COMMONWEALTH of VIRGINIA
Board of Education Agenda

Date of Meeting: January 13, 2011 **Time:** 9 a.m.
Location: Jefferson Conference Room, 22nd Floor, James Monroe Building
101 North 14th Street, Richmond, Virginia

9:00 a.m. FULL BOARD CONVENES `

Moment of Silence

Pledge of Allegiance

Approval of Minutes of the November 18, 2010, Meeting of the Board

Public Comment

Resolution of Appreciation for Outstanding Leadership and Service to Public Education: Dr. Ella P. Ward, Member of the Virginia Board of Education, 2003-2011, and Vice President, 2006-2011

Consent Agenda

A. Final Review of Financial Report on Literary Fund

Action/Discussion: Board of Education Regulations

B. Final Review of Proposed Amendments to the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131) to Conform to HB 1199 by the 2010 General Assembly

C. Final Review of the Proposed Revisions to the *Guidance Document Governing Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia*

D. First Review of the Proposed *Regulations Governing the Operation of Private Schools for Students with Disabilities* (8 VAC 20-671), and Repeal of the *Regulations Governing the Operation of Private Day Schools for Students with Disabilities* (8 VAC 20-670-10 et seq.)

E. First Review of the Proposed *Regulations Governing Unexcused Absences and Truancy*

Action/Discussion Items

F. Final Review of a Report on Homebound Instructional Services in Response to HB 257 Passed by the 2010 General Assembly

G. Final Review of the Criteria for Charter Schools, the Application for Charter Schools, and the Procedures for Receiving and Reviewing Charter School Applications

H. Final Review of the Application for College Partnership Laboratory Schools, and the Procedures for Receiving, Reviewing, and Ruling on College Partnership Laboratory School Applications

I. Final Review to Reaffirm the 2009 Recommendations to the *Standards of Quality*

J. Final Review of Proposed G*uidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools*

K. Final Review of Recommended Cut Scores for End-of-Course History Standards of Learning Tests Based on the 2008 History Standards

L. Final Review of Proposed Guidelines for Policies on Concussions in Student-Athletes, Senate Bill 652 Passed by the 2010 General Assembly

M. Final Review of the Proposed Supplement to the Curriculum Framework for the 2009 *Mathematics Standards of Learning*

N. First Review of Revisions of Industry, Professional, or Trade Association Certification Examinations and Occupational Competency Assessments to Meet the Requirements for the Board of Education's Career and Technical Education and Advanced Mathematics and Technology Seals and the Student-Selected Verified Credit

O. First Review of Revisions to Criteria for the *Virginia Index of Performance*, Virginia's Incentive Program to Encourage and Recognize Outstanding Achievement (HB 1172/SB 145)

P. First Review of a Recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to Approve the Criteria for Identifying Alternative Routes to Teacher Licensure as "Low Performing" or "At Risk of Becoming Low Performing" Required by Title II of the Higher Education Act (HEA)

Q. First Review of Proposed Revisions to *Virginia School Bus Specifications*

R. First Review of Revised Proposed Annual Measurable Objectives in Reading and Mathematics for 2010-2011 through 2013-2014

Action/Discussion Items (continued)

S. First Review of the Proposed Addition of Asian Students as a Subgroup for the Purposes of Calculating Adequate Yearly Progress (AYP) in Virginia's Consolidated State Application Accountability Plan Under the *No Child Left Behind Act of 2011*

Report

T. Report on the Review of Virginia's Textbook Adoption Process, the Virginia Studies Textbook *Our Virginia: Past and Present,* and Other Selected United States History Textbooks

DISCUSSION OF CURRENT ISSUES - by Board of Education Members and Superintendent of Public Instruction

EXECUTIVE SESSION

ADJOURNMENT

PUBLIC NOTICE

The Board of Education members will meet for dinner at 6:30 p.m. at the Crowne Plaza Hotel on Wednesday, January 12, 2011. Items for the Board agenda may be discussed informally at that dinner. No votes will be taken, and it is open to the public. The Board president reserves the right to change the times listed on this agenda depending upon the time constraints during the meeting.

GUIDELINES FOR PUBLIC COMMENT

1. The Board of Education is pleased to receive public comment at each of its regular monthly meetings. In order to allow the Board sufficient time for its other business, the total time allotted to public comment will generally be limited to thirty (30) minutes. Individuals seeking to speak to the Board will be allotted three (3) minutes each.

2. Those wishing to speak to the Board should contact Dr. Margaret Roberts, Executive Assistant for Board Relations at (804) 225-2924. Normally, speakers will be scheduled in the order that their requests are received until the entire allotted time slot has been used. Where issues involving a variety of views are presented before the Board, the Board reserves the right to allocate the time available so as to ensure that the Board hears from different points of view on any particular issue.

3. Speakers are urged to contact Dr. Roberts in advance of the meeting. Because of time limitations, those persons who have not previously registered to speak prior to the day of the Board meeting cannot be assured that they will have an opportunity to appear before the Board.

4. In order to make the limited time available most effective, speakers are urged to provide multiple written copies of their comments or other material amplifying their views.

Board of Education Agenda Item

Item: A. **Date:** January 13, 2011

Topic: Final Review of Financial Report on Literary Fund

Presenter: Mr. Kent C. Dickey, Deputy Superintendent for Finance and Operations

Telephone Number: (804) 225-2025 **E-Mail Address**: Kent.Dickey@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

_X_ Board review required by
- _X_ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

_X_ Action requested at this meeting _____ Action requested at future meeting: _____ (date)

Previous Review/Action:

_X_ No previous board review/action

_____ Previous review/action
- date _____
- action _____

Background Information:

In accordance with the provisions of the *Code of Virginia*, Chapter 10, Section 22.1-142, the Board of Education is responsible for the management of the Literary Fund. This report reflects the status of the Literary Fund and the status of the Reserve Fund, which is in the custody of the Virginia Public School Authority (VPSA). The report also reflects the total principal of the fund, as well as cash, investments, and all short-/long-term loans in both funds.

Summary of Major Elements:

Attachment A reflects the financial position of the Literary Fund as of September 30, 2010. The information presented in this report reflects the commitments against the Literary Fund as of September 30, 2010.

Attachment B reflects the currently active projects funded through the Literary Fund as of September 30, 2010.

Attachment C represents the projects that have closed and for which full payment from the Literary Fund has been made since the last Board meeting.

There are no further agenda items related to the Literary Fund. Agenda A is the only item where changes occurred for this period.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends approval of the financial report (including all statements) on the status of the Literary Fund as of September 30, 2010.

Impact on Resources:

As funds become available in the Literary Fund, recommendations will be made to the Board for funding priority projects and those projects at the top of the First Priority Waiting List, with the cash balance reduced as loan requests are processed.

Timetable for Further Review/Action:

The Department staff will prepare a quarterly financial report on this fund for Board approval. Information also will be presented each quarter, as part of another agenda item, regarding those projects on the two waiting lists.

Attachment A

STATEMENT OF THE FINANCIAL POSITION OF THE LITERARY FUND
(as of September 30, 2010)

Line Reference		September 30, 2010	June 30, 2010	Increase/(Decrease)
	PRINCIPAL BALANCE			
1.	Cash and investments maintained by State Treasurer	46,385,553	17,681,539	28,704,014
2.	Temporary loans received from local school boards (secured by promissory notes)	-	-	-
3.	Long-term loans in custody of Virginia Public School Authority (VPSA)	285,370,086	297,013,703	(11,643,617)
4.	Total Principal of Literary Fund	**331,755,639**	**314,695,242**	17,060,397
	CURRENT COMMITMENTS AGAINST LITERARY FUND REVENUE			-
5.	Balance due on active projects (Attachment B)	4,334,686	4,334,686	-
6.	Debt service on VPSA equipment notes [1]	63,510,236	-	63,510,236
7.	Interest rate subsidy [2]	-	-	-
8.	Transfer for Teacher Retirement [3]	141,575,000	-	141,575,000
9.	Required Carry Forward Balance	62,807,678	63,510,236	(702,559)
10.	Total of Literary Fund Commitments	**272,227,600**	**67,844,922**	204,382,678
	FUNDS AVAILABLE FOR CURRENT COMMITMENTS AND NEW LOANS			
11.	Cash and investments maintained by State Treasurer (Line 1)	46,385,553	17,681,539	
12.	Less commitments against Literary Fund Revenues (Line 10)	(272,227,600)	(67,844,922)	
13.	**Balance Available to Fund New Projects Currently on Waiting List or (Additional Funds Needed to Meet Commitments)**	**(225,842,047)**	**(50,163,384)**	

NOTES:

[1]Chapter 874 requires $63,510,236 to be set aside for debt service on VPSA equipment notes in fiscal year 2011.

[2]Chapter 874 requires there be no funds set aside for an interest rate subsidy program in fiscal year 2011.

[3]Chapter 874 requires $141,575,000 to be transferred from the Literary Fund to pay teacher retirement in fiscal year 2011.

January, 2011

ACTIVE LITERARY FUND PROJECTS (as of September 30, 2010)

Application Number	School Division	School	Release Date	Funds Approved for Release	Actual Funds Disbursed	Balance Due	Percent Drawn
Literary Loans							
	No Projects						
Subsidy Grants							
11062	Chesapeake City	Butts Road Intermediate	2001 Subsidy	85,594	(77,881)	7,713	90.99%
11151	Nottoway County	Blackstone Primary	2004 Subsidy	54,632	(40,393)	14,239	73.94%
11150	Nottoway County	Crewe Primary	2004 Subsidy	191,790	(161,572)	30,218	84.24%
11181	Grayson County	Grayson Middle	2005 Subsidy	138,831	-	138,831	0.00%
11210	Halifax County	Halifax Middle	2006 Subsidy	1,331,227	(1,097,125)	234,102	82.41%
11220	Halifax County	South Boston Elementary	2006 Subsidy	641,739	(227,676)	414,063	35.48%
11212	Washington County	Abingdon Elementary	2007 Subsidy	201,358	(6,500)	194,858	3.23%
11213	Washington County	High Point Elementary	2007 Subsidy	154,739	-	154,739	0.00%
11214	Washington County	Valley Institute Elementary	2007 Subsidy	123,197	-	123,197	0.00%
11215	Washington County	E. B. Stanley Middle	2007 Subsidy	149,896	-	149,896	0.00%
11255	Roanoke City	William Fleming High School	2008 Subsidy	1,006,140	-	1,006,140	0.00%
11273	Town of West Point	West Point Middle School	2008 Subsidy	41,984	-	41,984	0.00%
11293	Tazewell County	Richlands Elementary School	2008 Subsidy	446,045	-	446,045	0.00%
11294	Tazewell County	Tazewell Elementary School	2008 Subsidy	483,392	-	483,392	0.00%
11295	Tazewell County	Springville Elementary School	2008 Subsidy	243,178	-	243,178	0.00%
11296	Tazewell County	North Tazewell Elementary School	2008 Subsidy	324,368	-	324,368	0.00%
11297	Tazewell County	Cedar Bluff Elementary School	2008 Subsidy	327,724	-	327,724	0.00%
				$ 5,945,833	**$ (1,611,147)**	**$ 4,334,686**	

January, 2011

Attachment C

LITERARY FUND PROJECT REIMBURSEMENTS COMPLETED (as of September 30, 2010)

Application Number	School Division	School	Release Date	Funds Approved for Release	Actual Funds Disbursed	Funds Returned	Balance Due	Percent Drawn

NO PROJECT REIMBURSEMENTS

January, 2011

Board of Education Agenda Item

Item: B. **Date:** January 13, 2011

Topic: Final Review of Proposed Amendments to the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131) to Conform to HB 1199 by the 2010 General Assembly

Presenter: Ms. Anne D. Wescott, Assistant Superintendent for Policy and Communications

Telephone Numbers: (804) 225-2403 **E-Mail Addresses** Anne.Wescott@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by
__X__ State or federal law or regulation
____ Other: _____

__X__ Action requested at future meeting: _____

Previous Review/Action:

____ No previous board review/action
__X__ Previous review/action
dates November 18, 2010
actions First review

Background Information: The 2010 General Assembly passed HB 1199, which requires the Board of Education to provide for the waiver of certain graduation requirements to be granted only for good cause and to be considered on a case-by-case basis.

The legislation passed by the 2010 General Assembly amended § 22.1-253.13:4 of the *Code of Virginia* to add the following provision:

§ 22.1-253.13:4. Standard 4. Student achievement and graduation requirements.

….D. In establishing course and credit requirements for a high school diploma, the Board shall:

…7. Provide for the waiver of certain graduation requirements (i) upon the Board's initiative or (ii) at the request of a local school board. Such waivers shall be granted only for good cause and shall be considered on a case-by-case basis.

Virginia Board of Education *Regulations Establishing Standards for Accrediting Public Schools in Virginia* outline student achievement expectations and graduation requirements for public school students as well as the standards under which all public schools will receive accreditation ratings.

The Administrative Process Act (APA), in § 2.2-4006 of the *Code of Virginia*, provides for exemptions from the rulemaking process for regulatory actions that are necessary to conform to state and federal laws, federal regulations, and state and federal court orders when there is no agency discretion involved.

This is a final action that, upon certification by the Office of the Attorney General, is published in the Virginia Register and posted to the Virginia Regulatory Town Hall (the electronic Web site for all state agency regulations). The regulation becomes effective 30 days following publication in the Virginia Register.

Summary of Major Elements: The waiver provision in the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* would be amended to address the requirements of HB 1199. The amended language would say:

"Waivers of some of the requirements of these regulations may be granted by the Board of Education based on submission of a request from the division superintendent and chairman of the local school board. The request shall include documentation of the need for the waiver. In no event shall waivers be granted to the requirements of Part III (8 VAC 20-131-30 through 8 VAC 20-131-60) of these regulations ***except that the Board of Education may provide for the waiver of certain graduation requirements in 8 VAC 20-131-50 (i) upon the Board's initiative or (ii) at the request of a local school board on a case-by-case basis in accordance with guidelines established by the Board.***"

It is the intent of the Board to develop guidelines that address submission procedures needed in order to implement this legislation. These guidelines would be included in the Board's *Guidance Document Governing Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia*.

Superintendent's Recommendation: The Superintendent of Public Instruction recommends that the Board of Education waive first review and approve the proposed amendments to the *Regulations Establishing Standards for Accrediting Public Schools in Virginia*, and authorize staff of the Department of Education to proceed with the remaining steps required by the Administrative Process Act.

Impact on Resources: The impact on resources for these regulations is not expected to be significant.

Timetable for Further Review/Action: The Department of Education will notify local school divisions of the changes in the regulations when the regulations become final, pursuant to the requirements of the Administrative Process Act.

Attachment A

Proposed Amendments to the
Regulations Establishing Standards for Accrediting Public Schools in Virginia
(8 VAC 20-131-5 et seq.)

8 VAC 20-131-350. Waivers.

Waivers of some of the requirements of these regulations may be granted by the Board of Education based on submission of a request from the division superintendent and chairman of the local school board. The request shall include documentation of the need for the waiver. In no event shall waivers be granted to the requirements of Part III (8 VAC 20-131-30 through 8 VAC 20-131-60) of these regulations ***except that the Board of Education may provide for the waiver of certain graduation requirements in 8 VAC 20-131-50 (i) upon the Board's initiative or (ii) at the request of a local school board on a case-by-case basis in accordance with guidelines established by the Board.***

Exempt Action Final Regulation
Agency Background Document

Agency name	Virginia Board of Education
Virginia Administrative Code (VAC) citation	8 VAC 20 – 131
Regulation title	*Regulations Establishing Standards for Accrediting Public Schools in Virginia*
Action title	This regulatory change, which is proposed in response to legislation enacted by the 2010 General Assembly, will permit the Virginia Board of Education to waive certain requirements for graduation.
Final agency action date	Expected January 13, 2011
Document preparation date	November 1, 2010

When a regulatory action is exempt from executive branch review pursuant to § 2.2-4002 or § 2.2-4006 of the Virginia Administrative Process Act (APA), the agency is encouraged to provide information to the public on the Regulatory Town Hall using this form.

Note: While posting this form on the Town Hall is optional, the agency must comply with requirements of the Virginia Register Act, Executive Orders 14 (2010) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Summary

Please provide a brief summary of all regulatory changes, including the rationale behind such changes. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation.

The proposed amendments are needed to address legislation enacted by the 2010 General Assembly. House Bill 1199 requires the Board of Education to provide for the waiver of certain graduation requirements to be granted only for good cause and on a case-by-case basis. The legislation states that the Board of Education shall: "*…Provide for the waiver of certain graduation requirements (i) upon the Board's initiative or (ii) at the request of a local school board. Such waivers shall be granted only for good cause and shall be considered on a case-by-case basis.*"

The Virginia Board of Education *Regulations Establishing Standards for Accrediting Public Schools in Virginia,* outline student achievement expectations and graduation requirements for public school students as well as the standards under which all public schools will receive accreditation ratings. One section of these regulations (8 VAC 20-131-350) provides for waivers as follows: *"Waivers of some of the requirements of these regulations may be granted by the Board of Education based on submission of a request from the division superintendent and chairman of the local school board. The request shall include documentation of the need for the waiver. In no event shall waivers be granted to the requirements of Part III (8 VAC 20-131-30 et seq.) of these regulations."* The wavier provision in the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* would be amended to address the requirements of House Bill 1199.

This proposed regulatory change would amend 8 VAC 20-131-350 by adding a provision that would permit the Board to develop and implement guidelines under which local school boards could request a waiver of some of the graduation requirements outlined in the regulation for individual students under certain conditions.

Statement of final agency action

Please provide a statement of the final action taken by the agency including (1) the date the action was taken, (2) the name of the agency taking the action, and (3) the title of the regulation.

At the meeting of the Board of Education on November 18, 2010, the Board is expected to accept for first review proposed revisions to the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* 8VAC 20-131-10 et seq. to address House Bill 1199. Final action will be taken by the Board of Education on January 13, 2011, at which time it is anticipated that the Board will direct the Department of Education to proceed with the final stages of the regulatory process.

Family impact

Assess the impact of this regulatory action on the institution of the family and family stability.

The proposed amendment does not negatively impact the institution of the family or the stability of families. The amendment is intended to address a legislative mandate that would provide relief from certain graduation requirements to those students with extenuating circumstances, as determined by the Board of Education.

Board of Education Agenda Item

Item: C. **Date:** January 13, 2011

Topic: Final Review of the Proposed Revisions to the *Guidance Document Governing Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia*

Presenter: Ms. Anne D. Wescott, Assistant Superintendent for Policy and Communications

Telephone Number: (804) 225-2403 **E-Mail Address:** Anne.Wescott@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by
__X__ State or federal law or regulation
____ Board of Education regulation
____ Other: _____

__X__ Action requested at this meeting

____ Action requested at future meeting: _____

Previous Review/Action:

____ No previous board review/action
__X__ Previous review/action
dates November 18, 2010
actions First review

Background Information: The 2010 General Assembly passed HB 1199, which requires the Board of Education to provide for the waiver of certain graduation requirements to be granted only for good cause and to be considered on a case-by-case basis.

In a separate Board action item, an amendment to the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* is being considered to address implementation of this bill by including the following proposed language in the waiver section (8 VAC 20-131-350) of these regulations:

> **8 VAC 20-131-350. Waivers**
>
> Waivers of some of the requirements of these regulations may be granted by the Board of Education based on submission of a request from the division superintendent and chairman of the local school board. The request shall include documentation of the need

for the waiver. In no event shall waivers be granted to the requirements of Part III (8 VAC 20-131-30 et seq.) of these regulations ***except that the Board of Education may provide for the waiver of certain graduation requirements in 8 VAC 20-131-50 (i) upon the Board's initiative or (ii) at the request of a local school board on a case-by-case basis in accordance with guidelines established by the Board.***

Summary of Major Elements: The guidelines would provide that the Board of Education may waive certain graduation requirements in 8 VAC 20-131-50 by resolution. The resolution shall specify the requirement(s) being waived and, if the waiver is time-limited, when the waiver would expire.

Two additions are proposed to the guidelines. First, there would be a provision to require that the local superintendent notify the Superintendent of Public Instruction as soon as feasible when there is a situation that could warrant a waiver. This would permit the Superintendent or designee to explore options and offer technical assistance that might enable the student to graduate without a waiver. Second, there would be a provision that the waiver must be submitted at within 15 days of graduation if possible.

Therefore, the guidelines for waiver requests from local school boards would include the following:

1. Provisions for local school boards to submit to the Superintendent of Public Instruction, on behalf of the Board, requests for waivers of certain graduation requirements for a student.

2. A requirement that any local school board submitting a waiver must include an explanation of what requirements are requested to be waived and a justification, which shall include a statement of all efforts that the local school board has made to assist the student prior to the submission of the request to the Board.

3. **A requirement that the local superintendent must notify the Superintendent of Public Instruction as soon as feasible when there is a situation that could potentially result in a waiver, in order to explore options that might be available to permit the student to graduate without needing a waiver.**

4. A provision that a waiver request may not be submitted more than 90 days prior to the date of graduation **and, if possible, at least 15 days prior to graduation**.

5. A provision allowing the Superintendent of Public Instruction to approve a waiver on behalf of the Board. The Superintendent will also report to the Board any waivers granted or denied.

6. Provisions for determining 'good cause', which would include, but not be limited to:

    - A catastrophic, sudden, or debilitating illness or injury suffered by the student late in his high school career; or

- A sudden, unexpected requirement or event that causes a student's family to relocate to another state where the student is unable to complete graduation requirements in Virginia or the receiving state.

7. In no event shall a waiver be granted if that waiver substantially reduces or diminishes the integrity of the diplomas approved by the Board.

8. Graduation requirements that have been approved for a waiver shall be noted on a student's official academic record.

The Board of Education authorized a 30-day period of public comment on the criteria, procedures, and application. Two comments were received. One commenter raised questions, and staff responded to the questions. Another commenter noted that a waiver does reduce the integrity of the diploma, and objected to the statement: "In no event shall a waiver be granted that would substantially reduce or diminish the integrity of the diplomas approved by the Board of Education." Copies of the comments are attached.

Superintendent's Recommendation: The Superintendent of Public Instruction recommends that the Board of Education approved guidelines.

Impact on Resources: The impact on resources is not expected to be significant.

Timetable for Further Review/Action: The Department of Education will notify school divisions and will post the revised guidelines on the department's Web site.

Attachment A

Proposed Amendments to the
Guidance Document Governing Certain Provisions of the
Regulations Establishing Standards for Accrediting Public Schools in Virginia

STANDARD: 8 VAC 20-131-350. Waivers.

Waivers of some of the requirements of these regulations may be granted by the Board of Education based on submission of a request from the division superintendent and chairman of the local school board. The request shall include documentation of the need for the waiver. In no event shall waivers be granted to the requirements of Part III (8 VAC 20-131-30 et seq.) of these regulations ***except that the Board of Education may provide for the waiver of certain graduation requirements in 8 VAC 20-131-50 (i) upon the Board's initiative or (ii) at the request of a local school board on a case-by-case basis in accordance with guidelines established by the Board.***

Guidance:

The Board of Education may waive certain graduation requirements in 8 VAC 20-131-50 by resolution. The resolution shall specify the requirement(s) being waived and, if the waiver is time-limited, when the waiver would expire.

Local school boards may seek a waiver of certain graduation requirements in 8 VAC 20-131-50 on a case-by-case basis by submitting a request to the Superintendent of Public Instruction, on behalf of the Board, which explains what requirement(s) are requested to be waived and the justification for each requirement(s) requested for waiver.

The local superintendent shall notify the Superintendent of Public Instruction as soon as feasible when there is a situation that could potentially result in a waiver, in order to explore options that might be available to permit the student to graduate without needing a waiver.

The justification shall include a statement of the efforts made by the local school board to assist the student to meet the requirement(s) prior to requesting the waiver.

Such waiver requests may not be submitted more than 90 days prior to the date the student is expected to graduate ***and, if possible, at least 15 days prior to graduation****.*

The Superintendent may approve the waiver on behalf of the Board and report to the Board waivers that have been granted or denied.

For the purposes of this provision, good cause may include, but not be limited to, a catastrophic, sudden, or debilitating illness or injury suffered by the student late in his high school career or a sudden, unexpected requirement or event that causes the family to relocate to another state where the student is unable to complete graduation requirements either in Virginia or the receiving state.

In no event shall a waiver be granted that would substantially reduce or diminish the integrity of the diplomas approved by the Board of Education.

Requirements that have been approved for a waiver shall be noted on the student's official academic record (transcript).

Public Comments on the Guidance for a Waiver of the Graduation Requirements

From: jbm
Sent: Tuesday, November 30, 2010 2:21 PM
To: Wescott, Anne (DOE)
Cc: State NAACP; Rev. Vines
Subject: Amendment (Waivers)

Ms Wescott,

Please consider the following inquiry regarding waivers.

* The phrases; ***"GOOD CAUSE" & CASE- BY- CASE*** may allow some direction for a school division to proceed with deciding to whom and why waivers should be granted.... however, will school divisions be more specific in defining **"GOOD CAUSE** & will some examples of ***CASE -BY CASE***

be given as a guideline ?.

* Will the decision to grant a waiver be left to a sole school staff member, or will several signatures be required to approve the waiver?

* What role will parents play in the granting of a waiver ?

Virginia State Conference NAACP Education Committee

Mrs. Janette Boyd Martin, Chair

From: Patti Flynn
Sent: Tuesday, December 28, 2010 4:10 PM
To: Wescott, Anne (DOE)
Subject: Public Comment

Dear Ms. Wescott,

In response to:

Attachment A

Proposed Amendments to the Guidance Document Governing Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia

STANDARD: 8 VAC 20-131-350. Waivers.

Items included in the proposed amendment that contradict one another are:

* In no event shall a waiver be granted that would substantially reduce or diminish the integrity of the diplomas approved by the Board of Education.
* Requirements that have been approved for a waiver shall be noted on the student's official academic record (transcript)."

If the proposed elimination of one or more graduation requirements does not substantially reduce or diminish the integrity of the diplomas approved by the Board of Education, than there is no need for the approved waiver to be noted on the official transcript. A notice should be included on the transcript only when the integrity of the diploma has been altered. This is to alert any person or agency viewing the diploma that the student was unable to be taught, and or fully learn all of the material said to be required in order to earn that particular diploma type. If the elimination of the content material does not upset the integrity of the diploma type because the student's knowledge base in that area was assessed some other way, or because the content knowledge was unnecessary, then the notice of waiver does nothing more than violate the student's privacy, and should not be included.

By all other measures mentioned in the waiver, the student's awarding of the diploma, in and of itself, is certification that according to the Commonwealth of Virginia the student has learned, to the extent required, all necessary information required to graduate with that particular diploma. If removing any of the content requirements alters in any way the knowledge base by which the Commonwealth requires the student to have prior to receiving the diploma, then and only then should there be a warning or notice on the transcript mentioning the waiver, so as not to false advertise.

The diploma is not a reward for completing state set requirements, no more than denying the diploma to someone, who has not completed those state set requirements, a punishment. Rather, the document is an artifact representing the completion of a certain kind, and of a certain amount, of material learned while in school. If eliminating a content area does not effect the integrity of the high school diploma, than that content area should be re-named an elective. Unless the student tests out of that content requirement, earning them that credit and eliminating the need for the waiver, then removing a requirement does change the integrity of the diploma's meaning. Because of that that fact, the

notation should be made on the transcript, and the following should not be included in the amended waiver:

"In no event shall a waiver be granted that would substantially reduce or diminish the integrity of the diplomas approved by the Board of Education."

Respectfully,

Patti Lee Flynn M.S. Ed.
English Teacher/Special Educator
Special Education Advisory Committee (SEAC)
Drop Out Prevention Committee
Framework for Quality Learning (FQL) Advisory Team
School Improvement Committee (SIC)
Administrative Intern
Albemarle County High School

Board of Education Agenda Item

Item: D. **Date:** January 13, 2011

Topic: First Review of the Proposed *Regulations Governing the Operation of Private Schools for Students with Disabilities (*8 VAC 20-671), and Repeal of the *Regulations Governing the Operation of Private Day Schools for Students with Disabilities* (8 VAC 20-670-10 et seq.).

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Origin:

____ Topic presented for information only (no board action required)

_X_ Board review required by
_X__ State or federal law or regulation
____ Board of Education regulation
____ Other: _____

__X__ Action requested at this meeting ____ Action requested at future meeting: _____ (date)

Previous Review/Action:

__ __ No previous board review/action

_X_ Previous review/action
date July 22, 2010
action The Board waived first review and authorized the Virginia Department of Education (VDOE) staff to proceed with the requirements of the Administrative Process Act (APA) to promulgate regulations for a single regulation for the operation of education programs in private day schools for students with disabilities and children's residential facilities, including group homes. Concurrent action will repeal *Regulations Governing the Operation of Private Day Schools for Students with Disabilities* (8 VAC 20-670-10 et seq.).

The *Notice of Intended Regulatory Action (NOIRA)* was printed in the *Virginia Registrar of Regulations* on October 11, 2010. A public comment forum opened on October 11, 2010, and remained opened through November 12, 2010. No comments were received.

Background Information:

Chapter 16, *Schools for Students with Disabilities*, of the *Code of Virginia* at §§ 22.1-214 – 319-22.1-332, outlines the provisions to establish and operate a school for the purpose of providing educational services to students with disabilities. Section 22.1-321 of the *Code* states: "the Board of Education shall make regulations not inconsistent with law for the management and conduct of schools. The regulations may include standards for programs offered by the schools. The Board may authorize the Superintendent of Public Instruction to issue licenses to operate schools." *The Code of Virginia*, at § 22.1-323, states "No person shall open, operate or conduct any school for students with disabilities in this Commonwealth without a license to operate such school issued by the Board of Education." The Board has authorized the Superintendent of Public Instruction to grant such licenses.

Prior to July 1, 2008, educational programs in residential facilities for children, including group homes, were regulated by the *Standards for Interdepartmental Regulation of Children's Residential Facilities*, 22 VAC 42-11-10 et seq. Those regulations were promulgated by the Boards of Education; Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS), (Department of Behavioral Health and Developmental Services, effective July 1, 2009); Social Services (DSS); and Juvenile Justice (DJJ). During the 2008 General Assembly, SB 472, patroned by Delegate Emmett W. Hanger, was passed that eliminated the interdepartmental regulation of children's residential facilities and group homes and provided that DMHMRSAS, DSS, and DJJ shall regulate and license residential facilities and group homes for which they are the primary licensing agency.

On April 23, 2008, the General Assembly of Virginia, amended and reenacted §§ 22.1-323.2, 37.2-408, and 66-24 of the *Code of Virginia* and added 37.2-408.1, relating to the regulation of group homes and residential facilities for children. The *Code of Virginia*, at 22.1-323.2, Licensing of services delivered in group homes and residential facilities for children, states:

A. The Department of Education shall cooperate with other state departments in fulfilling their respective licensing and certification responsibilities regarding educational programs offered in group homes and residential facilities in the Commonwealth. The Board shall promulgate regulations allowing the Department of Education to assist and cooperate with other state departments.

B. The Board's regulations shall address the educational services required to be provided in such group homes and residential facilities as it may deem appropriate to ensure the education and safety of the students.

The 2008 General Assembly provided that the *Standards for Interdepartmental Regulation of Children's Residential Facilities* (VAC 42-11-10 et seq.) shall remain in full force and effect until such time as each Board promulgates regulations as required by this act. Upon promulgation of regulations by a Board, the *Standards for Interdepartmental Regulation of Children's Residential Facilities* shall cease to apply to facilities licensed and regulated by that Board.

The Department of Education's Office of Federal Program Monitoring, which is responsible for monitoring and licensing private schools for students with disabilities, held six stakeholder meetings to discuss and draft the proposed regulations. The stakeholders included owners and program administrators of private day schools and residential facilities with schools for students with disabilities, parents, administrators of special education from school divisions, and representatives from private school accrediting agencies. The stakeholders represented a cross-section of constituencies impacted by

current applicable regulations. In addition, the proposed regulations were drafted in consultation with the Departments of Social Services and Behavioral Health and Developmental Services (DBHDS).

These proposed regulations were drafted to govern the operation of both schools for students with disabilities in private residential facilities, including group homes, and the operation of private day schools for students with disabilities. With the promulgation of new regulations, the Board of Education's *Regulations Governing the Operation of Private Day Schools for Students with Disabilities*, VAC 20-670-10 et. seq., effective September 10, 2004, will be repealed.

These proposed regulations are essential to protect the health, safety, and welfare of students with disabilities in Virginia who receive their education in private schools licensed by the Department of Education. These proposed regulations are designed to ensure students with disabilities who cannot be served in public schools can receive a free appropriate education as required by federal law, the *Individuals with Disabilities Education Improvement Act (IDEA '04)* and its implementing federal regulations, and the *Code of Virginia* at § 22.1-214 and § 22.1-319. The *Code of Virginia* at § 22.1-321 authorizes the Board of Education to make regulations for the management and conduct of schools. That section of the *Code* also permits the Board to promulgate regulations to include standards for programs offered by the schools. The proposed regulations allow the licensing agency to make exception to the requirements for good cause.

Summary of Major Elements

The chart provides a summary of major elements.

PART I -- DEFINITIONS	
8 VAC 20-671-10. Definitions, p. 10	Provides definitions for the following terms to comply with state requirements or to provide clarity: Applicant, Autism, Behavioral intervention plan, Behavioral support, Board, Business day, Calendar days, Complaint, Consent, Controlled substance, Corrective action plan, Deaf-blindness, Deafness, Department, Developmental delay, Disability category, Education records, Eligible student, Emotional disability, Guaranty instrument, Hearing impairment, Illegal drug, Individualized Education Program, Individualized Instruction Plan, Intellectual disability, Licensee, License to operate, Licensing agency, Multiple disabilities, Orthopedic impairment, Other health impairment, Paraprofessional, Parent, Personally-identifiable information, Physical restraint, Privately-placed student, Publicly-placed student, Qualified personnel, Related services, Regulations, Section 504, School, School for students with disabilities, Specially-designed instruction, Specific-learning disability, Speech or language impairment, Standard precautions, Standards of Learning, Strip search, Superintendent, Teacher of record, Time out, Traumatic brain injury, Visual impairment, Volunteer, Virtual learning
PART II – GENERAL PROVISIONS AND EQUIREMENTS	
8 VAC 20-671-20. Exemptions, p. 26	Exempts any privately owned preschool, elementary, middle or secondary school whose primary purpose is to provide educational services to students without disabilities as required by the § 22.1-320 of the *Code of Virginia*
8 VAC 20-671-30. Licenses generally, p. 27	Provides general requirements for a license to operate a private school for students with disabilities. Clarifies that no person shall open, operate, or conduct any school for students with disabilities in this

	Commonwealth without a License to Operate. Restricts a license to the disability categories specifically indicated on the license to comply with § 22.1-323 of the *Code of Virginia.* Grants the provision to make exception to the requirements of these regulations for good cause
8 VAC 20-671-40. Advertising, 28	Outlines provisions for advertising a school to the public consistent with the requirements of § 22.1-325 of the *Code of Virginia*. Requires that the licensee advertise the school at all times in a manner that will be free from misrepresentation, deception or fraud and to conform to regulations of the Board governing such advertising
8 VAC 20-671-50. Types of licenses, p. 29	Names the types of licenses that may be offered and the terms of the licenses consistent with § 22.1-323.1 of the *Code of Virginia*. Permits the Board or designee to issue licenses for periods of up to three successive years
8 VAC 20-671-60. Change in condition(s), p. 30	Outlines the conditions for which a License to Operate may be modified, i.e., change in location, services, ownership, merger of schools, capacity of the school, and disability categories served
8 VAC 20-671-70. License to Operate is nontransferable, p 31	Clarifies § 22.1-323 of the *Code of Virginia* that a License to Operate a school for students with disabilities cannot be transferred
8 VAC 20-671-80. Penalty for noncompliance in obtaining a license, p. 31	Identifies the penalties allowed in § 22.1-331 of the *Code of Virginia* for conducting a school without first obtaining a License to Operate
8 VAC 20-671-90. Directory of private schools for children with disabilities, p. 32	Requires the Department of Education to maintain a directory of schools holding valid licenses to operate that is available to the public
PART III – SCHOOL LICENSING PROCESS	
8 VAC 20-671-100. Initial application, p. 32	Outlines the requirements for an initial application for a license to comply with § 22.1-324 of the *Code of Virginia*. To obtain a License to Operate a school, an application, certified as true and correct, shall be filed with the Board
8 VAC 20-671-110. Applicant commitments, p. 34	Requires a commitment to conduct the school in an ethical manner and in accordance with the regulations consistent with § 22.1-324 of the *Code of Virginia*
8 VAC 20-671-120. Assessment of application, p. 35	Requires the Department of Education to receive and evaluate each application to operate a school within 60 calendar days. Requires that any application that has not been approved due to the applicant's failure to submit a completed application within six months be denied and returned to the applicant. The licensing agency may require the applicant to appear before a review committee.
8 VAC 20-671-130. On-site inspection, p. 35	Permits the Department of Education to make announced or unannounced inspections before issuing a licensee as required by the *Code of Virginia* at § 22.1-323
8 VAC 20-671-140. Renewal of licenses p. 35	Requires a licensee to submit an updated application to include any new or modifications in policies and procedures and any other updates upon the expiration of a current license
PART 1V – OVERSIGHT RESPONSIBILITY	
8 VAC 20-671-150. Monitoring, p. 36	Requires the Department of Education (licensing agency) to make at least one announced or unannounced visit during the effective dates of the license for the purpose of monitoring compliance with regulations
8 VAC 20-671-160. Complaint resolution procedures, p. 36	Requires the Department of Education to investigate complaints against a school by any individual, organization, or individual from another state and to address an action that occurred not more than one year prior to the date the complaint is received
8 VAC 20-671-170. Denial, revocation or suspension of license. p. 39	Outlines the provisions for which the Department of Education may refuse to issue or renew a license or may revoke or suspend the license of any school issued pursuant to these requirements or any regulation of the Board consistent with § 22.1-329 of the *Code of Virginia*
8 VAC 20-671-180. Summary of suspension. p. 40	Outlines the provisions under the Administrative Process Act for the Superintendent of Public Instruction to issue a summary order of

	suspension a license of a residential or day school when conditions or practices exist in the school that pose an immediate and substantial threat to the health, safety, and welfare of the students who are residing or attending the school as required by § 22.1-329
8 VAC 20-671-190. Timeline for correction of unsatisfactory conditions. p. 42	Grants the Board or Department the authority to grant a period of time as it deems reasonable for a school to correct any unsatisfactory conditions before refusing to renew, revoke or suspend any license as authorized by § 22.1-329 of the *Code of Virginia*
PART V – ADMINISTRATION OF THE SCHOOL	
8 VAC 20-671-200. Governing body, p. 42	Requires that the licensee clearly identify the governing body of the school for all publicity
8 VAC 20-671-210. Responsibilities of the licensee, p. 42	Requires several responsibilities of the licensee, including (1) appointment of an individual(s) to whom it delegates the authority and responsibility to assume the administrative direction of the school; (2) staff positions and responsibilities shall meet the needs of the population served; (3) as a condition of employment, each employee shall submit to fingerprinting, required by § 22.1-296.3 of the *Code of Virginia* and to provide necessary personal information for the school to obtain a search of the registry of founded complaints of child abuse and neglect required by § 63.2-1515 of the *Code of Virginia*; (4) report to the Department of Education (licensing agency) within 10 business days lawsuits, settlements, or criminal charges relating to the operation of the school
8 VAC 20-671-220. Fiscal accountability, p. 44	Requires the licensee to prepare at the end of each fiscal year, a month-to-month accounting of revenue and expenses and a balance sheet showing assets and liabilities for the fiscal year
8 VAC 20-671-230. Protection of contractual rights, p. 45	Requires an applicant to obtain a guaranty instrument to protect the contractual rights of parents and students to comply with § 22.1-324 of the *Code of Virginia*. Requires a minimum guaranty of $10,000 for up to 25 students and $5,000 for each additional 25 students. If a school collects no advance tuition other than equal monthly installments or receives payment after services have been rendered, the school may apply to the licensing agency for exemption from the guaranty requirements.
8 VAC 20-671-240. Insurance, p. 46	Requires the licensee to maintain liability insurance covering the premises and the school's operation; requires liability insurance coverage on all vehicles used to transport students
8 VAC 20-671-250. Fundraising, p. 46	Requires the school to have a written policy to obtain written permission of the parent and student, age 14 or older, for participation in fund-raising activities
8 VAC 20-671-260. Relationship to the licensing agency. p. 46	Requires the licensee to make information available to the licensing agency within reporting timelines established by the licensing agency for determination of compliance with regulations
PART VI – SCHOOL PERSONNEL	
8 VAC 20-671-270. Personnel policies and procedures, p. 47	Requires the licensee to have written personnel policies and procedures to include: job qualifications, job descriptions, staff supervision, evaluation, grievance, and termination
8 VAC 20-671-280. Job qualifications, p. 47	Requires that a person who assumes or is designated to assume the responsibilities of a position meet the qualifications of the position and to comply with all applicable requirements
8 VAC 20-671-290. Job descriptions, p. 47	Requires schools to have written job descriptions for each position and provide a copy to each person assigned at the time of employment
8 VAC 20-671-300. School administrators, p. 48	Outlines the requirements of the instructional leader; Requires a valid five-year renewable postgraduate professional licensee with an endorsement in school administration and supervision or special education and experience working with students with disabilities
8 VAC 20-671-310. Teachers and staffing, p. 49	Requires that staffing be in accordance with the *Regulations Governing*

	Special Education Programs for Children with Disabilities in Virginia, 8 VAC 20-81-10, et seq.
8 VAC 20-671-320. Substitute teachers, p. 51	Requires a substitute teacher be at least 18 years old, hold a high school diploma or a general educational diploma (GED); have acquired two years of full-time postsecondary education or two years of successful work experience with children with disabilities or equivalent. Requires orientation to the school's policies and procedures. Requires that no substitute teacher be used to fill a vacant teaching position for more than 90 teaching days in such vacancy during one school year, consistent with the public school
8 VAC 20-671-330. Support staff, p. 51	Requires support staff to meet the same standards as personnel providing services in the public schools as required by the *Regulations Governing Special Education Programs for Children with Disabilities in Virginia*
8 VAC 20-671-340 Staff supervision, p. 52	Requires written policies and procedures regarding the supervision of individuals working with students, including volunteers and interns
8 VAC 20-671-350. Staff development. p. 52	Outlines required professional development for all staff working with students; including emergency preparedness and response training; child abuse/neglect; and mandatory reporting
8 VAC 20-671-360. Personnel records, p. 53	Requires separate up-to-date personnel records of employment and health records and management in a confidential manner
PART VII – S CHOOL FACILITIES AND SAFETY	
8 VAC 20-671-370. School facilities and safety, p. 55	Requires the licensee to maintain a school that is accessible, barrier free, safe, and clean. Requires suitable space for classrooms; adequate, safe, and properly-equipped classrooms, laboratories, and dining areas that meet the needs of students and instruction. Prohibits smoking on school grounds. Requires electronic two-way communication system available to staff at all times
8 VAC 20-671-380. Contingency plans, p. 56	Requires contingency plans for emergencies that include certification of 1:10 teacher-student ratio for training/certification in CPR and abdominal thrust. Requires development of contingency plans with the assistance of state or local public safety authorities. Requires evacuation drills for the school and buses; and documentation of drills
8 VAC 20-671-390. Weapons, p. 60	Requires a written policy governing prohibition of the possession and use of firearms, pellet guns, air guns, and other weapons on the school's premises and during school-related activities
8 VAC 20-671-400. Strip searches. p. 61	Prohibits strip searches and body cavity searches
PART VIII -- SCHOOL INSTRUCTIONAL PROGRAM	
8 VAC 20-671-410. Student application and admission, p. 62	Outlines the requirements for a student application and admission. Requires an admission policy that includes a description of the population to be served and types of services offered
8 VAC 20-671-420. Standard school year and school day, p. 63	Requires a standard school year and school day consistent with public schools for all students unless prescribed otherwise on a student's IEP, 504 Plan, or IIP
8 VAC 20-671-430. School and community communications, p. 64	Requires schools to promote communications and foster mutual understanding with parents and the community
8 VAC 20-671-440. Philosophy, goals, and objectives, p. 64	Requires schools to have current philosophy, goals, and objectives that serve as the basis for all policies and practices
8 VAC 20-671-450. Student achievement expectations, p. 65	Requires schools to have a process to identify and recommend strategies to address the learning, behavior, communication, or development of individual students who are having difficulty in the educational setting. Requires cooperation with the public school in the administration of SOL tests
8 VAC 20-671-460. Program of instruction and learning objectives, p. 66	Outlines requirements of a school's program of instruction and learning objectives. Requires that the instructional program meets the needs of all students enrolled and educate students with age-appropriate peers.

	Requires schools to provide a program of instruction that supports the Virginia Standards of Learning for the core subjects: English, mathematics, science, and history/social science. Requires that students have opportunities to gain appreciation for art and music. Requires an instructional program that promotes the individual student's developmental growth and academic achievement at successive grade levels, as appropriate
8 VAC 20-671-470. Individualized Education Program (IEP), p. 67	Requires that a representative of the private school attend IEP meetings upon the request of the student's public school or participate by other means
8 VAC 20-671-480. Individualized Instruction Program (IIP), p. 68	Requires development of an Individualized Instruction Program (IIP) for all students without disabilities within 30 days of admission
8 VAC 20-671-490. 504 Plans, p. 68	Requires schools to implement 504 Plans and cooperate with the child's public school in reviewing the plan
8 VAC 20-671-500. Instructional program for elementary school grades, p. 69	Outlines the requirements for an instructional program for elementary grades. Requires that 75 percent of the annual instructional time of 990 hours be given to instruction in English, mathematics, science, and history/social science. Requires schools to provide additional instructional time in reading to students who are unable to read with comprehension. Reading, writing, spelling, and mathematics are required as the focus of instruction for kindergarten through grade 3
8 VAC 20-671-510. Instructional program for middle school grades, p. 69	Outlines the requirements for an instructional program for middle school grades. Requires an instructional program that supports the Standards of Learning for English, mathematics, science, and history/social science and 140 clock hours per year of instruction for each student. Requires schools to provide opportunities for appreciation of art and music and an introduction to career and technical exploration. Requires students to participate in a program of health and physical fitness during the regular school day. Requires schools to provide students who are unable to read with comprehension with additional instructional time in reading
8 VAC 20-671-520. Instructional program for secondary school grades, p. 70	Outlines the requirements for an instructional program for secondary school grades. Requires schools to provide a program of instruction in the academic areas of English, mathematics, science, and history/social science. Requires 140 clock hours per year of instruction in each of the four disciplines. Requires schools to provide students who are unable to read with comprehension additional instructional time in reading. Requires guidance counseling be provided to ensure that a program of studies contributing to the student's academic achievement and meeting graduation requirements is being followed
8 VAC 20-671-530. Alternative education, p. 71	Provides secondary schools the option to provide students, ages 16 to 18, an Individualized Student Alternative Education Plan (ISAEP) program. Requires filing an application and approval by the Department of Education
8 VAC 20-671-540. Transition services, p. 71	Requires schools to cooperate with the public schools to ensure that the transition plans for students with disabilities are implemented according to their IEPs
8 VAC 20-671-550. Extracurricular and other school activities, including recess, p. 71	Requires that school sponsored extracurricular activities be under direct supervision of the staff and contribute to the educational objectives of the school
8 VAC 20-671-560. Family life. p. 72	Requires schools to obtain written consent from the parent before enrolling a student in a family life education program
8 VAC 20-671-570. Student work-study or on-the-job training, p. 72	Provides protection for students on work-study, on-the-job training, or other forms of employment
8 VAC 20-671-580. Virtual learning, p. 72	Permits the use of alternative means to deliver instruction to accommodate student needs through technologies. Requires supervision by a licensed teacher or person eligible to hold a Virginia license to teach. Requires comparable in rigor and breadth to the course that is traditionally delivered. Requires accreditation by a nationally recognized accrediting body or authorized by a public school or school

	division
8 VAC 20-671-590. Equipment, materials, and library media, p. 73	Requires schools to provide a variety of grade-level materials and equipment to support the instructional program, including functional life skills programs. Requires access to computers and library media. Requires schools to adopt a system for updating textbooks, comparable to public schools in Virginia. This requirement is consistent with other states.
8 VAC 20-671-600. School records, p. 73	Requires an academic calendar, class roster, class schedule, course descriptions, course curriculum, and student progress reports
8 VAC 20-671-610. Diplomas, p. 73	Prohibits schools from using the Seal of Virginia in its diploma designs. Requires written policy for awarding diplomas
8 VAC 20-671-620. Student conduct, p. 74	Requires written policy and procedures that address standards of conduct, attendance, truancy, suspension, expulsion, alcohol and drugs, weapons, fighting, bullying, sexual and disability harassment, and pornography
8 VAC 20-671-630. Behavior intervention, p. 74	Requires written policy and procedures that emphasize positive behavior interventions that focus on teaching and supporting students to practice methods to manage their own behavior
8 VAC 20-671-640. Time-out, p. 75	Requires written policy and procedures governing the conditions under which a student may be placed in timeout. Each student shall be free from any unnecessary timeout. Requires staff checks at least every 15 minutes and more often depending on the nature of the student's disability, condition, and behavior. Requires schools to document use of timeout and staff checks
8 VAC 20-671-650. Prohibitions, p. 75	Identifies prohibitions to include: restraint and seclusion; deprivation of drinking water or food; any action that is humiliating, degrading, or abusive; corporal punishment; deprivation of approved prescription medication or treatment; denial of access to toilet facilities; application of aversive stimuli; use of mechanical or pharmacological restraints; and strip searches
8 VAC 20-671-660. Managing student behavior in emergency situations, p. 76	Requires written policy and procedures on behavior management techniques. Prohibits the use of physical restraint or seclusion for any behavioral or protective purpose unless other less restrictive techniques have been tried. Requires documentation in the student's record that less restrictive techniques did not or would not succeed in reducing or eliminating behaviors that are self-injurious or dangerous to other people or that no less restrictive measure was possible in the event of a sudden emergency. Requires documentation of each application of restraint or seclusion and notification to the parent(s) and placing agency. Requires notification to the licensing agency upon request
8 VAC 20-671-670. Videotaping, p.79	Requires written policy and procedures that address videotaping students while in school and during any school sponsored activity
8 VAC 20-671-680. Referral for evaluation, p. 79	Requires schools to refer a student who has not been found eligible for special education and related services to the public school for evaluation when the student is suspected of having a disability and to cooperate with the school division on how to implement the child find and evaluation activities
8 VAC 20-671-690. Suspected child abuse and neglect, p. 79	Requires schools to comply with § 63.2-1509 of the *Code of Virginia* regarding child abuse and neglect
8 VAC 20-671-700. Serious incident reports, p. 80	Requires schools to report serious incidents immediately, no later than the end of the school day, to the parent, placing agency, the student's public school, and the licensing agency
PART IX -- STUDENT SERVICES	
8 VAC 20-671-710. Medication and health, p. 81	Provides safeguard for medical emergencies. Outlines minimum requirements for school health programs. Requires staff training in medication management of all staff members who handle students'

	medicine
8 VAC 20-671-720. School nutrition, p. 84	Ensures students are provided with nutritionally balanced meals that meet the minimum requirements of the U.S. Dietary Guidelines
8 VAC 20-671-730. Transportation, p. 85	Requires that any transportation provided for or used by students be in compliance with local, state, and federal laws
8 VAC 20-671-740. Treatment services, p. 85	Provides protection of the instructional program and required hours of instruction to the extent possible
8 VAC 20-671-750. Student discharge, p. 85	Requires written policy and procedures for student discharge
8 VAC 20-671-760. Maintenance of student records p. 86	Outlines requirements for protecting student education records from unauthorized disclosure. Provides parents and eligible students the right to written consent for disclosure of personally identifiable information; right to access their child's records; right to obtain copies of their child's education records if failure to provide copies would effectively prevent the parent from exercising the right to inspect and review the records
8 VAC 20-671-770. Participation of students in human research, p.89	Protects students from being subjects of human research without prior consent of the parent and eligible student. Requires the school to have approval from an institutional review board or research review committee prior to participating in a human research protocol. Requires compliance with the *Code of Virginia*
PART X – SCHOOL CLOSING	
8 VAC 20-671-780. School closing procedures, p. 90	Outlines procedures for a school that ceases to operate. Requires the school to provide written notice as early as possible to all students, their parents, placing agencies, each child's public school, and the licensing agency. Requires the school to provide all education records of privately placed students to the parent(s) and education records of publicly placed students to the school divison of the parent's residence and acknowledgement to the parent or student who has reached age 18 and to the licensing agency

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education accept for first review these proposed regulations and authorize the Department of Education to proceed with the next steps of the regulatory process under the Administrative Process Act and to make any minor technical or typographic changes that do not affect the substance of the regulations.

Impact on Resources:

The administrative impact for the review and revision of this regulation is not expected to be unduly burdensome on the Department of Education and is expected to have no fiscal or administrative impact on the local school divisions. It is anticipated that the implementation of the regulation will have minimal fiscal or administrative impact on existing private schools licensed by the Board.

Each school would be required to maintain liability insurance on all vehicles used to transport students. To comply with § 22.1-324 of the *Code of Virginia*, the proposed regulations require schools to submit and maintain a guaranty instrument payable to the Commonwealth of Virginia, conditioned to protect the contractual rights of students and other contracting parties. The guaranty instrument shall be based on the school's approved capacity. The current minimum guaranty is for up to 50 students at $5,000. The proposed regulation requires a minimum guaranty of $10,000 for up to 25 students and $5,000 for each additional 25 students. In the event a guaranty instrument is terminated, the license to operate will terminate within 30 calendar days if a replacement bond or other instrument is not filed with the Department of Education. If a school collects no advance tuition other than equal monthly installments

or receives payment after services have been rendered, the school may apply to the licensing agency for exemption from the guaranty requirements.

Timetable for Further Review/Action:

The timetable for further action will be governed by the requirements of the Administrative Process Act.

D R A F T

REGULATIONS GOVERNING THE OPERATION OF

PRIVATE SCHOOLS FOR STUDENTS WITH

DISABILITIES IN THE COMMONWEALTH

First Review with Board of Education

November 2010

FOREWORD

The provisions for the operation of schools for students with disabilities are outlined in the *Code of Virginia.* The Board of Education shall make regulations not inconsistent with law for the management and conduct of schools (§ 22.1-321). No person shall open, operate, or conduct any school for students with disabilities in this Commonwealth without a License to Operate such school (§ 22.1-323). Interested parties are encouraged to consult with the Virginia Department of Education (VDOE), the licensing agency, throughout the application process.

These regulations govern the operation of education programs for students with disabilities in private day schools and children's residential facilities. They are designed to make the operation of these educational programs more closely aligned with the Board of Education's *Regulations Establishing Standards for Accrediting Public Schools in Virginia.* These regulations were drafted in collaboration with stakeholders, including administrators and parents of students enrolled in private schools for students with disabilities, representatives of public placing agencies, (school divisions, Department of Social Services, and the Department of Behavioral Health and Developmental Services), and private school accrediting agencies. With final adoption of these regulations by the Board of Education, the *Regulations Governing the Operation of Private Day Schools for Students with Disabilities, 8 VAC 20-670-10 et seq.*, were repealed.

These regulations were promulgated following the 2008 General Assembly of Virginia's amendment and reenactment of §§ 22.1-323.2, 37.2-408, and 66-24 of the *Code of Virginia* and the addition of § 37.2-408.1 of the *Code of Virginia*, relating to the regulations of group homes

and residential facilities for children. The change eliminated the interdepartmental regulation of children's residential facilities and requires the Department of Mental Health, Mental Retardation, and Substance Abuse Services, (Department of Behavioral Health and Developmental Services, effective July 1, 2009), the Department of Social Services and the Department of Juvenile Justice to regulate and license children's residential facilities. The bill requires that the Board of Education and the VDOE continue with oversight responsibility of the educational programs of children's residential facilities. In response to SB 472 of the 2008 General Assembly of Virginia, the Board of Education, promulgated new regulations for the operation of educational programs in private schools for children with disabilities, including education programs in children's residential and group homes. The VDOE is the licensing agency over all schools for students with disabilities.

In addition to these regulations, the following statutes and regulations are applicable to children with disabilities placed in private schools by public agencies: *Regulations Governing Special Education Programs for Children with Disabilities in Virginia, Code of Virginia*, *Section 504 of the Rehabilitation Act of 1973*, Comprehensive Services Act for Risk Youth and Families of 1993, *Americans with Disabilities Act*, and the *Virginians with Disabilities Act*.

PREAPPLICATION CONSULTATION SERVICES

Education specialists for private schools for students with disabilities in the Virginia Department of Education's (VDOE) Division of Special Education and Student Services provide consultation to interested parties in establishing a private school for students with disabilities. They make a preliminary review to determine whether the prospective school will be able to meet minimum requirements regarding building specifications, staff qualifications, educational program and services, and length of school day and school year. Applicants are encouraged to seek the need for a school for students with disabilities in the prospective area before submitting an application. It is also important that prospective applicants understand that they may need to seek licensure from other licensing agencies when they plan to offer noneducational services such as therapeutic treatment. In this case, a school for students with disabilities shall have a *License to Operate* issued by the Board of Education and a license issued by the Board of Behavioral Health and Developmental Services. Each licensing agency is required to issue a license or certificate to operate under the authority of the applicable section of the *Code of Virginia*.

Education specialists for private schools for students with disabilities are available to answer questions about the licensure process. They cannot provide consultation on which disability category to be served by the school, the location of the school, or how to market the school or educational program or services. A directory of licensed schools for students with disabilities, a survey form to determine the need for a school, application for a *License to Operate* a new school, the VDOE contact information, and other information are available on the VDOE's Web site at http://www.doe.virginia.gov/ under Special Education.

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PART I.

DEFINITIONS

8VAC-20-671-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise:

"Applicant" means the person, partnership, corporation, or association that has completed and submitted an application to the licensing agency for approval for a *License to Operate* a school for students with disabilities in Virginia.

"Autism" means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. Autism does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance. A child who manifests the characteristics of autism after age three could be identified as having autism if the criteria in this definition are satisfied. (34 CFR 300.8(c) (1))

"Behavioral intervention plan" means a plan that utilizes positive behavioral interventions and supports to address behaviors that interfere with the learning of students with disabilities or with the learning of others or behaviors that require disciplinary action.

"Behavioral support" means those principles and methods employed by a school to help a student achieve positive behavior and to address and correct a student's behavior in a

constructive and safe manner in accordance with written policies and procedures governing program expectations, educational and treatment goals, safety and security, and the student's Individualized Education Program (IEP) or Individual Instruction Plan (IIP) ____.

"Board" means the State Board of Education which has general supervision of the public school system_____.

"Business day" means Monday through Friday, 12 months of the year, exclusive of federal and state holidays (unless holidays are specifically included in the designation of business days.)

"Calendar days" means consecutive days, inclusive of Saturdays and Sundays. Whenever any period of time fixed by this chapter shall expire on a Saturday, Sunday, or federal or state holiday, the period of time for taking such action under this chapter shall be extended to the next day, not a Saturday, Sunday, or federal or state holiday.

"Complaint" means an accusation that a school has violated one or more of the requirements of this chapter or other applicable regulation(s).

"Consent" means:

1. The parent(s) or eligible student has been fully informed of all information relevant to the activity for which consent is sought in the parent's(s') or eligible student's native language, or other mode of communication;

2. The parent(s) or eligible student understands and agrees, in writing, to the carrying out of the activity for which consent is sought, and the consent describes that activity and lists the records (if any) that will be released and to whom; and

3. The parent(s) or eligible student understands that the granting of consent is voluntary on the part of the parent(s) or eligible student and may be revoked any time.

If a parent revokes consent, that revocation is not retroactive (i.e., it does not negate an action that has occurred after the consent was given and before the consent was revoked. Revocation ceases to be relevant after the activity for which consent was obtained was completed.).

The meaning of the term "consent" is not the same as the meaning of the term "agree" or "agreement." "Agree" or "agreement" refers to an understanding between the parent and the school about a particular matter and as required in this chapter. There is no requirement that an agreement be in writing, unless stated in this chapter. The school should document their agreement.

"Controlled substance" means a drug or other substance identified under schedules I, II, or III, IV, or V in § 202(c) of the Controlled Substances Act, 21 USC § 812(c). (34 CFR 300.530 (i)(1))

"Corrective action plan" means the school's plan of action to correct finding(s) of noncompliance. The plan must identify specific timelines and person(s) responsible for implementation.

"Deaf-blindness" means simultaneous hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness. (34 CFR 300.8(c)(3))

"Deafness" means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, that adversely affects the child's educational performance. (34 CFR 300.8(c)(3))

"Department" means the Virginia Department of Education.

"Developmental delay" means a disability affecting a child age two by September 30 through six, inclusive: (34 CFR 300.8(b); [34 CFR 300.306(b))

1. (i) Who is experiencing developmental delays, as measured by appropriate diagnostic instruments and procedures, in one or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development, or (ii) who has an established physical or mental condition that has a high probability of resulting in developmental delay;

2. The delay(s) is not primarily a result of cultural factors, environmental or economic disadvantage, or limited English proficiency; and

3. The presence of one or more documented characteristics of the delay has an adverse effect on educational performance and makes it necessary for the student to have specially designed instruction to access and make progress in the general educational activities for this age group.

"Disability category" means a listing of special education eligibility classifications for students served including: autism, deaf-blindness, developmental delay, emotional disability, hearing impairment, (including deafness), intellectual disability, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury, and visual impairment (including

blindness). § 22.1-213 of the *Code of Virginia*; 34 CFR 300.8(a)(1) and 34 CFR 300.8(a)(2)(i) and (ii)).

"Education records," also known as scholastic records, mean those records that are directly related to a student, and maintained by the school or by a party acting for the school. Education records may be recorded in any manner, including, but not limited to, handwriting, print, computer media, video or audiotape, film, microfilm, or microfiche. Education records include discipline and medical records. Education records include electronic exchanges between school personnel and parent(s) regarding matters associated with the child's educational program.

"Eligible student" means a student who has reached 18 years of age.

"Emotional disability" means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (34 CFR 300.8(c)(4))

1. An inability to learn that cannot be explained by intellectual, sensory, or health factors;

2. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;

3. Inappropriate types of behavior or feelings under normal circumstances;

4. A general pervasive mood of unhappiness or depression; or

5. A tendency to develop physical symptoms or fears associated with personal or school problem s.

Emotional disability includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disability as

defined by the *Regulations Governing Special Education Programs for Children with Disabilities in Virginia, 8 VAC 20-80-10 seq.*

"Guaranty instrument" means a surety bond, irrevocable letter of credit or certificate of deposit.

"Hearing impairment" means an impairment in hearing in one or both ears, with or without amplification, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness in the *Regulations Governing Special Education Programs for Children with Disabilities*. (34 CFR 300.8(c)(5))

"Illegal drug" means a controlled substance, but does not include a controlled substance that is legally possessed or used under the supervision of a licensed health-care professional or that is legally possessed or used under any other authority under the Controlled Substances Act, 21 USC §812(c), or under any other provision of federal law.

"Individualized Education Program" or "IEP" means a written statement for a child with a disability that is developed, reviewed, and revised at least annually in a team meeting in accordance with the *Regulations Governing Special Education for Children with Disabilities in Virginia.* The IEP specifies the individual educational needs of the child and what special education and related services are necessary to meet the child's educational needs. (34 CFR 300.22)

"Individualized Instruction Plan" or "IIP" means a written statement (plan) for a child who is privately placed or for a child that has not been determined eligible for special education services that is developed, reviewed, and revised at least annually in a team meeting that

includes the parent. The IIP specifies the student's academic level, course of study, individual educational needs, and the educational services the child will receive.

"Intellectual disability" means the definition formerly known as "mental retardation" and means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period that adversely affects a child's educational performance. (34 CFR 300.8(c)(6))

"Licensee" also known as the sponsor, means the person, partnership, corporation, or association to whom a license is issued and who is legally responsible for compliance with this chapter.

"License to Operate" or "license" means a document issued by the State Superintendent of Public Instruction, verifying approval to operate a school for students with disabilities and that indicates the status of the school regarding compliance with applicable regulations.

"Licensing agency" means the Virginia Department of Education.

"Multiple disabilities" mean simultaneous impairments (such as intellectual disability with blindness, intellectual disability, with orthopedic impairment), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blindness. (34 CFR 300.8(c)(7)

"Orthopedic impairment" means a severe orthopedic impairment that adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly, impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and

impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures). (34 CFR 300.8(c)(8))

"Other health impairment" means having limited strength, vitality or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome that adversely affects a child's educational performance. (34 CFR 300.8(c)(9)

"Paraprofessional," also known as paraeducator, means an appropriately-trained employee who assists and is supervised by qualified professional staff in meeting the requirements of this chapter.

"Parent" means (§ 22.1-213.1 of the *Code of Virginia*)

A. For purposes of these regulations:

1. A biological or adoptive parent of a child;

2. A foster parent, even if the biological or adoptive parent's rights have not been terminated, but subject to subsection B;

3. A guardian generally authorized to act as the child's parent, or authorized to make educational decisions for the child, (but not the Commonwealth if the child is a ward of the Commonwealth);

4. An individual acting in the place of a biological or adoptive parent (including grandparent, stepparent, or other relative) with whom the child lives, or an individual who is legally responsible for the child's welfare; or

5. If no party qualified under subdivisions 1 through 4 can be identified, or those parties are unwilling to act as parent, a surrogate parent who has been appointed in accordance with 8 VAC 20-80-80.

B. The biological or adoptive parent, when attempting to act as the parent pursuant to this section and when more than one party is qualified under subsection A to act as a parent, must be presumed to be the parent for purposes of this section unless the biological or adoptive parent has had their residual parental rights and responsibilities terminated pursuant to § 16.1-277.01, 16.1-277.02, 16.1-283 or a comparable law in another state.

C. The local school division shall provide written notice to the biological or adoptive parents at their last known address that a foster parent is acting as the parent pursuant to this section, and the local school division is entitled to rely upon the actions of the foster parent pursuant to this section until such time that the biological or adoptive parent attempts to act as the parent.

D. If a judicial decree or order identifies a specific person or persons among subdivisions A 1 through A 5 to act as the "parent" of a child or to make educational decisions on behalf of a child, then such person or persons shall be determined to be the "parent" for purposes of the special education identification, evaluation, and placement of a child and the provision of a free appropriate public education to a child.

"Personally-identifiable information" means information that includes, but is not limited to:

(1) the student's name, the child's parent, or other family member;

(2) the address of the child;

(3) A personal identifier, such as the child's social security number or student number; or

(4) A list of personal characteristics that would make the student's identity easily traceable.

"Physical restraint," means the use of approved physical interventions or "hands-on" holds by trained staff to prevent a student from moving his/her body to engage in a behavior that places him/her or others at risk of physical harm. Physical restraint does not include:

1. briefly holding a student in order to calm or comfort the student; or

2. holding a student's hand or arm to escort the student safely from one area to another.

(Board of Education's *Guidelines for the Development of Policies and Procedures for Managing Student Behaviors in Emergency Situations*)

"Privately-placed student" means a student placed in a private school for students with disabilities by their parent or parents.

"Publicly-placed student" means a student placed in a private school for students with disabilities by a local school division or Comprehensive Services Act team or by Court Order.

"Qualified personnel" or "qualified staff" means personnel who have met Virginia Department of Education approved or recognized certification, licensing, registration, or other comparable requirements that apply to the area in which the individual is providing special education or related services. In addition, the professional must meet other state

agency requirements for such professional service and Virginia licensure requirements as designated by Virginia law or regulations.

"Related services" mean transportation and such developmental, corrective, and other supportive services as are required to assist a child with a disability to benefit from special education and includes speech-language pathology and audiology services; interpreting services; psychological services; physical and occupational therapy; recreation, including therapeutic recreation; early identification and assessment of disabilities in children; counseling services, including rehabilitation counseling; orientation and mobility services; medical services for diagnostic or evaluation purposes. Related services also includes school health services and school nurse services; social work services in schools; and parent counseling and training. Related services do not include a medical device that is surgically implanted including cochlear implants, the optimization of device functioning (e.g., mapping), maintenance of the device, or the replacement of that device. The list of related services is not exhaustive and may include other developmental, corrective, or supportive services (such as artistic and cultural programs, and art, music and dance therapy), if they are required to assist a child with a disability to benefit from special education. (§ 22.2-213 of the *Code of Virginia*; 34 CFR 300.34(a) and (b))

"Regulations" means this document in its entirety (8 VAC 20-671).

"School" means a school for students with disabilities that has a *License to Operate* issued by the Superintendent of Public Instruction.

"School for students with disabilities" or "school" or "schools" means a privately owned and operated preschool, school or educational organization, no matter how titled, maintained,

or conducting classes for the purpose of offering instruction, for a consideration, profit or tuition, to persons determined to have autism, deaf-blindness, developmental delay, a hearing impairment including deafness, multiple disabilities, orthopedic impairment, other health impairment, an emotional disturbance, a severe disability, a specific learning disability, a speech or language impairment, a traumatic brain injury, or a visual impairment including blindness. (§ 22.1-319 of the *Code of Virginia)*

"Seclusion" means the confinement of a student alone in a room from which the student is physically prevented from leaving. (Board of Education's *Guidelines for the Development of Policies and Procedures for Managing Student Behaviors in Emergency Situations*)

"Section 504" means that section of the Rehabilitation Act of 1973 (8 VAC 20-671), as amended, which is designed to eliminate discrimination on the basis of disability in any program or activity receiving federal financial assistance. (29 USC § 701 et seq.)

"Serious incident" means:

1. Any accident or injury requiring medical attention by a physician;

2. Any illness that requires hospitalization;

3. Any runaway, or

4. Any event that affects, or potentially may affect, the health, safety, or welfare of any student being served at the school or school-related activity.

"Serious injury" means any injury resulting in bodily hurt, damage, harm, or loss that requires medical attention by a licensed physician.

"Special education" means specially-designed instruction to meet the unique needs of a child with a disability. There is no cost to the parent(s) for special education for a child who is placed in a school for students with disabilities by a school division, Department of Social Services, or court order. (§ 22.1-213 of the *Code of Virginia*; 34 CFR 300.39)

1. Speech-language pathology services or any other related service, if the service is considered special education rather than a related service under state standards;

2. Vocational education; and

3. Travel training.

"Specially-designed instruction" means adapting, as appropriate to the needs of an eligible child under this chapter, the content, methodology, or delivery of instruction: (34 CFR 300.39(b)(3))

1. To address the unique needs of the child that result from the child's disability; and

2. To ensure access of the child to the general curriculum, so that the child can meet the educational standards that apply to all children within the jurisdiction of the local educational agency.

"Specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities; of intellectual disabilities; of emotional

disabilities; of environmental, cultural, or economic disadvantage. (§ 22.1-213 of the *Code of Virginia*; 34 CFR 300.8(c)(10))

Dyslexia is distinguished from other learning disabilities due to its weakness occurring at the phonological level. Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

"Speech or language impairment" means a communication disorder, such as stuttering, impaired articulation, expressive or receptive language impairment, or voice impairment that adversely affects a child's educational performance. (34 CFR 300.8(c)(11))

"Standard precautions" mean precautions designed to prevent transmission of HIV, hepatitis B virus (HBV), and other bloodborne pathogens when providing first aid or health care. Standard cautions apply to blood, all body fluids, secretions, and excretions except sweat, regardless of whether or not they contain blood, nonintact skin; and mucous membranes. The precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection when providing first aid or health care. Standard precautions include protective barriers such as gloves, gowns, aprons, mask or protective eye wear which can reduce the risk of exposure with materials that may contain infectious microorganisms.

"Standards of Learning" or "SOL" means Virginia's rigorous academic standards established by the Board of Education.

"Strip search" means a visual inspection of the body of a student when that student's outer clothing or total clothing is removed, and there is an inspection of the removed clothing. Strip searches are conducted for the detection of contraband.

"Superintendent" means the State Superintendent of Public Instruction.

"Teacher of record" means the teacher who is responsible for the delivery of instruction. The teacher of record shall hold a license issued by the State Board of Education.

"Time-out" means assisting a student to regain control by removing the student from his immediate environment to a different open location until the student is calm or the problem behavior has subsided. (Board of Education's *Guidelines for the Development of Policies and Procedures for Managing Student Behaviors in Emergency Situations*)

"Traumatic brain injury" means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. Traumatic brain injury applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. Traumatic brain injury does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma. (34 CFR 300.8(c)(12))

"Visual impairment including blindness" means an impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness. (34 CFR 300.8(c)(13))

"Volunteer" means any individual who of his own free will, and without compensation, provides goods or services to the school.

"Virtual learning" means the delivery of instruction through emerging technologies such as satellite, streaming video, or the Internet.

PART II.

GENERAL PROVISIONS AND REQUIREMENTS

8 VAC 20-671-20. Exemptions.

These regulations shall not apply to any of the following at § 22.1-320 of the *Code of Virginia:*

1. Any school that is licensed or approved pursuant to other statutes of the Commonwealth;

2. Any public or private high school accredited or recognized by the Board of Education that has offered or may offer programs for students with disabilities covered in these regulations, if any tuition, fees, and charges made by the school are collected in accordance with the regulations prescribed by the governing body of such school;

3. Tutorial instruction given in a private home or elsewhere as supplemental to regular classes for students enrolled in any public or private school or in preparation of an individual for an examination for professional practice or higher education;

4. A program through which persons with disabilities are provided employment and training primarily in simple skills in a sheltered or protective environment;

5. Any privately owned or operated preschool, elementary, middle or secondary school that operates primarily to provide educational services to students without disabilities, although the school may serve children with disabilities in a regular academic setting; or

6. Any private school for students with disabilities that operates in or on the premises of an elementary, middle, or secondary public school in a regular school setting during a typical school day.

8 VAC 20-671-30. Licenses generally.

A. The Board of Education has established general requirements for a *License to Operate* a private school for students with disabilities and has authorized the Superintendent of Public Instruction to issue licenses. The following applies in accordance with § 22.1-323 of the *Code of Virginia*:

1. No person shall open, operate, or conduct any school for students with disabilities in this Commonwealth without a *License to Operate*.

2. A *License to Operate* shall be restricted to the disability categories specifically indicated on the license, which may include one or more of the disability categories in the definition of a school for students with disabilities in this chapter.

3. A *License to Operate* may be issued for a period of up to three successive years.

4. The term of a school's license may be reduced at any time during the licensure period based on a change in the school's compliance with these requirements.

5. A *License to Operate* shall be prominently displayed on the premises of the school in a place open for inspection by any interested person during the hours of operation.

6. A *License to Operate* shall be restricted to the approved conditions as printed on the license. Such conditions include, but are not limited to, the maximum number of students that can be enrolled, the disability category or categories of students that can be served, and the age range and gender.

B. An individual seeking to operate a school for students with disabilities shall file an application with the licensing agency. Applications may be retrieved from the Department of Education's Web site at http://www.doe.virginia.gov/.

C. A license to operate shall be restricted to the approved conditions as printed on the license. Such conditions include, but are not limited to, the maximum number of students that can be enrolled, the disability category or categories of students that can be served, and the age range and gender.

D. The licensing agency may make exception to the requirements of this chapter for good cause.

8 VAC 20-671-40. Advertising.

The following provisions consistent with § 22.1-323 of the *Code of Virginia* regarding advertisement of a school shall apply:

A. No school may use the seal of the Commonwealth in any advertisement, publication, or document, including diplomas, certificates, and other awards.

B. The advertisement of a school shall be in a form and manner that is free from misrepresentation, deception, or fraud and shall conform to the following:

1. The complete school name as listed on the *License to Operate* shall be used in all publicity, publications, promotions, or marketing purposes.

2. Advertisement shall not expressly, or by implication, indicate by any means that the *License to Operate* represents an endorsement by the Virginia Department of Education or the Board of Education.

3. No fraudulent or misleading statement shall be in print or nonprint about the school's admission policy, tuition and fees; programs and services; size and location; or any other information concerning the school.

4. Endorsements, commendations, or recommendations by students, individuals, manufacturers, business establishments, or organizations are prohibited except with their written consent and without any offer of financial compensation.

5. The accrediting agency shall be named, if accreditation is used, as part of a school's promotional materials.

C. Prospective applicants may advertise projected services and staff positions while in the application process but shall not misrepresent licensure status and shall not enroll students prior to receiving a *License to Operate* from the Superintendent of Public Instruction.

8 VAC 20-671-50. Types of licenses.

The following shall apply consistent with § 22.1-323.1 of the *Code of Virginia*:

A. A conditional license shall be issued to a new school that demonstrates compliance with administrative and policy requirements but has not demonstrated compliance with all requirements of these regulations.

1. A conditional license may be renewed.

2. The issuance of a conditional license and any renewals thereof shall be for no longer a period than six successive months.

B. A provisional license may be issued to a school that has demonstrated an inability to maintain compliance with these regulations or other applicable regulations.

1. A provisional license may be issued at any time.

2. A provisional license may be renewed.

3. The issuance of a provisional license and any renewal thereof shall be for no longer a period than six successive months.

C. An annual license may be issued under the following conditions and may be extended for a period not to exceed six successive months:

1. A school applies for renewal while holding a conditional or provisional license substantially meets the requirements of these regulations;

2. The licensing agency determines that a major violation has occurred that impacts the overall operation of the school; or

3. The school makes significant changes in its operation.

D. A triennial license shall be issued when a school:

1. Applies for renewal while holding an annual or triennial license; and

2. Substantially meets or exceeds the requirements of these and other applicable regulations.

E. The term of a school's license may be modified at any time during the licensure period based on a change in the school's compliance with these regulations and other applicable regulations.

8 VAC 20-671-60. Change in condition(s).

A. The condition(s) of a license may be modified during the term of the license with respect to: capacity of the school or classrooms; disability category or categories of students served; age range of students; change in location; change in services; change in ownership; merger of schools; and enrollment of day student(s) in a residential setting.

B. A change in condition(s) shall not be implemented prior to approval by the licensing agency. The licensing agency shall respond to the request and provide approval or denial in 10 calendar days following the date the request was received.

C. Change in condition(s) may not be approved during a provisional or conditional licensure period.

8 VAC 20-671-70. *License to Operate* is nontransferable.

A change of ownership occurs when control of a school changes from one owner to another. If there is a change in ownership, the following shall apply:

1. The licensee shall notify the licensing agency at least 30 calendar days prior to the proposed change.
2. The new owner shall submit an initial application for a *License to Operate* to the licensing agency within 30 calendar days following the effective date of the change in ownership.
3. The school may operate under the existing license for 60 calendar days from the effective date of the change in ownership at which time a conditional license may be issued.

8 VAC 20-671-80. Penalty for noncompliance in obtaining a *License to Operate*.

Failure to obtain a *License to Operate* a school for students with disabilities shall result in the following penalties allowed in § 22.1-331 of the *Code of Virginia*:

A. Any person who opens, operates, or conducts a school without first obtaining a license to operate may be found guilty of a Class 2 Misdemeanor.

B. Each day the school remains open without a *License to Operate*, the owner or board of directors shall incur a separate offense.

C. The licensing agency shall refer to the Office of the Attorney General any alleged or known violation of these provisions. The Office of the Attorney General shall refer the

matter to the Commonwealth Attorney of proper jurisdiction.

8 VAC 20-671-90. Directory of private schools for students with disabilities.

The licensing agency shall maintain a directory of schools holding valid licenses to operate which shall be available to the public (§ 22.1-332 of the *Code of Virginia*). The directory shall identify other applicable state licensing agencies over the school and may include additional information to inform the public about the school's operation.

PART III.

SCHOOL LICENSING PROCESS

8 VAC 20-671-100. Initial application.

To obtain a *License to Operate* a school for students with disability, an application shall be filed with the Department of Education. A completed initial application shall include the following:

1. Complete name and physical address of the school;
2. Name(s) and address(es) of owner(s), controlling official(s), and managing employee(s);
3. Evidence that the applicant has conducted a needs assessment;
4. Evidence of the applicant's compliance with the applicable regulations of the State Corporation Commission when the school is owned by a partnership or corporation;
5. Narrative description of building and scale drawing or copy of the floor plan(s) including room use and dimensions;
6. Certificate of occupancy with educational use group or other report(s) from the appropriate government agency or agencies indicating that the location(s) meet

applicable zoning, building code, use permit, business license, fire safety, and sanitation requirements;

7. Copy of the deed, lease, or other legal instrument authorizing the school to occupy such location;

8. Proposed working budget for the year showing projected revenue and expenses for the first year of operation and a balance sheet showing assets and liabilities; a three-year financial plan, and documentation of sufficient operating capital or line of credit to carry the school through the first year of operation;

9. Original signed surety bond, irrevocable letter of credit, or certificate of deposit to protect the contractual rights of parents and students;

10. Schedule of tuition and other fees and the procedure for collecting and refunding tuition;

11. Copies of all proposed advertisements;

12. Description of the education program to include disability category or categories to be served, enrollment capacity, age range, gender, and course offerings;

13. Listing of instructional resources and equipment;

14. Description of related services;

15. School's policy manual;

16. Proposed staffing and organizational chart;

17. Job description for each position;

18. Parent/student handbook;

19. Statement of transportation services if the school provides transportation for

students;

20. Statement regarding provision of student lunches; and

21. Any other information necessary to complete the application process.

8 VAC 20-671-110. Applicant commitments.

Each application for a *License to Operate* a school for students with disabilities shall contain the following commitments:

1. To conduct the school in accordance with all applicable regulations of the Board;
2. To permit the Board or Department to inspect the school or classes being conducted therein at any time and to make available to the Board or Department, when requested to do so, all information pertaining to the activities of the school required for the administration of these regulations, including its financial condition;
3. To advertise the school at all times in a form and manner that is free from misrepresentation, deception, or fraud and to conform to provisions of the Board governing such advertising;
4. To ensure that all representations made by an agent of the school are free from misrepresentation, deception, or fraud and to conform to provisions of the Board governing such advertising;
5. To display the current *License to Operate* prominently where it may be inspected by students, visitors, and the Board or Department; and
6. To maintain all premises, equipment, and facilities of the school in an adequate, safe and sanitary condition.

8 VAC 20-671-120. Assessment of application.

A. The licensing agency shall evaluate each application within 60 calendar days from the date received and advise the applicant in writing of approval or deficiencies.

B. The applicant shall correct all deficiencies within 30 calendar days from the date of the written assessment of the application. The licensing agency may grant an extension for a reasonable period of time.

C. Any application that has not been approved within the allotted time period shall be denied and returned to the applicant. The applicant may reapply for a license 90 calendar days following the date of the returned application.

D. The licensing agency may require the applicant to appear before a review committee for final approval of the application.

8 VAC 20-671-130. On-site inspection.

Before a license can be issued, the licensing agency shall conduct an on-site inspection or equivalent virtual inspection of the school building and grounds to determine its suitability for the operation of a school for students with disabilities.

8 VAC 20-671-140. Renewal of licenses.

A. Sixty calendar days prior to the expiration of a *License to Operate*, the licensee shall submit to the licensing agency notification of intent for continued operation of the school.

B. The license of each school that continues to operate as such shall be renewed on or before the anniversary date set by the licensing agency.

C. Each license that has not been renewed in accordance with these provisions shall expire and a new license shall be obtained from the Board before such school may continue to operate. A new application must be submitted to the licensing agency.

PART IV.

OVERSIGHT RESPONSIBILITY

8 VAC 20-671-150. Monitoring.

The licensing agency shall:

A. Make at least one announced or unannounced visit during the effective dates of the *License to Operate* for the purpose of monitoring the school's compliance with this chapter;

B. Notify relevant local government, placing and funding agencies of health and safety or human rights violations.

C. Cooperate with other licensing agencies; specifically, the Department of Social Services and the Department of Behavioral Health and Developmental Services, in fulfilling licensing responsibilities. The licensing agency shall notify relevant local governments and placing and funding agencies when a school's licensure status is lowered to provisional.

8 VAC 20-671-160. Complaint resolution procedures.

A. A complaint may be filed with the licensing agency by any individual or organization and shall address an action that occurred not more than one year prior to the date the complaint is received by the licensing agency.

B. A complaint must provide a statement of some disagreement with procedures or process regarding any matter relative to these regulations or other applicable regulations.

C. Upon receipt of a complaint, the licensing agency shall initiate an investigation to determine whether the school is in compliance with applicable laws and regulations in accordance with the following procedures:

1. Within seven business days of the receipt of a complaint, the licensing agency

shall provide written notification to each complainant and the private school.

a. The notification sent to the school shall include:

(1) A copy of the complaint;

(2) An offer of technical assistance in resolving the complaint;

(3) A statement that the school has the opportunity to propose a resolution of the complaint;

(4) A request that the school submit within 10 business days of receipt of the letter of notification either:

(a) written documentation that the complaint has been resolved; or

(b) if the complaint was not resolved, a written response including all requested documentation.

2. The licensing agency shall review the complaint and the school's response and determine the need for any further investigation or corrections.

3. The licensing agency shall notify appropriate agencies of serious violations.

4. During the course of the investigation, the licensing agency shall:

(a) Conduct an investigation of the complaint that shall include a complete review of all relevant documentation and may include interviews with appropriate individuals, and an independent on-site investigation, if necessary.

(b) Consider all facts and issues presented and the applicable requirements specified in these regulations or other applicable regulations.

(c) Make a determination of compliance or noncompliance on each issue in the complaint based upon the facts and applicable regulations and notify the

parties in writing of the findings and the bases for such findings.

The licensing agency has 60 calendar days after the written complaint is received to carry out the investigation and to resolve the complaint. An extension of the 60 calendar day time limit may occur if exceptional circumstances exist with respect to a particular complaint.

(d) Ensure that the final decision is effectively implemented, if needed, through technical assistance activities, negotiations, and corrective actions to achieve compliance.

(e) Notify the parties in writing of any needed corrective actions and the specific steps that shall be taken by the school to bring it into compliance with applicable timelines.

E. Parties to the complaint procedures shall have the right to appeal the final decision to the licensing agency within 30 calendar days of the issuance of the decision.

F. When the school develops a plan of action to correct the violations, such plan shall include timelines to correct violations not to exceed 30 business days unless circumstances warrant otherwise. The plan of action shall include a description of all changes contemplated and shall be subject to approval of the licensing agency.

G. If the school does not come into compliance within the period of time set forth in the notification, the licensing agency may reduce or revoke the school's *License to Operate*.

8 VAC 20-671-170. Denial, revocation, or suspension of license.

A. The Superintendent may refuse to issue or renew a *License to Operate* or may revoke or suspend a license issued to any school pursuant to these regulations for the following causes (§ 22.1-329 of the *Code of Virginia):*

1. Violating any provision of these regulations or regulation of the Board;

2. Furnishing false, misleading, or incomplete information to the Board or Department or failure to furnish information requested by the Board or Department;

3. Violating any commitment made in an application for a license;

4. Presenting either by the school or by any agent of the school to prospective students information relating to the school which is false, misleading, or fraudulent;

5. Failing to provide or maintain premises or equipment in a safe and sanitary condition as required by law;

6. Making any false promises through agents or by advertising or otherwise of a character likely to influence, persuade, or induce enrollments;

7. Paying a commission or valuable consideration to any person for any act of service performed in willful violation of this chapter;

8. Failing to maintain financial resources adequate for the satisfactory conduct of courses of instruction offered or to retain a sufficient or qualified instructional staff;

9. Demonstrating unworthiness or incompetency to conduct the school in a manner calculated to safeguard the interests of the public;

10. Failing within a reasonable time to provide information requested by the Board or Department as a result of a formal or informal complaint to or by the Board or Department which would indicate a violation of these requirements;

11. Attempting to use or employ any enrolled students in any commercial activity whereby the school receives any compensation whatsoever without reasonable remuneration to the student, except to the extent that employment of students in such activities is necessary or essential to their training and is permitted and authorized by the Board; or

12. Engaging in or authorizing any other conduct whether of the same or of a different character from that herein specified which constitutes fraudulent or dishonest dealings.

8 VAC 20-671-180. Summary of suspension.

The provisions of the Administrative Process Act at § 2.2-4000 et seq. of the *Code of Virginia* shall be applicable to proceedings under this section. In compliance with § 22.1-329 of the *Code of Virginia*, the following shall apply:

A. In addition to the authority for other disciplinary actions provided in this chapter, the Superintendent of Public Instruction may issue a summary order of suspension of a license of a residential or day school for students with disabilities in conjunction with any proceeding for revocation, denial, or other action when conditions or practices exist in the school that pose an immediate and substantial threat to the health, safety, and welfare of the students who are residing or attending the school and the Superintendent of Public Instruction believes the operation of the school should be suspended during the pendency of such proceeding.

B. The summary order of suspension shall take effect upon its issuance and shall be served on the licensee or its designee as soon as practicable thereafter by personal service and certified mail, return receipt requested, to the address of record of the licensee. The order shall state the time, date, and location of a hearing to determine whether the suspension is appropriate. Such hearing shall be held no later than three business days after the issuance of the summary order of suspension and shall be convened by the Superintendent of Public Instruction or designee.

C. After such hearing, the Superintendent of Public Instruction may issue a final order of summary suspension or may find that such summary suspension is not warranted by the facts and circumstances presented. A final order of summary suspension shall include notice that the licensee may appeal the Superintendent of Public Instruction's decision to the appropriate circuit court no later than 10 days following issuance of the order. The sole issue before the court shall be whether the Superintendent of Public Instruction had reasonable grounds to require the licensee to cease operations during the pendency of the concurrent revocation, denial, or other proceeding. The concurrent revocation denial or other proceeding shall not be affected by the outcome of any hearing on the appropriateness of the summary suspension.

D. The willful and material failure to comply with the summary order of suspension or final order of summary suspension shall be punishable as a Class 2 misdemeanor. The Superintendent of Public Instruction may require the cooperation of any other agency or subdivision of the Commonwealth in the relocation of students who are residents of a home or facility whose license has been summarily suspended pursuant to this section and in any other actions necessary to reduce the risk of further harm to students.

8 VAC 20-671-190. Timeline for correction of unsatisfactory conditions.

In compliance with § 22.1-330 of the *Code of Virginia*, the Board or Department may:

A. Upon its own motion, and shall, upon the verified complaint in writing of any person setting forth facts which, if proved, would constitute grounds for refusal, suspension, or revocation of a license, investigate the actions of any applicant for or any person or persons holding or claiming to hold a *License to Operate*.

B. Before refusing to renew, revoking, or suspending any license, the Board may grant such period of time as it deems reasonable to correct any unsatisfactory condition.

PART V

ADMINISTRATION OF THE SCHOOL

8 VAC 20-671-200. Governing body.

A. Each school shall use its complete name as listed on the *License to Operate* for all publicity, publications, promotions, or marketing purposes.

B. Any governing board, body, entity, or person to whom it delegates the legal responsibilities and duties of the licensee shall be clearly identified.

8 VAC 20-671-210. Responsibilities of the licensee.

The licensee shall:

A. Appoint an individual(s) to whom it delegates the authority and responsibility to assume the administrative direction of the school. The appointment shall be in writing.

B. Develop and implement a written decision-making plan that shall include provision for a staff person with the qualifications of the school administrator or education program director to be designated to assume the temporary responsibility for the operation of the school in the absence of the school administrator. The plan shall include a current organizational chart.

C. Ensure that staff positions and responsibilities meet the needs of the population served.

D. Develop a written statement of the objectives of the school including a description of the target population and the program offerings.

E. Develop and implement written policies and procedures to monitor and evaluate the effectiveness of the education program on a systematic and ongoing basis and implement improvements when the need is determined.

F. Ensure compliance with applicable child-labor laws.

G. Develop a written policy prohibiting the consumption of tobacco products, drugs, and alcohol or being under the influence of intoxicating and or hallucinogenic agents while on campus and at school-sponsored activities.

H. Require as a condition of employment that any applicant who accepts employment full-time or part-time, permanent or temporary, including interns and volunteers, to submit to fingerprinting and to provide personal descriptive information to be forwarded along with the applicant's fingerprints through *Virginia's Central Criminal Records Exchange to the Federal Bureau of Investigation* for the purpose of obtaining criminal history record information regarding such applicant. In addition, where the applicant has resided in another state within the last five years, the school shall as a condition of employment determine if there are any founded complaints of child abuse or neglect in such state(s) pursuant to§ 22.1-296.3 and 22.1-296.4 of the *Code of Virginia.*

I. Require as a condition of employment that any applicant who accepts employment requiring direct contact with students whether full-time or part-time, permanent or temporary, including interns and volunteers, provide written consent and necessary personal information for the school to obtain a search of the registry of founded complaints of child abuse and neglect maintained by the Department of Social Services pursuant to § 63.2-1515 of the *Code of Virginia*.

J. Notify the licensing agency within five calendar days of any change in administration or newly appointed individual responsible for the day-to-day administration or operation of the school.

K. Ensure that all staff members receive annual professional development related to their job responsibilities.

L. Report to the licensing agency within 10 business days lawsuits, settlements, or criminal charges relating to the operation of the school.

M. Develop and implement an accessible policy and procedures to handle grievances from students, parents, and employees.

8 VAC 20-671-220. Fiscal accountability.

A. The licensee shall prepare at the end of each fiscal year:

1. An operating statement to include a month-to-month accounting of revenue and expenses for the fiscal year just ended;

2. A working budget showing projected revenue and expenses for the next fiscal year that gives evidence of sufficient funds to operate; and

3. A balance sheet showing assets and liabilities for the fiscal year just ended.

B. There shall be a system of financial recordkeeping that shows a separation of the school's accounts from all other records.

C. There shall be written policies and procedures that address the day-to-day handling of the school's funds.

D. The licensing agency reserves the right to call for one of these two types of statements:

1. An audited financial statement certified by an outside independent certified public

accountant in accordance with standards established by the American Institute of Certified Public Accountants; or

2. A financial statement that has been reviewed by an outside independent certified public accountant in accordance with principles established for reviews by the American Institute of Certified Public Accountants.

8 VAC 20-671-230. Protection of contractual rights.

In compliance with § 22.1-324 of the *Code of Virginia*, provisions for the protection of contractual rights shall include the following:

A. With each application, the applicant shall submit and maintain a guaranty instrument payable to the Commonwealth of Virginia to protect the contractual rights of students and other contracting parties.

B. The guaranty instrument shall be based on the school's approved capacity. A minimum guaranty of $10,000 for up to 25 students and $5,000 for each additional 25 students shall apply.

C. In the event a guaranty instrument is terminated, the *License to Operate* will terminate within 30 calendar days if a replacement bond or other instrument is not filed with the licensing agency.

D. If a school collects no advance tuition other than equal monthly installments or receives payment after services have been rendered, the school may apply to the licensing agency for exemption from the guaranty requirements.

8 VAC 20-671-240. Insurance.

A. The licensee shall maintain liability insurance covering the premises and the school's operation.

B. The licensee shall maintain liability insurance on all vehicles used to transport students, including vehicles owned by staff.

C. The members of the governing body and staff who are authorized to handle school or students' funds shall be bonded.

8 VAC 20-671-250. Fundraising.

Written consent of the parent(s) or legal guardian and of a child age 14 or older shall be obtained before participating in any school fundraising activity.

8 VAC 20-271-260. Relationship to the licensing agency.

The licensee shall make information available to the licensing agency upon the requested due date in order to make a timely determination of compliance with these regulations and other applicable regulations and statutes. The licensing agency may alter the term of a license if the school fails to comply in a reasonable time period.

PART VI

SCHOOL PERSONNEL

8 VAC 20-671-270. Personnel policies and procedures.

A. The licensee shall have written personnel policies and procedures that include, but not limited to, job qualifications, job descriptions, staff supervision, evaluation, grievance, and termination.

1. The licensee shall develop and implement written policies and procedures that persons appointed or designated to assume the responsibilities of each position possess the education, experience, knowledge, skills, and abilities specified in the job description.

2. The licensee shall make written personnel policies and procedures accessible to each employee.

B. The licensee shall maintain a current organizational chart of all full-time and part-time positions.

8 VAC 20-671-280. Job qualifications.

A person who assumes or is designated to assume the responsibilities of a position or any combination of positions described in these regulations shall meet the qualifications of the position, comply with all applicable regulations for each function, and demonstrate a working knowledge of the policies and procedures applicable to the position,

8 VAC 20-671-290. Job descriptions.

A. There shall be a written job description for each position that includes job title; duties and responsibilities; job title of the immediate supervisor; and minimum education, experience, knowledge, skills, and abilities required for entry-level performance of the job.

B. A copy of the job description shall be given to each person assigned to a position at the time of employment or assignment.

8 VAC 20-671-300. School administrators.

A. The licensee shall designate one or more individuals responsible for the administrative operation of the school who serves as the instructional leader and is responsible for effective school management that promotes positive student achievement, and a safe and secure environment in which to teach and learn.

B. As the instructional leader, the school administrator is responsible for ensuring that students are provided an opportunity to learn and shall:

1. Protect the academic instructional time from unnecessary interruptions and disruptions and enable the professional teaching staff to spend the maximum time possible in the teaching/learning process by keeping to a minimum clerical responsibility and the time students are out of class;
2. Seek to maintain a safe and secure school environment;
3. Involve the staff of the school in identifying the types of staff development needed to improve student achievement and ensure that the staff participate in those activities;
4. Analyze classroom practices and methods for improvement of instruction;
5. Ensure that students' education records are maintained and that criteria used in making placement and promotion decisions, as well as any instructional interventions used to improve the student's performance, are included in the record; and
6. Monitor and evaluate the quality of instruction, provide staff development, and provide support that is designed to improve instruction.

C. The instructional leader shall hold a valid five-year renewable postgraduate professional license issued by the Board with an endorsement in school administration and supervision or special education and have at least three years of experience working with students with disabilities.

D. The instructional leader or designee shall at all times be on the premises of the school while the school is in operation.

E. All staff on duty must know who is responsible for the administration of the school at any given time.

8 VAC 20-671-310. Teachers and staffing.

A. Each teacher shall meet the requirements of the *Licensure Regulations for School Personnel*, 8 VAC 20-22-10 et. seq.

B. Staffing shall be in accordance with the *Regulations Governing Special Education Programs for Children with Disabilities in Virginia* in the following settings:

1. A student with an Individualized Education Program (IEP) may be instructed with students without disabilities, as appropriate, and in accordance with the IEP.

2. A student with an IEP may receive services with children with the same disability or with children with different disabilities.

C. Teacher personnel assignments shall be in accordance with *Regulations Governing Special Education Programs for Children with Disabilities in Virginia*.

1. General education qualified personnel who are knowledgeable about the students and their special education may implement special services in collaboration with special education personnel.

2. Special education services include those services provided directly to the student and those provided indirectly.

D. Teacher caseloads shall be assigned in accordance with the *Regulations Governing Special Education Programs for Children with Disabilities in Virginia.*

1. If children with disabilities in a single building receive academic content area instruction from multiple special education teachers, the teachers' caseloads shall be determined by using a building average.

2. When special education personnel are assigned to provide services for students who do not have a disability under this chapter or are assigned to administrative duties, there shall be a reduction in the caseload specified in proportion to the percentage of school time on such assignment.

3. Special education personnel may be assigned to serve children who are not eligible for special education and related services as long as they hold appropriate licenses and endorsements for such assignments.

E. Staffing for early childhood special education shall be in accordance with the *Regulations Governing Special Education Programs for Children with Disabilities in Virginia.*

1. Children of preschool ages (two to five, inclusive) who are eligible for special education may receive early childhood special education.

2. Students receiving early childhood special education may receive services together with other preschool-aged children with the same or with different disabilities.

F. A school may offer for consideration of approval an alternative staffing plan in accordance with the Department's procedures. The Department may grant approval for alternative

staffing levels upon request from private schools for students with disabilities seeking to implement innovative programs that are not consistent with the staffing levels outlined in the *Regulations Governing Special Education Programs for Children with Disabilities in Virginia*.

8 VAC 20-671-320. Substitute teachers.

A. No substitute teacher shall be used to fill a vacant teaching position for more than 90 teaching days in such vacancy during one school year.

B. Substitute teachers shall be at least 18 years of age; hold a high school diploma or a general educational diploma (GED); have two years of full-time postsecondary education or two years of successful work experience with children with disabilities or equivalent; and attend orientation to the school's policies and procedures.

8 VAC 20-671-330. Support staff.

A. School support personnel, including contractual service providers, shall meet the Board of Education's *Licensure Regulations for School Personnel* (VAC 20-22-10 et. seq.) or the requirements of other state or national accrediting agency.

B. Paraprofessionals and other ancillary staff shall be at least 18 years of age (21 years of age preferred); hold a high school diploma or a general educational diploma (GED); have two years of full-time successful work experience with children or completed two years of coursework in a related field; complete orientation conducted by the school administrator or designee regarding school policies and procedures and characteristics of students served; and work under the supervision of qualified staff.

C. No support staff shall be used as replacement for teachers or related service staff

unless they meet the qualifications of the position.

D. Support staff that do not meet licensure or certification requirements shall not be given misleading work titles or titles that infer that they meet required credentials.

8 VAC 20-671-340. Staff supervision.

The licensee shall develop and implement written policies and procedures regarding the supervision of employees and all other individuals working with children, including volunteers and interns.

8 VAC 20-671-350. Staff development.

A. Within seven calendar days following their begin date, each staff member responsible for working with students shall receive orientation of the school's philosophy, goals and objectives, duties and responsibilities of their position, and the school's policy and procedures for behavior intervention.

B. Within 14 calendar days following their begin date, staff shall receive emergency preparedness and response training that shall include: alerting emergency personnel and sounding alarms; implementing evacuation procedures with particular attention to students with special needs; using, maintaining and operating emergency equipment; accessing emergency information for students including medical information; and utilizing community support services.

C. Within 14 calendar days following their begin date, staff shall receive professional development on confidentiality; the school's administrative decision-making plan; and policies and procedures that are applicable to their positions, duties, and responsibilities.

D. Within 30 calendar days following their begin date, all staff shall receive training on the school's policy and procedures, including standard precautions, child abuse and neglect, and mandatory reporting.

E. Within 30 calendar days following their begin date, all staff responsible for medication administration shall have successfully completed an approved medication-training program approved by the Board of Nursing or be licensed by the Commonwealth of Virginia to administer medications. Staff shall meet this requirement before administering any medication to students and shall receive annual retraining.

F. All staff shall receive annual professional development and refresher in emergency preparedness and response to include alerting emergency personnel and sounding alarms; implementing evacuation procedures with particular attention to students with special needs; and using, maintaining, and operating emergency equipment.

G. All staff shall receive annual professional development and refresher on behavior supports; child abuse and neglect, and mandatory reporting.

H. Each full-time staff person shall complete an additional 15 hours of annual training applicable to their job duties.

8 VAC 20-671-360. Personnel records.

A. Separate up-to-date personnel records shall be maintained for each full- and part-time employee, student intern, and volunteer for whom background investigations are required by Virginia statute. Content of personnel records of volunteers, student interns, and contractual service providers shall include at minimum documentation of compliance with requirements

of Virginia laws regarding child protective services and criminal history background investigations.

B. A record shall be maintained for each staff to include:

1. A completed employment application or other documentation providing the individual's name, address, and telephone number;

2. Documentation of qualifications;

3. Employment history;

4. Written references or notations of oral references;

5. Reports of required health examinations;

6. Annual performance evaluations;

7. Date of employment for each position held and date of separation;

8. Documentation of compliance with requirements of Virginia laws regarding child protective services and criminal history background investigations;

9. Documentation of Department of Motor Vehicles checks and a current copy of the driver's license for all staff who transport students;

10. Documentation of all training required by these regulations and any other training or professional development received by individual staff; and

11. A current job description.

C. All personnel records shall be maintained confidentially and retained in their entirety for a minimum of three years after staff's separation from the school.

PART VII

SCHOOL FACILITIES AND SAFETY

8 VAC 20-671-370. School facilities and safety.

A. Each school shall be maintained in a manner ensuring compliance with the *Virginia Uniform Statewide Building Code* (13 VAC 5-61-10 et seq.) Each school shall:

1. Maintain a physical plant that is accessible, barrier free, safe, and clean;

2. Provide 50 net square feet per occupant space for classrooms and suitable space for administrative staff, pupil personnel services, library and media services, and physical education with consideration given to safety;

3. Provide adequate, safe, and properly-equipped classrooms, laboratories, play and dining areas that meet the needs of students and instruction; and

4. Provide space for safe storage of items such as first-aid equipment, medication, household supplies, school supplies, and equipment.

B. After the initial application, the school shall document annually that buildings and equipment are maintained in accordance with the *Virginia Statewide Fire Prevention Code* and maintain records of regular safety, health, and fire inspections conducted and certified by local health and fire departments.

C. Building plans and specifications for new construction, change in use of existing buildings, and any structural modifications or additions to existing buildings shall be submitted in advance to the licensing agency for approval.

D. Animals allowed on the premises shall be tested, inoculated, and licensed as required by law.

E. Smoking shall be prohibited at all times and in all school buildings, school grounds, and

during off campus school-sponsored activities.

F. Swimming pools shall be inspected annually by the state or local health authorities or by a swimming pool business.

G. There shall be a written policy concerning safeguards for aquatic-related activities to include supervision by a certified lifeguard.

H. There shall be a written policy regarding safeguards for school sponsored activities including adventure and wilderness activities.

I. There shall be an electronic two-way communication system available to staff at all times in the classroom and during school-sponsored activities.

8 VAC 20-671-380. Contingency plans.

A. A school shall have contingency plans for emergencies that include staff certification in cardiopulmonary resuscitation (CPR), abdominal thrust (Heimlich maneuver), and emergency first aid.

B. The school administration shall ensure that the school has:

1. Written procedures to follow in emergencies such as fire, injury, illness, and violent or threatening behavior. Contingency plans should be developed with the assistance of state or local public safety authorities. Such plans shall be outlined in the student handbook and discussed with staff and students during the first week of each school year.

2. Space for the proper care of students who become ill; and

3. A written procedure for responding to violent, disruptive, or illegal activities by students on school property or during a school-sponsored activity.

C. Each school shall have at least three tornado drills every school year in order that students may be practiced in such drills.

D. The school shall have a written emergency preparedness and response plan for all locations that addresses:

1. Documentation of contact with the local emergency coordinator to determine (i) local disaster risks (ii) communitywide plans to address different disasters and emergency situations, and (iii) assistance, if any, that the local emergency management office will provide to the school in an emergency.

2. Analysis of the school's capabilities and potential hazards, including natural disasters, severe weather, fire, flooding, workplace violence or terrorism, missing persons, riot, severe injuries, or other emergencies that would disrupt the normal course of service delivery.

3. Written emergency management policies outlining specific responsibilities for provision of administrative direction and management of response activities; coordination of logistics during the emergency; communications; life safety of students, employees, contractors, student interns, volunteers, and visitors; property protection; community outreach; recovery and restoration.

4. Written emergency response procedures for assessing the situation; protecting students, employees, contractors, student interns, volunteers, and visitors; equipment and education records; and restoring services.

5. Emergency procedures shall address:

a. Communicating with employees, contractors, and community responders;

b. Warning and notification of students;

c. Providing emergency access to secure areas and opening locked doors;

d. Conducting evacuations to emergency shelters or alternative sites and accounting for all students;

e. Relocating students and staff, if necessary;

f. Notifying family members and legal guardians;

g. Alerting emergency personnel and sounding alarms; and

h. Locating and shutting off utilities when necessary.

6. Supporting documents that would be needed in an emergency, including emergency call lists, building and site maps necessary to shut off utilities, designated escape routes, and list of major resources such as local emergency shelters;

7. Schedule for testing the implementation of the plan and conducting emergency preparedness drills; and

8. Children who use wheelchairs, crutches, canes, or other mechanical devices for assistance in walking shall be provided with a planned, personalized means of effective egress for use in emergencies.

E. The school shall have emergency preparedness and response training for all employees, contractors, student interns, and volunteers that shall include responsibilities for:

1. Alerting emergency personnel and sounding alarms;

2. Implementing evacuation procedures including evacuation of students with special needs

(i.e., deaf, blind, non-ambulatory);

3. Using, maintaining, and operating emergency equipment;

4. Accessing emergency information for students including medical information; and

5. Utilizing community support services.

F. There shall be documented review of the emergency preparedness plan annually and revisions made if necessary.

G. Employees, contractors, student interns, and volunteers shall be prepared to implement the emergency preparedness plan in the event of an emergency.

H. Floor plans showing primary and secondary means of egress shall be posted on each floor in locations where they can easily be seen by staff and students.

I. The procedures and responsibilities reflected in the emergency procedures shall be communicated to all students within seven days following admission or a substantive change in the procedures.

J. At least one evacuation drill (the simulation of the school's emergency procedures) shall be conducted each week during the first month of school and one each month thereafter in each building occupied by students.

K. Evacuation drills shall include, at a minimum:

1. Sounding of emergency alarms;

2. Practice in evacuating buildings and buses or vans;

3. Practice in alerting emergency authorities;

4. Simulated use of emergency equipment; and

5. Practice in securing student emergency information.

L. A record shall be maintained for each evacuation drill and shall include the following:

1. Buildings and buses or vans in which the drill was conducted;

2. Date and time of drill;

3. Amount of time to evacuate the buildings;

4. Specific problems encountered;

5. Staff tasks completed including head count and practice in notifying emergency authorities; and

6. The name of the staff members responsible for conducting and documenting the drill and preparing the record.

M. The record for each evacuation drill shall be retained for three years after the drill.

N. At least one staff member shall be assigned the responsibility for ensuring that all requirements regarding the emergency preparedness and response plan and the evacuation drill program are met.

O. In the event of a disaster, fire, emergency, or any other condition that may jeopardize the health, safety, and welfare of students, the school shall notify the parent(s), the student's public school, placing agency, and licensing agency as soon as possible, but no later than 24 hours after the incident occurs.

8 VAC 20-671-390. Weapons.

The licensee shall develop written policies and procedures governing prohibition of the possession and use of firearms, pellet guns, air guns, and other weapons on the school's premises

and during school-related activities unless the weapons are in the possession of licensed security personnel or law enforcement officers.

8 VAC 20-671-400. Strip searches.

A. Strip searches and body cavity searches are prohibited.

B. A school that does not conduct pat downs shall have a written policy prohibiting them.

C. A school that conducts pat downs shall develop and implement written policies and procedures that shall provide the following:

1. Pat downs shall be limited to instances where they are necessary to prohibit contraband;

2. Pat downs shall be conducted by personnel of the same gender as the student being searched;

3. Pat downs shall be conducted only by personnel who are specifically authorized to conduct searches by the school's written policies and procedures; and

4. Pat downs shall be conducted in such a way as to protect the subject's dignity and in the presence of one or more witnesses.

PART VIII.

SCHOOL INSTRUCTIONAL PROGRAM

8 VAC 20-261-410. Student application and admission.

A. The school's written admission policy shall include:

1. A description of the population to be served;

2. A description of the types of services offered;

3. Admission procedures;

4. Exclusion criteria that identify behaviors or conditions the school will not accept; and

5. A description of how educational services will be delivered.

B. A summary of each school's admissions policy, course offerings at each grade level, and behavioral management program shall be made available to students, parents, and placing and licensing agencies.

C. Each school's admissions process shall be designed to determine the suitability of enrolling a student. The school shall accept and serve only those students whose needs are compatible with the services provided by the school.

D. The school shall provide written notification for a student's education records in five business days of the student's enrollment. Notification shall be made to the superintendent of the school division where the student last attended. The school shall request current information pertinent to the student's educational growth to include, but not limited to the IEP, 504 Plan, or career development plan; plan of study; assessments; grades or transcript; discipline records; and health records.

E. An application for admission is not to be construed as a binding instrument on the part of the student or the school.

F. A school may require the payment of a reasonable nonrefundable initial application fee to cover expenses in connection with processing a student's application provided it retains a signed statement in which the parties acknowledge their understanding that the fee is nonrefundable. No other nonrefundable fees shall be allowed prior to enrollment.

G. Any contract or enrollment agreement used by the school shall be in writing and clearly specify the following:

1. Complete name and physical address of the school;

2. Itemized cost of the program to include tuition, scholarships, and all other charges; and

3. The school's contingency, cancellation, and refund policies.

H. Any contract or enrollment agreement used by the school becomes a legally binding instrument upon the school's written acceptance.

I. Each school that serves privately placed students shall offer access to a tuition insurance plan if the school financially obligates students for more than quarterly increments of annual tuition.

8 VAC 20-671-420. Standard school year and school day.

A. Each school shall have a standard school year of at least 180 instructional days. The standard school day for students in grades one through 12 shall average at least 5-1/2 instructional hours (990 hours annual instructional time), excluding breaks for meals and recess, and a minimum of three hours for kindergarten.

B. All students in grades one through 12 shall maintain a full day schedule of classes (5-1/2 hours), unless otherwise stated in the child's Individualized Education Program (IEP), Individualized Instruction Plan (IIP), 504 Plan, or other documentation.

C. Each school shall have policies and procedures that address make-up days when the school is unable to meet the required instructional time.

8 VAC 20-671-430. School and community communications.

A. Each school shall promote communications and foster mutual understanding with parents and the community and use information from parents, citizens, and business and industry in evaluating the educational program.

B. At the beginning of each school year, the school shall provide to parents or guardians information on the availability of and source for receiving the curriculum for their child's core subjects and a copy of the school's promotion and retention policies and access to the school's policies and procedures.

8 VAC 20-671-440. Philosophy, goals, and objectives.

A. Each school shall have a current philosophy, goals, and objectives that serve as the basis for all policies and practices and shall be developed using the following criteria:

1. The philosophy, goals, and objectives shall be developed with the advice of professional and lay people who represent the various populations served by the school and in consideration of the needs of the community and shall serve as a basis for an annual self-evaluation of the school.

2. The goals and objectives shall be (i) written in plain language so as to be understandable to noneducators, including parents, (ii) to the extent possible, be stated in measurable

terms; and (iii) consist primarily of measurable objectives to raise student and school achievement in the core academic areas, to increase graduation rates, and to increase the quality of instruction through professional staff development and licensure.

B. Copies of the school's philosophy, goals, and objectives shall be available upon request.

8 VAC 20-671-450. Student achievement expectations.

A. A process to identify and recommend strategies to address the learning, behavior, communication, or development of individual students who are having difficulty in the educational setting shall be developed at each school.

B. Participation in the Virginia assessment program by students with disabilities shall be prescribed by provisions of their IEPs or 504 Plans. All students with disabilities shall be assessed with appropriate accommodations and alternate assessments when required.

C. Each school that serves students who anticipate earning a diploma and graduating from a Virginia high school must follow the requirements for graduation outlined in the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131).

D. The school shall cooperate with the public school in the administration of SOL tests to students with disabilities, students who need verified credits to graduate from a public high school in Virginia, and the administration of any other SOL tests.

E. The school shall use testing and evaluation materials that are not racially or culturally discriminatory and do take into consideration the student's disabling condition(s), racial and cultural background.

8 VAC 20-671-460. Program of instruction and learning objectives.

A. Each school's instructional program shall reflect the written philosophy of the school. The methods, procedures, and practices shall reflect an understanding of and meet the applicable academic, vocational, therapeutic, recreational, and socialization needs of the students served.

B. The instructional program shall be designed to meet the needs of all students enrolled and shall educate students with age-appropriate peers.

C. Services shall be delivered in accordance with the student's IEP, IIP, or 504 Plan.

D. Each school serving students age 14 and older shall provide opportunities for students to gain knowledge and occupational readiness skills necessary for successful transition to training, employment, and independent living, as appropriate.

E. Each school shall provide opportunities for students to gain knowledge and occupational readiness skills necessary for successful transition to post-secondary training, education, employment and independent living skills, as appropriate.

F. Each school shall provide a program of instruction that supports the SOL for the core subjects: English, mathematics, science, and history/social science.

G. Each school shall require students to participate in a program of health and physical fitness during the regular school year unless the student is unable to participate due to a medical condition.

H. Each school shall provide students with opportunities to gain appreciation for art and music.

I. Each school shall provide an instructional program that promotes the individual student's developmental growth and academic achievement at successive grade levels, as appropriate.

J. The services provided by a private school shall be provided by personnel meeting the same licensure requirements as personnel providing services in the public school, outlined in *Licensure Regulations for School Personnel* (8 VAC 20-22).

K. The school shall equitably serve the needs and interests of all students, taking into consideration age appropriateness, cultural norms, physical, and cognitive abilities.

8 VAC 20-671-470. Individualized Education Program (IEP).

A. When a child is presently receiving the services of a private school, a representative of the private school shall attend IEP meetings upon the request of the student's school division. If a representative is not able to attend, the school shall use other methods to ensure participation by the private school including individual or conference telephone calls.

B. After a child with a disability enters a private school, any meetings to review and revise the child's IEP may be initiated and conducted by the private school at the discretion of the student's school division.

C. If the private school initiates and conducts these meetings, the student's school division and the parent or parents shall:

1. Be involved in any decision affecting the child's IEP;

2. Agree to any proposed changes in the program before those changes are implemented; and

3. Be involved in any meetings that are held regarding reevaluation.

D. A parent(s) does not include local or state agencies or their agents, including local departments of social services, if the child is in the custody of such an agency.

E. When a child with a disability is placed by a local school division or a Comprehensive Services Act team in a private school, all rights and protections under state and federal regulations shall be extended to the child.

8 VAC 20-671-480. Individualized Instruction Program (IIP).

A. Students without disabilities and those placed by parents for educational reasons shall have an Individualized Instruction Program (IIP) developed within 30 days of admission that describes: strengths and needs of the student, current level of functioning, goals and objectives, timelines, course of study, and post-secondary goals for age 14 and older students.

B. Each school shall request with consent of the parent(s) the student's education records from the last school attended, and information from other agencies as appropriate. This information should be used in developing the student's IIP.

C. The IIP shall provide a beginning and ending date of services.

D. The IIP shall be reviewed at least annually by a team that includes the student and the parent.

E. Student progress reports shall be provided to the parent or guardian at least quarterly.

8 VAC 20-671-490. 504 Plans.

Each school admitting students with 504 Plans shall implement the plan and cooperate with the school division in its annual review.

8 VAC 20-671-500. Instructional program for elementary school grades.

A. The elementary school grades shall provide each student a program of instruction that supports the SOL for English, mathematics, science, and history/social science. In addition, each school shall provide opportunities for students to gain an appreciation for art and music. Students shall be required to participate in a program of health and physical fitness during the regular school year.

B. In kindergarten through grade three, reading, writing, spelling, and mathematics shall be the focus of the instructional program.

C. To provide students with sufficient opportunity to learn, a minimum of 75 percent of the annual instructional time of 990 hours shall be given to instruction in the disciplines of English, mathematics, science, and history/social science. Students who are not successfully progressing in early reading proficiency, or who are unable to read with comprehension the materials used for instruction, shall receive additional instructional time in reading.

8 VAC 20-671-510. Instructional program for middle school grades.

A. The middle school grades shall provide each student a program of instruction that supports the SOL for English, mathematics, science, and history/social science. Each school shall provide opportunities for appreciation of art and music and an introduction to career and technical exploration and require students to participate in a program of health and physical fitness during the regular school year.

B. English, mathematics, science, and history/social science shall be required.

C. To provide students a sufficient opportunity to learn, each student shall be provided 140 clock hours per year of instruction in each of the four disciplines of English, mathematics, science, and history/social science.

D. Each school shall ensure that students who are unable to read with comprehension the materials used for instruction receive additional instruction in reading.

VAC 20-671-520. Instructional program for secondary school grades.

A. The secondary school grades shall provide each student a program of instruction that supports the SOL in English, mathematics, science, and history/social science.

B. To provide students a sufficient opportunity to learn, each student shall be provided 140 clock hours per year of instruction in each of the four disciplines.

C. Students in secondary education programs who plan to graduate with a standard or advanced diploma from a Virginia public high school should have the opportunity to complete credits in foreign languages, fine arts, and career and technical training.

D. Classroom driver education may count for 36 class periods of health education. Students shall not be removed from classes other than health and physical education for the in-car phase of driver education.

E. Each school shall ensure that students who are unable to read with comprehension the materials used for instruction receive additional instruction in reading,

F. Guidance and counseling shall be provided for students to ensure that a program of studies contributing to the student's academic achievement and meeting graduation requirements is being followed.

8 VAC 20-671-530. Alternative education.

Schools may provide students, ages 16 to 18, an *Individualized Student Alternative Education Plan* (ISAEP), a program that includes career guidance counseling; mandatory enrollment in a GED preparation program; and career and technical education. Implementation of the ISAEP requires submission of an application and approval by the Department of Education.

8 VAC 20-671-540. Transition services.

A. Schools shall cooperate with the public schools to ensure that the transition plan for each student with a disability, beginning at age 14, (or younger), is implemented according to the child's IEP.

B. Schools shall provide evidence of transition services designed within an outcome-oriented process for all students, as appropriate, that promotes movement from the private school to a public school the child would normally attend; movement from school to post-school activities, including postsecondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation.

8 VAC 20-671-550. Extracurricular and other school activities, and recess.

A. School-sponsored extracurricular activities shall be under direct supervision of the staff and shall contribute to the educational objectives of the school. Extracurricular activities must be organized to avoid interrupting the instructional program.

B. School-sponsored extracurricular activities shall have at least one person certified in CPR for every 10 students.

C. Schools that take students on adventure activities shall develop policies and procedures to

ensure supervision, health and safety, and medical management.

8 VAC 20-671-560. Family life.

A. Schools may use the Standards of Learning for the Family Life Education program or other education program, which shall have the goals of reducing the incidence of pregnancy and sexually-transmitted diseases and substance abuse.

B. Schools offering family life shall obtain written consent from the parent or guardian for the child's enrollment in the course.

8 VAC 20-671-570. Student work-study or on-the-job training.

A. Each school that places students on work-study, on-the-job training, or any other form of employment shall ensure compliance with the applicable laws governing the employment of children.

B. Work assignments that are paid or unpaid shall be in accordance with the age, health, ability, and education program of the student.

C. Work assignments or employment outside the school, including reasonable rates of pay, shall be approved by the school administrator with the knowledge and consent of the parent or legal guardian.

8 VAC-20-671-580. Virtual learning.

A. Schools are encouraged to pursue alternative means to deliver instruction to accommodate student needs through virtual learning. A school shall ensure that each virtual education course is provided by an institution accredited by a nationally recognized accrediting body or is authorized by a public school or school division.

B. A school shall ensure that virtual learning courses meet the following requirements:

1. The content, instruction, and assessment of each course is comparable in rigor and breadth to the course that is traditionally delivered;

2. The course content is appropriate for the school's grade levels and age range; and

3. The virtual learning shall be supervised by a licensed teacher or a person eligible to hold a Virginia teaching license. The individual shall be available to the student.

8 VAC 20-671-590. Equipment, instructional materials, and library media.

A. Each school shall provide a variety of current grade-level materials and equipment to support the instructional program, including functional life skills programs.

B. Each school shall provide access to computers and library media necessary to meet research inquiry and reading requirements of the instructional program and general student interest.

C. Each student, as appropriate, shall be provided instruction on the use of instructional equipment and shall demonstrate understanding before access to laboratories.

D. Each school shall provide textbooks and instructional materials that support Virginia's Standards of Learning.

E. Each school shall establish written policy on the use of computers, including the use of the Internet and e-mail.

8 VAC 20-671-600. School records.

Each school shall maintain up-to-date records to include the school's academic calendar, class roster, class schedule, course descriptions, course curriculum, individual student schedules, student progress reports, and student transcript or other documentation of grades.

8 VAC 20-671-610. Diplomas.

A. No school shall use the Seal of Virginia in its diploma design.

B. Each school that offers a diploma upon graduation shall have written policy and procedures that address the following:

1. The requirements for a diploma shall be those in effect when the student enters the ninth grade for the first time.

2. The requirements for a diploma shall be based upon completion of program requirements that demonstrate academic rigor.

8 VAC 20-671-620. Student conduct.

A. Each school shall have written policies and procedures that address standards of student conduct and procedures for enforcement to include attendance, truancy, suspension, expulsion, alcohol, drugs, weapons, fighting, bullying, sexual and disability harassment, pornography, and other areas as appropriate.

B. When a student is suspended, including in-school suspension, or expelled, the school shall notify the student's home school division within 24 hours.

8 VAC 20-671-630. Behavior intervention.

A. Each school shall develop and implement written policies and procedures that emphasize positive behavior interventions that focus on teaching and supporting students to practice methods to manage their own behavior.

B. Behavior techniques that are used or available for use shall be listed in the order of their relative degree of restrictiveness and specify the staff members who may authorize the use of each technique.

C. Staff shall consider behavior management data in their annual review of the school's policies and procedures.

D. When substantive revisions are made to policies and procedures governing management of student behavior, written information concerning the revisions shall be provided to students, parents, placing agencies, and the licensing agency prior to implementation.

8 VAC 20-671-640. Time-out.

A. The school shall have written policy and procedures governing the conditions under which a student may use time-out and the maximum period of time-out not to exceed 30 minutes per episode. The conditions and maximum period of time-out shall be based on the student's chronological and developmental level. The school's policy and procedures shall include provisions that address the following:

1. Each student is entitled to be completely free from any unnecessary use of time-out.

2. The areas in which a student is placed shall not be locked nor the door secured in a manner that prevents the student from opening it.

3. A student in time-out shall be able to communicate with staff.

4. Staff shall check on the student in the time-out area at least every 15 minutes and more often depending on the nature of the student's disability, condition, and behavior.

5. Procedures shall be implemented for documenting the use of time-out and staff checks on the student.

6. Staff shall review procedures when a student consistently chooses to stay in time-out beyond the determined time limit to determine that it has not become reinforcement.

8 VAC 20-671-650. Prohibitions.

A. The following actions are prohibited:

1. Restraint and seclusion, except when it is necessary to protect the student or others from

personal harm, injury, or death and other less restrictive interventions were unsuccessful;

2. Prone "face down" restraints, mechanical restraints, and pharmacological restraints;

3. Deprivation of drinking water or food;

4. Limitation on contacts and visits with the student's probation officer, regulators, or placing agency representative;

5. Any action that is humiliating, degrading, or abusive;

6. Corporal punishment;

7. Deprivation of approved prescription medication or other necessary services and treatment;

8. Denial of access to toilet facilities;

9. Application of aversive stimuli;

10. Strip and body cavity searches; and

11. Discipline, restraint, or implementation of behavior management plans by other students.

8 VAC 20-671-660. Managing student behavior in emergency situations.

A. Application of a formal behavior management program designed to reduce or eliminate severely maladaptive, violent, or self-injurious behavior contingent upon the exhibition of such behaviors is allowed only as part of an individually approved time specific plan that is consistent with sound therapeutic practice. Written consent of the student, parent or guardian, and the student's school division is required.

B. Each school shall have written policies and procedures that include, but are not limited to:

1. Methods for preventing student violence, self-injurious behavior, and suicide, including de-escalation of potentially dangerous behavior occurring among groups of students or with an individual student.

2. A policy stating that corporal punishment and abusive techniques and interventions are not authorized, permitted, or condoned.

C. Each school shall develop and implement behavior management techniques in order of their relative degree of intrusiveness or restrictiveness and the conditions under which they may be used by trained school personnel.

D. While the use of restraint and seclusion are prohibited, a school that finds it absolutely necessary can only do so under the following conditions:

1. Physical restraint or seclusion are allowed only in an emergency situation for a time period that is necessary to contain the behavior of the student so that the student no longer presents an immediate threat of causing physical injury to self or others or causing severe property damage.

2. Physical restraint or seclusion shall not be used as a punishment, retaliation, or for staff's convenience.

3. The school shall have written policies and procedures governing use of physical restraint and seclusion incidents that shall include the following:

(a) Each student is entitled to be completely free from any unnecessary use of physical restraint or seclusion. Physical restraint and seclusion are allowed only in an emergency situation for a time period that is necessary to contain the behavior of the

student so that the student no longer presents an immediate threat of causing physical injury to self or others or causing severe property damage.

(b) The school shall provide written notice of its behavior management program to students, parent(s) and placing agency at the time of the student's enrollment.

(c) Staff shall monitor the use of restraint and seclusion through continuous face-to-face observation, not solely by an electronic surveillance device.

(d) Restraints may only be implemented, monitored, and discontinued by staff who have been trained in the proper and safe use of restraint, including hands-on techniques.

(e) Students must be supervised by staff members trained in behavior intervention.

(f) Schools shall inform the parent and placing agency of each incident of physical restraint or seclusion on the day of the occurrence and make available to the licensing agency upon request.

(g) Each application of physical restraint or seclusion shall be fully documented in the student's record including: date, time, staff involved, justification for the restraint or seclusion, less restrictive interventions that were unsuccessfully attempted prior to using physical restraint or seclusion, duration, description of method or methods of physical restraint techniques used, signature of the person completing the report and date; and reviewer's signature and date.

8 VAC 20-671-670. Videotaping.

A. Schools shall have written policy and procedures regarding videotaping students while in school and any school-sponsored activity, including those used for staff training.

B. No student shall be videotaped without written consent of the parent and eligible student.

C. Any videotaping of students shall be maintained confidentially unless there is explicit written permission to release or disclose from the parent(s) and eligible student.

D. Buildings and grounds surveillance is not considered videotaping for the purpose of these regulations.

8 VAC 20-671-680. Referral for evaluation.

A. When a student, including those placed by their parent(s) or from out-of-state, is suspected of having a disability, the school shall make a referral to the division superintendent of the school division where the private school is located. Documentation of the referral notice shall be maintained in the student's record.

B. The school shall cooperate with the school division on child find activities.

8 VAC 20-671-690. Suspected child abuse and neglect.

A. Written policies and procedures related to child abuse and neglect shall comply with the requirements of § 63.2-1509 of the *Code of Virginia* and distributed to all staff members. Policies and procedures shall include:

1. Handling accusations against staff; and

2. Promptly referring suspected cases of child abuse and neglect to the local child protective services unit and for cooperating with the unit during any investigation.

B. Any case of suspected child abuse or neglect occurring at the school, on a school-sponsored event or excursion shall be reported immediately to the student's parent, guardian, or both if appropriate, the placing and licensing agencies.

C. When a case of suspected child abuse or neglect is reported to child protective services, the school shall document the following:

1. The date and time the suspected abuse or neglect occurred;

2. A description of the suspected abuse or neglect;

3. Action taken as a result of the suspected abuse or neglect;

4. The name of the person who made the report to child protective services; and

5. The name of the person to whom the report was made at the local child protective services unit.

D. Suspected child abuse shall be handled and reported as a serious incident.

8 VAC 20-671-700. Serious incident reports.

A. Any serious incident, accident or injury to a student or medication error that occurs at the school or school-sponsored activity shall be reported immediately, no later than the end of the school day, to the parent, the student's public school, placing agency, and licensing agency.

B. The school shall document the following:

1. The date and time the incident occurred;

2. A brief description of the incident;

3. The action taken as a result of the incident;

4. The name of the person who completed the incident report; and

5. The date and name of the person who made the report to the proper authorities.

C. The licensing agency shall review all reports of serious incidents and investigate as appropriate using the complaint resolution procedures of this chapter**.**

Part IX.

STUDENT SERVICES

8 VAC 20-671-710. Medication and health.

A. Each student shall have on file evidence of a comprehensive physical examination prescribed by the State Health Commissioner from a qualified licensed physician or a licensed nurse practitioner or licensed physician assistant acting under the supervision of a licensed physician. The examination must contain, at a minimum, information required on the *Commonwealth of Virginia School Entrance Health Form*.

B. Each student shall have an up-to-date certificate of immunization documenting the immunizations required by the *Code of Virginia* and State Board of Health's *Regulations for Immunization of School Children.*

C. Any student or staff with a disease or medical condition that is contagious or infectious shall be excluded from school while in that condition unless attendance is approved by a qualified healthcare provider. Conditions meeting this requirement must be provided in the parent/student handbook or other print materials.

D. A first-aid kit shall be maintained and readily accessible for minor injuries and medical emergencies in each building used for instruction or other school activity.

E. All medications shall be accepted only in the original container with written permission signed and dated by the parent to administer to his child. The use of all prescriptive medication must be authorized in writing by a licensed prescriber.

F. All medication and medical paraphernalia shall be securely locked and properly labeled.

G. A program of medication administration shall be initiated for a student only when prescribed in writing by a person authorized by law to prescribe medication and written consent from the parent is obtained to administer.

H. An individual medication administration record shall be maintained for each medication a student receives and shall include: student name, date the medication is to begin, drug name, schedule for administration, strength, route, identification of the individual who administered the medication; and dates the medication was discontinued or changed.

I. The provider shall develop and implement written policies and procedures regarding:

1. Managing medication error(s) to include the following: administering first aid; contacting the poison control center; notifying the prescribing physician; taking action as directed; documenting the incident; reviewing medication errors and staff responses; and reporting errors to the parent and placing agency.

2. Handling adverse drug reactions;

3. Revising procedures as events may warrant;

4. Disposing of medication and medical supplies such as needles, syringes, lancets, etc.;

5. Storing of controlled substances;

6. Distributing medication off campus; and

7. Medication refusal to include who is responsible for documentation, where it will be documented and action taken by staff.

J. The telephone number of a regional poison control center and other emergency numbers shall be posted on or near the phone.

K. Medication training

1. All staff responsible for medication administration shall have successfully completed a medication training program approved by the Board of Nursing or be licensed by the Commonwealth of Virginia before they can administer medication.

2. Training shall be provided to all staff in medication procedures and effects and infection control measures, including the use of standard precautions.

3. There shall be a ratio of one staff member to 10 students certified in first-aid and CPR and available at all times on the school grounds and during any school-sponsored activity.

4. Documentation of medication training must be maintained in personnel files.

5. Staff authorized to administer medication shall be informed of any known side effects of the medication and the symptoms of the effects.

L. Monitoring the supply of medications.

1. Upon receiving any medication, staff members handling medication shall count individual tablets and measure the level of liquid medicine in the presence of the parent or parents or another staff member and record the count on the medication log.

2. The medication log shall include the signature or initials of the staff member who counted the medication and the parent or staff that witnessed the occurrence. When initials are

used, the medication administration record must contain the full name of the staff with corresponding initials for identification purposes.

3. Students shall be prohibited from transporting medication.

8 VAC 20-671-720. School nutrition.

A. Schools with internal food service shall serve on a daily basis, each student a daily diet that (i) consists of nutritionally balanced meals, (ii) includes an adequate variety and quantity of food for the age of students, and (iii) meets the minimum requirements and the *U.S. Dietary Guidelines.*

B. Schools with internal food service shall ensure that all food safety and sanitation procedures are followed in accordance with state and federal regulations.

C. Records of menus for all meals served shall be kept on file for six months.

D. Special diets shall be provided when prescribed by a physician or is requested by the student or parent because of the student's established religion.

E. In schools where students are required to bring their own lunch, provisions shall be made to ensure a meal for all students.

8 VAC 20-671-730. Transportation.

A. Each school shall have on file evidence that any vehicles used for the purpose of transporting students to and from school and school-related activities meet federal and state regulations, including:

1. Vehicle safety and maintenance;

2. Licensure of vehicles;

3. Licensure of drivers;

4. Vehicle liability insurance;

5. Child passenger safety, including requiring students to wear seat belts or restraints; and

6. Safety measures that take into consideration the age and disabling conditions of students.

B. All vehicles used to transport students to school activities shall be equipped with first-aid kits, fire extinguisher, and two-way communication devices.

C. Individual student emergency information including currently prescribed and over-the-counter medications, significant medical problems, and any allergies shall accompany students when they are being transported.

8 VAC 20-671-740. Treatment services.

Licensed providers of treatment services shall coordinate those services to allow students to receive the required hours of instruction to the extent possible. When treatment services are not prescribed by a licensed mental health professional, the student shall receive the required number of hours of instruction.

8 VAC 20-671-750. Student discharge.

A. Each school shall have a policy and procedures that address conditions for which a student may be discharged from the school.

B. The school's criteria for discharge shall be made available to prospective students, parents, and placing agencies before their enrollment.

C. The student's education record shall be documented with the date of discharge and reason for discharge.

D. Students shall be discharged only to the parent or legally-authorized representative.

8 VAC 20-671-760. Maintenance of student records.

A. The school shall have written policy and procedures for the management of all records, print and nonprint, regarding confidentiality, accessibility, security, and retention.

B. Student education records shall be maintained in fire-proof cabinets and protected from unauthorized disclosure.

C. Each student's education record shall contain information pertinent to the educational growth and development to include a completed enrollment sheet, a current IEP, 504 Plan, or IIP; student transcript; course of studies; and progress reports. Other information should include disciplinary records, health records, and achievement and test data.

D. A school shall obtain written consent from the child's parent before disclosure of information from a student's education record to unauthorized parties. Authorized parties shall be limited to school employees, including contracted employees, representatives of state licensing agencies who need access to the student's records to carry out their work responsibilities.

E. A school may disclose information in an emergency to any person who needs that particular information for the purpose of preventing injury to a student or staff. The school shall not disclose any information that is not needed for this specific purpose. The school may disclose any records if they are properly subpoenaed, if a court orders them to be produced, to the school's own legal counsel, or to anyone working on behalf of their legal counsel in providing representation to the school.

F. The school shall permit a parent or parents to inspect and review any education records relating to their child that are collected, maintained, or used by the school. The school shall comply with a request without unnecessary delay and before any meeting regarding an IEP or

504 Plan or in no case more than 14 calendar days after the request has been made. The right to inspect and review education records under this section includes:

1. The right to a response from the school to reasonable requests for explanations and interpretations of the records;

2. The right to request that the school provide copies of the records containing the information if failure to provide those copies would effectively prevent the parent from exercising the right to inspect and review the records;

3. The right to have a representative of the parent inspect and review the records; and

4. A school may presume that a parent has authority to inspect and review records relating to his child unless the school has been advised that the parent does not have the authority under applicable Virginia law governing such matters as guardianship, separation, and divorce.

G. Each school shall keep a record of parties, except parents and authorized employees of the school, obtaining access to education records collected or maintained, including the name of the party, the date of access, and the purpose of the access.

H. If any education record includes information on more than one child, the parent or parents of those children have the right to inspect and review only the information relating to their child or to be informed of the specific information requested.

I. Schools may charge a fee for copies of records that are made for a parent or parents under this chapter if the fee does not effectively prevent the parent or parents from exercising their right to inspect and review those records. A school may not charge a fee to search for or to retrieve information under this section.

J. A parent or parents who believe that information in the education records collected, maintained, or used under this chapter is inaccurate or misleading or violates the privacy or other rights of the child may request the school that maintains the information to amend the information.

1. The school shall decide whether to amend the information in accordance with the request within a reasonable period of time of receipt of the request.

2. If the school decides to refuse to amend the information in accordance with the request, it shall inform the parent or parents of the refusal and inform the parent of the right to place in the child's education records a statement commenting on the information or setting forth any reasons for disagreeing with the decision of the school.

3. Any explanation placed in the records of the child under this section must:

a. Be maintained by the school as part of the records of the child as long as the record or contested portion is maintained by the school; and

b. If the records of the child or the contested portion is disclosed by the school to any party, the explanation must also be disclosed to the party.

K. Records retention

1. Each school shall maintain all education records, including discipline and medical records for as long as the student continues enrollment at the school.

2. When a student transfers to another school, the student's complete education record shall be transferred within five business days from the date of request and notification of the transfer to the parent, guardian, and placing agency.

3. When a student graduates or leaves school, the school shall offer all records to the eligible student or parent(s). The records of a publicly-placed student who graduates or leaves school shall be transferred to the child's public school.

4. Each school shall maintain a permanent record of attendance to include the following:

a. Name and address of school;

b. Name, address, and birth date of student;

c. Name and address of parent or parents;

d. Student ID;

e. Dates of attendance;

f. Verification of immunizations;

g. Scholastic work completed; and

h. Academic transcript.

8 VAC 20-671-770. Participation of students in human research.

A. No human research involving students shall be conducted or authorized by any school unless in compliance with the Board of Education's regulation, 8 VAC 20-565-20, or other applicable law, including 45 CFR 46.

B. No such research shall be conducted or authorized unless the student and the student's legally authorized representative give their informed consent. Such informed consent shall be by a signed and witnessed informed consent form. Such form shall comply with § 32.1-162 of the *Code of Virginia*.

C. Any such research shall be approved and conducted under the review of a human research committee, which shall be established by the school conducting or authorizing the research.

Any such committee shall comply with the provisions of § 32.1-162.19 of the *Code of Virginia*. The committee shall submit to the Governor, the General Assembly, and the Superintendent of Public Instruction or designee at least annually a report on the student projects reviewed and approved by the committee, which shall state significant deviations from the proposals as approved.

D. There shall be excluded from the operation of this chapter those categories of research as § 32.1-162.17 of the *Code of Virginia* which exempts research or student learning outcomes as conducted in educational settings involving regular or special education instructional strategies, the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods, or the use of educational tests, whether cognitive, diagnostic, aptitude, or achievement, if the data from such tests are recorded in a manner so that subjects cannot be identified, directly or through identifiers linked to the subjects.

Part X.

SCHOOL CLOSING

8 VAC 20-671-780. Procedures for school closing.

A. A school that ceases operation shall provide written notice as early as possible to all enrolled students, the parent(s), the student's public school, and licensing agencies.

B. All advertisements of the school's operation shall cease immediately, and the current *License to Operate* shall be returned promptly to the licensing agency.

C. If privately-placed students are unable to complete the academic year due to the school's closing, the school's guaranty instrument shall be used for tuition reimbursement to the fullest extent allowable.

D. All education records of privately-placed students shall be provided to the parent or student who has reached age18 and acknowledgement of such to the licensing agency.

E. All education records of publicly-placed students shall be returned to the school division of the parent's residence and acknowledgement of such to the parent or student who has reached age 18, and the licensing agency.

REGULATIONS GOVERNING THE OPERATION OF PRIVATE DAY SCHOOLS FOR STUDENTS WITH DISABILITIES

8 VAC 20-670-10 ET. SEQ.

Effective September 10, 2004

~~REGULATIONS GOVERNING THE OPERATION OF PRIVATE DAY SCHOOLS FOR STUDENTS WITH DISABILITIES~~

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~~*Effective September 10, 2004*~~

Division for Educational Accountability
Virginia Department of Education
P. O. Box 2120
Richmond, Virginia 23218-2120

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TABLE OF CONTENTS

~~PRELUDE~~

~~STATEMENT~~

~~These regulations supersede the provisions of Regulations Governing the Operation of Proprietary Schools and Issuing of Agent Permits that were applicable to private day schools for students with disabilities.~~

PART I
DEFINITIONS, EXEMPTION

8 VAC 20-670-10. Definitions
8 VAC 20-670-15. Exemption

8 VAC 20-670-10. Definitions.

"Behavioral intervention plan" means a plan that utilizes positive behavioral interventions and supports to address behaviors that interfere with learning of students with disabilities or with the learning of others or behaviors that require disciplinary action.

"Behavior management program" means those principles and methods employed by a school to help an individual student achieve a positive outcome and to address and correct inappropriate behavior in a constructive and safe manner. Behavior management principles and methods must be employed in accordance with the individualized education program or individualized instructional plan and written policies and procedures governing service expectation, educational and treatment goals, and safety and security.

"Board" means the Virginia Board of Education.

"Branch campus" means any multi-site location in the same town, city, county where the school is offered on a regular continuing basis.

"Consent" means the voluntary and revocable agreement of the parent or parents or eligible student who has been fully informed of all information relevant to the activity including which records, if any, will be released for which consent is sought in the parent's, parents' or eligible student's native language, or other mode of communication, and understands and agrees, in writing, to the carrying out of the activity for which consent is sought.

"Department" means the Virginia department of Education.

"Disability category" means a listing of special education eligibility classifications for students served.

"Extension classroom" means a location away from but in close proximity to the main campus where only classes are offered.

"Guaranty Instrument" means a surety bond, irrevocable letter of credit or certificate of deposit.

"License to Operate" means the legal document issued by the Board of Education that provides institutional and programmatic authority to operate a school as further defined in these regulations.

"Paraprofessional" means an appropriately trained employee who assists and is supervised by qualified professional staff.

"Physical restraint" (also referred to as "manual hold") means the use of approved physical interventions or "hands-on" holds to prevent a student from moving his body to engage in behavior that places himself or others at risk of physical harm. Physical restraint does **not** include the use of "hands on" approaches that occur for extremely brief periods of time and never exceed more than a few seconds duration and are used for the following purposes:

a. To intervene in or redirect a potentially dangerous encounter in which the student may voluntarily move away from the situation or hands-on approach; or
b. To quickly deescalate a dangerous situation that could cause harm to the individual or others.

"Regulations" means this document in its entirety.

"Rules of conduct" means a listing of rules that is maintained to inform students and others about behaviors that are not permitted and the consequences applied when the behaviors occur.

"School for students with disabilities" means a privately owned and/or operated preschool, school or educational organization, no matter how titled, maintained or conducting classes for the purpose of offering instruction, for a consideration, profit or tuition, to persons determined to have autism, deaf-blindness, a developmental delay, a hearing impairment, including deafness, mental retardation, multiple disabilities, an orthopedic impairment, other health impairment, an emotional disturbance, a severe disability, a specific learning disability, a speech or language impairment, a traumatic brain injury, or a visual impairment including blindness.

"Time out" means removing the individual from his immediate environment to a different, open location until the student is calm or the problem behavior has subsided.

~~8 VAC 20-670-15. Exemption.~~

~~Any privately owned or operated preschool, elementary, middle, or secondary school whose primary purpose is to provide educational services to students without disabilities, even though the school may serve children with disabilities in a regular academic setting, is exempt from this chapter.~~

PART II
GENERAL REQUIREMENTS

8 VAC 20-670-20. License to operate.

A. Any school defined in the Code of Virginia as a school for students with disabilities shall receive a license to operate from the board prior to operation.

B. A license to operate shall be prominently displayed on the premises of the school.

8 VAC 20-670-30. Initial application.

A. The application forms and information regarding the application process shall be available from the department.

B. Complete applications and other required documentation shall be received by the department at least 60 business days in advance of the school's planned opening date.

8 VAC 20-670-40. Assessment of application.

A. The department shall evaluate each completed application within 60 business days of its receipt for licensure and advise the school in writing of its approval or any deficiencies.

B. All deficiencies shall be corrected within 100 calendar days from receipt of the department's written evaluation of the application. Any school not meeting this deadline shall submit to the department a written request for continued consideration.

8 VAC 20-670-50. Advertising and enrolling restrictions.

A. A school shall not advertise or enroll students prior to receiving a license to operate.

B. A license to operate shall be restricted to the disability categories specifically indicated.

C. Authority is granted to the department to suspend enrollment in or withdraw approval of programs of holders of license to operate that do not continue to meet the requirements of these regulations. A school that has had enrollment suspended or approval withdrawn shall be notified by certified mail and shall not enroll new students in such programs.

8 VAC 20-670-60. Certification, licensing of branch campus/extension classroom.

A school with a license to operate may open an additional facility in the same town, city or county under the same certificate or license. The school shall submit an application and secure authorization from the department.

8 VAC 20-670-70. Penalty for non-compliance.

A. Any person who opens, operates, or conducts a school without first obtaining a license to operate may be found guilty of a Class 2 Misdemeanor §22.1-331 Code of Virginia.

B. Each day the school remains open without a license to operate the owner or board of directors shall incur a separate offense.

C. The department shall refer to the Office of the Attorney General any alleged or known violation of these provisions. The Office of the Attorney General shall refer the matter to the Commonwealth Attorney of proper jurisdiction.

~~PART III~~
~~APPLICATION~~

~~8 VAC 20-670-80. Application requirements for schools seeking a license to operate.~~

~~The following information shall be submitted as part of the application:~~

~~1. Title or name of the school which is permanent and distinct and shall not be changed without first securing approval from the department.~~

~~2. Names and addresses of owners, controlling officials, and managing employees.~~

~~3. Evidence of compliance with applicable State Corporation Commission regulations when the school is owned by a partnership or corporation.~~

~~4. Curriculum information in department's required format.~~

~~5. A scale drawing or copy of the floor plan including room use and dimensions.~~

~~6. A certificate of occupancy or other report(s) from the appropriate government agency(ies) indicating that the location or locations meet applicable fire safety, building code, and sanitation requirements.~~

~~7. A copy of the deed, lease, or other legal instruments authorizing the school to occupy such locations.~~

~~8. A listing of the equipment, training aids, and textbooks used for instruction.~~

~~9. The maximum anticipated enrollment to be accommodated with the equipment available and the ratio of students to teachers and instructional aides.~~

~~10. A listing of the qualifications of the staff in the school.~~

~~11. A proposed budget, a three year financial plan, and documentation of sufficient operating capital to carry the school through its first year including proof of a guaranty instrument described in #13 below.~~

PART III
APPLICATION

12. A copy of the student enrollment agreement, a current schedule of tuition and other fees, copies of all other forms used to keep student records, and the procedure for collecting and refunding tuition.

13. A surety bond, irrevocable letter of credit or certificate of deposit as required by Section 8 VAC 20-670-320..

14. Copies of all proposed advertising.

15. A handbook describing the school's programs and policies.

16. Any additional information as the board or department may deem necessary to carry out the provisions of the Code of Virginia.

8 VAC 20-670-90. Applicant commitments.

Each applicant for a license to operate shall provide a notarized certificate of compliance form provided by the Department of Education, acknowledging their commitment to conduct the school in an ethical manner and in accordance with the provisions of state and federal laws and applicable regulations.

PART IV
PROGRAM REQUIREMENTS

8 VAC 20-670-100. Statement of purpose, philosophy, and objectives.

Each school shall be responsible for formulating a written statement setting forth its purpose, philosophy, objectives, and admissions policies which shall be used for guidance concerning the character and number of students with disabilities to be served, the instructional program to be offered, the staff to be used, and the services to be provided.

8 VAC 20-670-110. Instructional program.

A. The instructional program of each school shall reflect the written philosophy of the school by implementing the stated objectives through methods, procedures, and practices which reflect an understanding of and meet the applicable academic, vocational, therapeutic, recreational, and socialization needs of the students served. Instructional programs for students with disabilities shall be conducted in accordance with appropriate regulations governing the education of children with disabilities approved and issued by the board 8 VAC 20-80-10 et. seq..

B. Each school shall provide a program of instruction that promotes the individual student's developmental growth or academic achievement at successive grade levels. Instruction shall be designed to accommodate each student and meet the abilities, interest, educational and transitional needs of the students.

C. Programs for students with disabilities shall also comply with the following requirements:

~~PART IV~~
~~PROGRAM REQUIREMENTS~~

~~1. Each student identified by local education agency (LEA) as eligible for special education and related services and placed by a local school division or for non-educational reasons by a comprehensive services team shall have an individualized education program (IEP) on file with the school in accordance with regulations of the board governing the education of children with disabilities. Students not identified as such and those placed by parents shall have an individualized instruction program (IIP).~~

~~2. Individualized education programs (IEPs) shall address participation in the general curriculum and acquisition of the knowledge and skills contained in the Virginia Standards of Learning for English, mathematics, science, and history/social science 8 VAC 20-80-62.F..~~

~~3. Confidentiality of information including access rights, record of access, record on more than one child, list of types and location of information, fees, amendment of records at parent's request, consent, collection, storage, disclosure and destruction safeguards, and destruction of information shall be kept in accordance with regulations of the board 8 VAC 20-150-10 et. seq..~~

~~4. The school shall use testing and evaluation materials that are not racially or culturally discriminatory and do take into consideration the student's disabling condition(s), racial and cultural background.~~

~~5. The Virginia State Assessment Program shall be addressed in the student's individualized education program 8 VAC 20-80-62.F.5..~~

~~6. Schools shall follow the Standards for Accrediting Public Schools in Virginia or standards approved by the Virginia Council of Private Education for conferring credit and diplomas 8 VAC 20-131-110..~~

~~7. Records of current initial eligibility determinations or re-evaluations of eligible students with disabilities, conducted in accordance with board regulations, shall be on file 8 VAC 20-80-56..~~

~~8. A planned program for personnel development shall be provided.~~

~~9. A plan for and documentation of contact with parents, guardians, and local school division personnel shall be available.~~

~~10. All procedural safeguards required by regulations governing the education of students with disabilities shall apply for eligible students 8 VAC 20-80-70..~~

~~11. Instructional/training schedules shall be conducted in accordance with board regulations 8 VAC 20-131-150].~~.

~~12. The school shall maintain pupil-teacher ratios in accordance with department regulations 8 VAC 20-80-45.~~.

~~D. A written agreement between the school and any third party organization shall be entered into for programs requiring an enrolled student internship or externship. A copy of the agreement shall be available for review by the board or department.~~

~~8 VAC 20-670-120. Intradepartmental cooperation.~~

~~A. Staff from the Department of Education will be available for consultation on educational programming.~~

~~8 VAC 20-670-130. Behavior management programs.~~

~~A. If a school has a program for behavior management or modification, the school shall develop, implement, and have on file written policies and procedures that describe the use of behavior management techniques approved by the governing body of the school. Positive approaches to behavior management shall be emphasized. The behavior management techniques used by the school shall be listed in order of their relative degree of intrusiveness or restrictiveness and the conditions under which they may be used by trained school personnel. The policies must protect the safety and well-being of the student at all times, including during fire and other emergencies. Policies must specify the mechanism for monitoring and methods of documenting the use of behavior management techniques.~~

~~B. All interested parties, including students, their parents, guardians and local education agencies when the student is publicly placed, shall be informed of the policies and rules of conduct through written information contained in the school's handbooks, brochure, enrollment contract, and/or other publications. Informed consent shall be obtained before implementation of any behavior management program.~~

~~C. Schools may allow students to voluntarily take time outside the classroom or in a designated area of the classroom to regroup. If the student requires assistance to remove himself from the immediate environment, it must be done in accordance with the school's policies and procedures for the use of time out that comply with sound therapeutic practice. Staff must be available to students during this time in regaining emotional control.~~

~~D. A school that uses physical restraints shall have and implement written policies and procedures governing their use. The procedures shall include methods to be followed should physical restraint, less intrusive interventions, or measures permitted by other applicable state regulations prove unsuccessful in calming and moderating the student's behavior. Use of physical restraints shall be limited to that which is minimally necessary to protect the student or others and may only be used by trained staff and only after less intrusive interventions have failed and when failure to restrain would result in harm to the student or others.~~

~~E. The behavior management program shall be developed, implemented, and monitored by staff trained in behavior management programming. Staff shall review the training in physical restraints and less intrusive interventions at least annually.~~

~~F. Application of a formal behavior management program designed to reduce or eliminate severely maladaptive, violent, or self injurious behavior contingent upon the exhibition of such behaviors is allowed only as part of an individually approved time specific plan that is consistent with sound therapeutic practice. Consent of the individual, parent or guardian, and the placing school division is required.~~

~~G. Individual applications of formal behavior management techniques including use of physical restraints shall be reported to the parents and documented in the student's record and, at a minimum, include date and time; staff involved; circumstances and reasons for use, including other behavior management techniques attempted, duration, type of technique used, and outcomes.~~

~~H. Injuries resulting from or occurring during the implementation of behavior management techniques shall be documented and appropriate health care shall be administered. The student's parents or legal guardian shall be notified.~~

PART IV
PROGRAM REQUIREMENTS

I. Students shall not discipline, restrain or implement behavior management plans of other students.

J. The following actions are prohibited:

1. Any action which is humiliating, degrading, or abusive;

2. Deprivation of drinking water or food necessary to meet a student's daily nutritional needs except as ordered by a licensed physician for a legitimate medical purpose and documented in the student's file;

3. Denial of use of toilet facilities, or toileting assistance;

4. Use of restraint as punishment, reprisal or for the convenience of staff;

5. Corporal punishment;

6. Deprivation of health care including counseling;

7. Use of mechanical and chemical restraints.

8 VAC 20-670-140. Equipment and instructional materials.

A. Equipment and materials for instruction shall be provided in sufficient variety, quantity, and design to implement the educational program to meet the needs of the students with disabilities as identified in the individualized education program (IEP) or individualized instruction plan (IIP) as appropriate.

B. There shall be a library adequately equipped or resource materials available on site to meet the needs of the students according to the types of training and/or educational programs offered by the school, if applicable. Depending upon the age and needs of the students with disabilities, reference materials should be available to the pre-academic, the academic, and the career education levels, if applicable.

8 VAC 20-670-150. Provisions for health.

A. A report of a comprehensive physical examination by a qualified healthcare provider and an up- to-date immunization record shall be on file for each student.

~~B. A student suffering with a contagious or infectious condition or disease shall be excluded from school while in that condition unless attendance is approved by a qualified healthcare provider.~~

~~C. An adequate first-aid kit shall be provided for use in the case of accidents, minor injuries, and medical emergencies.~~

~~D. All medications shall be accepted only in current original labeled prescription container with parental permission to administer.~~

~~E. Transportation of medication shall be expressly covered in the school's policy manual. All interested parties shall be informed of the policy through written information.~~

~~F. Training shall be provided to all staff in medication procedures and effects and in infection control measures including the use of universal precautions. All staff administering medication shall receive approved training for medication management. At least one person certified in first-aid and CPR shall be available at all times to the students at the school.~~

~~G. In schools where meals are served on a daily basis, the school shall have the services of either a full-time or part-time dietitian or nutritionist, or consultative assistance to insure that a well-balanced nutritious daily menu is provided. Records of menus for all meals served shall be kept on file for six months.~~

~~H. Any case of suspected child abuse or neglect shall be reported immediately to the local child protective services unit as required by the Code of Virginia §63.2-1509.. Any case of suspected child abuse or neglect which is related to the facility shall be reported immediately to the department and placing agency, and to either the parent or legal guardian. When a case of suspected child abuse or neglect is reported to child protective services, the students records shall include: the date and time the suspected abuse or neglect occurred; a description of the incident; action taken as a result of the incident; and, the name of the person to whom the report was made at the local child protective services unit.~~

~~PART IV~~
~~PROGRAM REQUIREMENTS~~

~~8 VAC 20-670-160. Transportation.~~

~~A. All drivers of vehicles transporting students shall comply with the requirements of the applicable laws of Virginia. Appropriate safety measures which take into consideration the age range and disabling conditions of students served at the school shall be taken by staff members or other adults who may transport students to and from school or on school-sponsored activities.~~

~~B. Evidence of vehicle liability insurance to protect those students transported to and from the school shall be submitted.~~

~~C. All schools shall have on file evidence that school-owned vehicles used for the purpose of transporting students to and from school and school-related activities meet federal and state standards and are maintained in accordance with applicable state and federal laws 49 CFR 571.~~

~~D. All vehicles used to transport students on school activities, shall be equipped with first-aid kits, fire extinguisher, and two-way communication devices.~~

~~E. Individual student emergency information including currently prescribed and over the counter medications, significant medical problems, and any allergies shall accompany students when they are being transported.~~

~~PART V~~
~~DISABILITY CATEGORIES~~

~~8 VAC 20-670-170. Disability categories~~

~~8 VAC 20-670-170. Disability categories.~~

~~A. The instructional program shall exist only for those students who have a disability listed in the categories posted on the school's current license to operate.~~

~~B. Supplementary applications to serve additional categories of students may be submitted to the department for approval at any time. The information must be submitted in such form as prescribed by the department.~~

~~C. Revisions to existing program services must be submitted to the department for approval prior to implementation.~~

~~PART VI~~
~~STAFF~~

~~8 VAC 20-670-180. Personnel policies.~~

~~Each school shall develop written personnel policies for employees which shall include, but not be limited to, job descriptions, evaluation procedures, procedures for handling accusation against staff and termination policies and make them available to the board or department if requested.~~

~~Licensure Regulations for School Personnel issued by the board are to be used by the schools when hiring staff employed by another school.~~

~~8 VAC 20-670-190. Administrative personnel.~~

~~A. Each school shall designate a person to be responsible for the administration of the school. This person shall be a graduate of an accredited college or university and shall have sufficient time, training, and ability to carry out effectively the duties involved.~~

~~B. The individual responsible for the day-to-day operation of the educational program, no matter how titled, shall hold and maintain a valid five year renewable post graduate professional license issued by the board. This individual shall hold an endorsement in at least one appropriate area of disability served by the school 8 VAC 20-21-10 et. seq.. The individual serving in this capacity could be the same person functioning as the administrator identified in Paragraph 1 above provided licensure requirements are met.~~

~~C. The department may make exception to the above requirements for good cause upon application by the school.~~

~~PART VI~~
~~STAFF~~

~~8 VAC 20-670-200. Teachers.~~

~~A. Teachers of academic courses in elementary and non-departmentalized middle and high school programs shall hold a current Virginia teaching license, issued by the board, with endorsement in at least one of the specific areas of disability served by the school, or otherwise comply with the Licensure Regulations for School Personnel 8 VAC 20-21-10 et. seq.~~

~~B. Teachers in middle and high schools that are departmentalized must hold a current Virginia teachers license with endorsement in the academic area they are instructing 8 VAC 20-21-10 et. seq.. A sufficient number of appropriately endorsed special education teachers must be available to case manage Individualized Education Programs (IEPs) and to provide disability specific technical assistance and instruction. On-going staff development must include disability specific training.~~

~~C. Teachers of specialized subjects such as music, art, physical education, health and vocational education must hold a valid teaching license with an endorsement in the teaching area of responsibility, and agree to complete course work and/or in-service training in working with the types of students served by the school.~~

~~D. The board may make exception to the above requirements for good cause.~~

~~8 VAC 20-670-210. Ancillary personnel.~~

~~A. A therapist employed by a school shall be professionally trained in the area or areas of therapy in which he practices. If the school employs a therapist, this person shall be licensed or certified by the appropriate state and national authority or licensed eligible and currently working under the supervision of a licensed therapist. Documentation of continued progress toward licensure must be maintained.~~

~~B. Audiologists or speech therapists employed by the school shall be licensed by the appropriate state authority or meet the requirements for licensure as outlined in Licensure Regulations for School Personnel (8 VAC 20-21).~~

~~PART VI~~
~~STAFF~~

~~C. Psychologists employed by the school shall be licensed by the appropriate state authority, or meet the requirements for school psychologists, or both, as outlined in Virginia Licensure Regulations for School Personnel.~~

~~D. Paraprofessionals employed by the school shall be, at a minimum, high school graduates or the equivalent and have in-service training or experience in working with the type of student served by the school.~~

~~E. All support personnel such as librarians, guidance counselors, social workers, etc. shall have earned a bachelor's degree from an accredited institution and hold a valid license, where applicable, issued by the department or be licensed by the appropriate state authority.~~

~~F. All medical personnel, including but not limited to nurses and physicians, shall hold all licenses required by the Commonwealth of Virginia.~~

~~G. All volunteers and interns, or students who are receiving professional training shall be properly supervised.~~

~~H. The department may make exception to the above for good cause upon application by the school.~~

~~8 VAC 20-670-220. Personnel files.~~

~~A. Personnel files for staff shall be maintained and shall include the following documentation:~~

~~1. Academic preparation and past experience;~~
~~2. Attendance records;~~
~~3. Copies of contract(s) indicating dates and term(s) of employment;~~
~~4. Results of a x-ray or tuberculin test and/or other health records required by §22.1-300 of the Code and applicable regulations of the Virginia Department of Health;~~

~~5. Evidence of child protective service and criminal records checks including finger printing. Additionally for all staff who may transport students, evidence of Department of Motor Vehicles checks and a current copy of the driver's license; and~~

~~6. Documentation of staff development.~~

~~PART VII~~
~~PHYSICAL FACILITIES, INSPECTIONS~~

~~8 VAC 20-670-230. Facilities~~
~~8 VAC 20-670-240. The school plant~~

~~8 VAC 20-670-230. Facilities.~~

~~A. Department staff shall inspect the school facilities and file a report which is available to the board for review as a prerequisite to certification or licensing. The department shall schedule periodic monitoring visits to each school for students with disabilities at least once every three years. Unannounced visits by department staff may be made during the three[-]year time period. All facilities in use must comply with appropriate state and local ordinances governing fire safety, sanitation, and health.~~

~~B. A change in the location of a school shall be reported to the department at least 30 days before the move, on forms provided by the department. Documents required by 8 VAC 20-670-80(5), (6), and (7) of these regulations for the new location must be submitted to the department before the actual move takes place. An on-site visit must be made by department staff as soon as possible following notification of the pending change.~~

~~C. Schools which find it necessary to utilize extension and branch facilities, must submit the information required by 8 VAC 20-670-80 (5), (6), and (7) of these regulations and have an on-site visit to the facilities conducted by department staff prior to utilizing the facilities.~~

~~D. Schools which are modifying or expanding current facilities must submit the information required in 8 VAC 20-670-80 (5)and (6) of these regulations, and may have an on-site visit conducted by department staff.~~

~~E. In the event of fire or other emergency situations, the school must notify the department as soon as possible of the conditions and status of the school.~~

~~PART VII~~
~~PHYSICAL FACILITIES, INSPECTIONS~~

~~8 VAC 20-670-240. The school plant.~~

~~A. Schools shall be in compliance with the Uniform Statewide Building Code and the Americans with Disabilities Act. They shall maintain a physical plant that is accessible, barrier-free, safe, and clean.~~

~~B. In the case of new construction, schools shall comply with § 2.1-514 of the Code with reference to architectural barriers.~~

~~C. Emergency procedures shall be established by the school for handling emergencies including hostage situations, bomb threats, power outages, fires, medical emergencies, and inclement weather.~~

PART VIII
STUDENT SERVICES, RECORDS, AND CONTRACTS

8 VAC 20-670-250. Student services and records.

A. Each school shall maintain a listing of all students who enroll that includes, but is not limited to, the student's name, address, telephone number, social security number, disability, and enrollment date. For all publicly placed students, this list shall include the student's local school division. The information shall be current as of the date the student enrolls and shall be available for inspection by or submission to the board or department upon request.

B. Records of student counseling sessions for academic or disciplinary reasons must be maintained in the student's permanent record if termination, dismissal, or withdrawal is the basis for the counseling. The student, parent/guardian, or local school division shall receive a copy of the report upon written request if the action resulted in dismissal or termination.

C. Schools shall develop, publish, and provide to students clearly written policies governing conduct, attendance, academic progress necessary to matriculate to the next grade or level, and other matters relative to encouraging responsible student behavior.

D. Each school shall develop, publish, and make available to parents and students a procedure for resolving complaints which shall include information on reporting such complaints to the department. The department may utilize outside services to investigate and resolve complaints.

8 VAC 20-670-260. Applications and enrollment agreements for students privately placed.

A. An application for admission is not to be construed as a binding instrument on the part of the student or the school.

B. Any contract between a student, parent or guardian and a school, certified or licensed by the board shall be separate from the application for admission and must clearly outline the obligations of both parties.

C. Any contract or enrollment agreement used by the school shall comply with the following provisions:

1. The name and address of the school shall be clearly stated;

2. The total cost of the program, including tuition and all other charges, shall be clearly stated;

3. A disclosure that such agreement becomes a legally binding instrument upon the school's written acceptance of the student;

4. The school's cancellation and refund policy, shall be clearly stated.

D. Each school that serves privately placed students shall offer access to a tuition insurance plan if they financially obligate students for more than quarterly increments of the annual tuition.

E. A school may require the payment of a reasonable non-refundable initial fee, to cover expenses in connection with processing a student's application, provided it retains a signed statement in which the parties acknowledge their understanding that the fee is non-refundable. No other non-refundable fees shall be allowed prior to enrollment.

F. Schools which charge or are paid on a "services-rendered" basis may be exempted from the provisions of this Part upon written request to the department.

8 VAC 20-670-270. Application and enrollment agreements for students publicly placed.

A. An application for admission is not to be construed as a binding instrument on the part of the student or the school.

B. Any contract between a local school division or any other public agency or agencies financially responsible for the student's placement and a school, certified or licensed by the board shall be separate from the application for admission and must

~~clearly outline the obligations of both parties.~~

~~PART VIII~~
~~STUDENT SERVICES, RECORDS, AND CONTRACTS~~

~~C. Any contract or enrollment agreement used by the school shall comply with the following provisions:~~

~~1. The name and address of the school must be clearly stated;~~

~~2. The total cost of the program, including tuition and all other charges, shall be clearly stated; and~~

~~3. A disclosure that such agreement becomes a legally binding instrument upon the school's written acceptance of the student.~~

PART IX
ADVERTISING, PUBLICATIONS

8 VAC 20-670-280. Advertising and publications

8 VAC 20-670-280. Advertising and publications.

A. Each school shall use its complete name as listed on its license to operate for all publicity, publications, promotions or marketing purposes.

B. With respect to its status with the board, the school may advertise only that it has a "License to Operate, from the Virginia Board of Education." No other wording is acceptable to the board.

A school holding a license to operate issued by the board shall not expressly or by implication indicate by any means that the license to operate represents an endorsement offered by the school.

C. All printed materials, shall be accurate concerning the school's requirements for admission, curricula, programs and services, graduation requirements, tuition and other fees or charges, and terms for payment of tuition and other fees. Copies shall be filed with the board or department.

D. A school or its representatives shall not make any fraudulent or misleading statement about any phase of its operation in published or distributed materials.

E. Printed or electronic representations shall not be used by a school in such a manner as to convey a false impression about the size, importance, or location of the school's facilities, or its equipment.

F. Schools shall not use endorsements, commendations, or recommendations by students, individuals, manufacturers, business establishments or organizations except with their written consent and without any offer of financial compensation. Written evidence of compliance shall be maintained and available to the board or department.

G. The accrediting agency must be named if accreditation is used as part of a school's promotional materials.

H. No school may use the seal of the Commonwealth in any advertisement, publication or document.

~~PART X~~
~~ELECTRONIC CAMPUS SCHOOLS~~

~~8 VAC 20-670-290. Electronic campus schools~~

~~8 VAC 20-670-290. Electronic campus schools.~~

~~This section shall apply only to electronic campus schools.~~

~~A. In addition to the general application requirements, considerable emphasis will be placed on the following components when reviewing documentation submitted with an application from an electronic campus school:~~

~~1. Clearly defined education objectives, which demonstrate they can be achieved through distance learning, must be included with any application.~~

~~2. Courses offered are sufficiently comprehensive, accurate, and up-to-date, and educationally sound instructional materials and methods are used to achieve the stated objectives.~~

~~3. The school provides adequate examination services, maintenance of records, encouragement to students, and attention to individual differences.~~

~~PART XI~~
~~CHANGE OF OWNERSHIP~~

~~8 VAC 20-670-300. A license to operate is not transferable~~

~~8 VAC 20-670-300. A license to operate is not transferable.~~

~~A. A change of ownership occurs when control of a school changes from one owner to another. New owners of a school shall make an application for an original license to operate.~~

~~B. If there is a change in ownership of a school, the current owner shall notify the department at least 30 days prior to the proposed date of sale and provide a copy of the agreement of sale. An application for an original license to operate, including all attachments listed in 8 VAC 20-670-30 of these regulations, shall be submitted to the department by the new owner within 30 days following the effective date of the change. The school may be operated on a temporary basis under the new ownership until an original license to operate has been issued by the board.~~

~~PART XII~~
~~CONTRACTUAL RIGHTS OF STUDENTS~~

~~8 VAC 20-670-310. Protection of contractual rights of students.~~

~~As required by §22.1-324 of the Code of Virginia, each school applying for a license to operate shall provide a certain guaranty to protect the contractual rights of students.~~

~~If the school holds a surety bond or other guaranty instrument as required by 8 VAC 20-670-320 of these regulations, the first priority shall be to file a claim against the guaranty instrument.~~

~~8 VAC 20-670-320. Guaranty instrument requirements.~~

~~A. All applicants for a new license to operate, including those who have a change of ownership, shall provide a surety bond, irrevocable letter of credit or certificate of deposit as required by this section and maintain said guaranty instrument. Schools for students with disabilities shall maintain a guaranty instrument as required by this section as a condition of continued certification or licensing.~~

~~B. The amount of the guaranty instrument shall be based on the total projected enrollments as follows:~~
~~The minimum guaranty for up to 50 students is $5000.~~
~~The minimum increases incrementally, by $5000, for each additional 50 students or portion thereof.~~

~~C. If the school shows that it collects no advance tuition other than equal monthly installments or is paid after services have been rendered the school may apply, after three full years of operation, on forms provided for that purpose, to the department for authority to be exempt from the guaranty requirements.~~

~~PART XII~~
~~CONTRACTUAL RIGHTS OF STUDENTS~~

~~D. For guaranty instrument purposes, the school shall count its total current enrollment as of the date of the application, or its largest enrollment as of the date of the application, or its largest enrollment in the preceding 12 months, whichever is greater. A school being organized shall use the maximum projected enrollment which will be subject to revision based on the enrollment 60 days following the date classes start.~~

~~E. In the event a guaranty instrument is terminated other than as allowed in C. above, the license to operate will automatically expire if a replacement bond is not provided.~~

PART XIII
RENEWAL

8 VAC 20-670-330. Renewal of license to operate

8 VAC 20-670-330. Renewal of license to operate.

A. Schools for students with disabilities may have their licenses to operate renewed for up to three years.

B. The application for renewal shall include, in addition to other information:

1. A current fire inspection report.

2. A current schedule of tuition and other fees.

3. A copy of the financial statements of the school or owning entity to include, but not be limited to, the following:

a. A balance sheet, reflecting assets, liabilities, equity, and retained earnings;

b. An income statement, reflecting revenues, expenses, and profits and losses;

c. A statement of increase or decrease in cash, reflecting the sources and uses of working capital; and

d. Explanatory notes, which reflect the disclosures required by generally accepted accounting principles. These statements must be as of the date of the school's most recently-ended fiscal year.

4. The department reserves the right to call for, if need be in specific cases, one of these two types of statements:

a. An audited financial statement, certified by an outside, independent, certified public accountant in accordance with standards established by the American Institute of Certified Public Accountants; or

b. A financial statement which has been "reviewed" by an outside, independent, certified public accountant in accordance with principles established for reviews by the American Institute of Certified Public Accountants.

~~PART XIII~~
~~RENEWAL~~

~~C. Every license to operate, which has not been renewed by the board on or before the renewal anniversary date, shall expire, and the school shall cease operation immediately. A new license to operate shall be obtained from the board before such school may resume operations. All of the requirements of Part III of these regulations shall be met.~~

~~D. Any school not complying with the provisions of this section shall be deemed to be in violation of these regulations and shall be reported to the Office of the Attorney General for appropriate action.~~

PART XIV
DENIAL, REVOCATION, SUSPENSION OR REFUSAL TO RENEW, GROUNDS

8 VAC 20-670-340. Board actions.

The license to operate shall not be denied, revoked or suspended or a request for renewal refused except upon the action of the board which shall be reported in writing. Records of the board's findings, recommendations, and actions shall be preserved in writing.

8 VAC 20-670-350. Refusal, denial, revocation, or suspension.

The board may refuse to renew or may deny, revoke or suspend the license to operate of a school for any one or combination of the following causes:

1. Violation of any provision of the Code or any board regulations;
2. Furnishing false, misleading, or incomplete information or failure to furnish information requested by the board or department;
3. Violation of any commitment made in an application for a license to operate;
4. Failure to provide or maintain the premises or equipment in a safe and sanitary condition as required by law, by state regulations or local ordinances;
5. Failure to maintain adequate financial resources to conduct the programs offered or to retain an adequate, qualified instructional staff;
6. Failure to safeguard the interests of the public; and

7. Failing within a reasonable time to provide information requested by the board or department as a result of a formal or informal complaint or as supplement to an application.

8 VAC 20-670-360. Board investigation.

The department may, upon its own motion, investigate the actions of any applicant or any persons holding or claiming to hold a license to operate. The department shall make such an investigation upon the written complaint of any individual setting forth facts which, if proved, would constitute grounds for denial, refusal, suspension, or revocation of license.

8 VAC 20-670-370. Department investigation procedures.

Authority is granted to the department staff to investigate complaints from individuals and other sources concerning alleged violations of the Code or regulations by a school. Where the finding(s) of the department is in favor of the complainant, the school shall abide by any recommendation(s) made or corrective action deemed necessary by the department. If the school disagrees with the recommendation(s) or corrective actions, the department shall hold an informal hearing to determine whether further action (i.e. revocation, suspension or refusal to renew a license) is warranted. The Superintendent of Public Instruction or his designee shall chair the hearing.

8 VAC 20-670-380. Corrective actions.

Before proceeding to a hearing, as provided for in the Code, on the question of whether a license to operate shall be denied, refused, suspended, or revoked for any cause, the department may grant a reasonable period of time to correct any unsatisfactory condition to the holder of or applicant for a license to operate. If, within such time, the condition is corrected to the department's satisfaction, no further action leading to denial, refusal, suspension, or revocation shall be taken by the board.

~~PART XIV~~
~~DENIAL, REVOCATION, SUSPENSION OR REFUSAL TO RENEW, GROUNDS~~

~~8 VAC 20-670-390. Procedure for taking actions.~~

~~All actions taken under the provisions of this section in regard to denials, revocations, suspensions, or refusals to renew shall be taken in accordance with the provisions of the Administrative Process Act (§ 2.2-4000 et seq.).~~

~~8 VAC 20-670-400. Revocation or denial consequences.~~

~~Any owner of a school which has had a certificate or license revoked, denied or has been refused renewal, shall not be allowed to re-apply before at least 12 months have passed since the date the formal action was taken. In addition, this policy shall apply to any owner who fails to comply with the provisions of Part XVI of these regulations when closing a school.~~

~~PART XV~~
~~LISTING OF SCHOOLS~~

~~8 VAC 20-670-410. School listing~~

~~8 VAC 20-670-410. School listing.~~

~~The department shall maintain a list of schools holding valid licenses to operate under the provisions of the Code which shall be available for the information of the public.~~

~~PART XVI~~
~~SCHOOL CLOSINGS~~

~~8 VAC 20-670-420. Closing procedures~~

~~8 VAC 20-670-420. Closing procedures.~~

~~A. A school which is closing shall notify its students of the closing in writing. Local school divisions of all publicly placed students will also be notified. Arrangements shall be made to assure that students are able to complete the school year or, if privately placed, are provided refunds. In the event such arrangements cannot be made, the department shall be available to assist in making special arrangements for students to complete that year's program or students will be advised of their rights.~~

~~B. Each school which is closing shall notify the department in writing in advance of the anticipated closing date and provide the following information relative to the students currently enrolled:~~

~~1. A listing as described in subdivision A of Part VIII of these regulations;~~

~~2. For privately placed students: academic records including credits, grades or courses completed, and grades for those courses; evidence of refunds made to students where applicable; a copy of each student's academic attendance and financial payment records; and a copy of the enrollment agreement;~~

~~3. Records for publicly placed students in schools for children with disabilities shall be returned to the student's home school division with verification of this transmittal to the department; and~~

~~4. Students' records transmitted to the department shall be the originals or certified true copies.~~

~~C. At the time of notification, the school shall submit a written plan detailing the process of closure which provides for the following:~~

~~1. The cessation of all recruitment activities and student enrollments as of the date of the notice;~~

~~2. A description of the provisions made for the students to complete the academic year;~~

~~PART XVI~~
~~SCHOOL CLOSINGS~~

~~3. Copies of all notices of the closing given to students, local school divisions, the general public, and/or other interested parties such as accrediting agencies, tuition insurers, etc.;~~

~~4. Provisions for the transfer of all publicly placed students to their local school divisions and privately placed student records to the department within 30 days of the close and notification to all students of the location of their records; and~~

~~5. Provisions for notifying students in writing of their financial obligations.~~

~~D. The cost of transferring the records to the department shall be borne by the school.~~

~~E. In the event a school files a bankruptcy petition, a complete, certified true copy shall be filed with the department. If privately placed students are unable to complete the academic year, they shall be given the highest creditor status allowed by statute for refunds in the full amount of tuition and fees paid to the school.~~

~~F. The board or department may request any additional information which is reasonable and necessary to carry out its responsibility.~~

~~PART XVII~~
~~TRANSMITTAL OF DOCUMENTS AND MATERIALS~~

~~8 VAC 20-670-430. Transmitting documents and other materials~~

~~8 VAC 20-670-430. Transmitting documents and other materials.~~

~~A. The mailing of applications, forms, letters, or other papers shall not constitute receipt of the same by the department unless sent by registered mail, certified mail, express mail, or courier with return receipt requested.~~

~~B. All materials sent should be addressed to the Private Day Schools for Students with Disabilities, Department of Education, Box 2120, Richmond, VA 23218-2120 or Office of Private Day Schools for Students with Disabilities, James Monroe Building, 24th Floor, 101 North 14th Street, Richmond, VA 23219.~~

~~C. Materials submitted by electronic means (e.g. facsimile machine, computer, etc.) will be accepted contingent upon receipt of original documents sent in accordance with subsection A of this section.~~

~~PART XVIII~~
~~COMPLAINTS~~

~~8 VAC 20-670-440 Complaints~~

~~8 VAC 20-670-440 Complaints.~~

~~Schools are required to establish and provide to parents, students, and placing agencies an internal complaints resolution process. In the event that the complainant is not satisfied with the internal resolution or prefers, they may file a complaint with the Office of Private Day Schools for Students with Disabilities, Virginia Department of Education, P.O. Box 2120, Richmond, Virginia 23218-2120.~~

Board of Education Agenda Item

Item: E. **Date:** January 13, 2011

Topic: First Review of the Proposed *Regulations Governing Unexcused Absences and Truancy*

Presenter: Dr. Cynthia A. Cave, Director, Office of Student Services

Telephone Number: (804) 225-2818 **E-Mail Address:** Cynthia.Cave@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X_ Board review required by
- __X_ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

__X_ Action requested at this meeting ____ Action requested at future meeting: _____ (date)

Previous Review/Action:

____ No previous board review/action

__X_ Previous review/action
- date September 17, 2009 and July 22, 2010
- action Approval of the Notice of Intended Regulatory Action (NOIRA)

Background Information:

The proposed regulations to govern the *Collection and Reporting of Unexcused Absences and Truancy Data and Student Attendance Policies, 8 VAC 20-730-10,* are new. The purpose of the regulations is to provide consistency in the collection and reporting of school attendance data as well as guidance on student attendance policies. Due to the strong link between truancy and dropout rates, it is critical to address attendance issues early and effectively. School divisions can use documented attendance data to examine and evaluate attendance patterns, to intervene early with identified problems, and to develop policies and practices to promote daily student attendance.

The proposed regulations will also provide the necessary definitions and attendance data to be collected in order to report consistent and accurate data to the United States Department of Education (USED). The Virginia Department of Education (VDOE) collects the number of days a student is present, and in 2008 began collecting the number of unexcused absences as part of the Student Record Collection to comply with the reporting requirements for federal regulations, Section 4112 of the No Child Left Behind Act (NCLB). Currently, unexcused absence data

reported to the VDOE are based on the definition declared individually by the 132 school divisions. Data are unreliable and inconsistent, and do not provide valid information for accurate reporting, evaluation or analysis. These regulations would support consistency in data reporting and enable VDOE to report more accurate information to USED.

Based on a citizen petition, on September 17, 2009, the Board of Education authorized a Notice of Intended Regulatory Action (NOIRA) to add new regulations governing reporting of student nonattendance and any concomitant policies and procedures. The VDOE published the petition in the *Register of Regulations in the Regulatory Town Hall,* as required by the Administrative Process Act. Public comments were received during a 21-day public comment period. Ten comments were received in support of establishing regulations. No comments were received in opposition to establishing regulations. Subsequently, staff worked with an advisory committee to draft the regulations.

The statewide advisory committee of twenty-seven members met on November 16, 2009, to discuss attendance issues and areas of concern. The committee includes a parent, attendance and school resource officers, alternative education program administrators, one elementary and one secondary school principal, student support administrators, school social workers, and representatives from the Department of Behavioral Health and Developmental Services, Department of Criminal Justice Services, Virginia Commission on Youth, Project Hope (VDOE's homeless student program), Virginia Association of School Social Workers, Legal Aid Justice Center, and the VDOE. Committee members discussed the need for attendance definitions and reliable data collection, as well as early identification of student attendance problems, intervention, and supports. A subcommittee drafted regulations to address needs for review. Subsequent revisions in response to the comments of reviewers produced the proposed regulations.

On June 29, 2010, Executive Order 14 was issued, requiring that proposed regulations go forward by 180 days from the posting of the NOIRA on the Regulatory Town Hall. The NOIRA was resubmitted and approved by the Board on July 22, 2010, in order to comply with the new timeline of the Executive Order. One public comment in favor of the proposed regulations was submitted through the Town Hall Web site during the new NOIRA period.

Summary of Major Elements

The proposed regulations offer attendance definitions for implementing an intervention process and reporting data. The regulations will produce more consistent data and support effective practices that will assist school divisions' continuous improvement of daily school attendance. A summary of the proposed new regulations by section follows.

The Foreword, which explains their purpose and goals:

- To provide for consistency in the collection and reporting of school attendance data and to provide guidance on student attendance policy
- To correlate with the procedures required in § 22.1-258 of the *Code of Virginia*. This data collection is necessary to construct a valid representation of nonattendance issues.

The data should be used to evaluate and analyze student attendance patterns and issues at the school division and state levels. The resulting information should be used to strengthen efforts to engage students in daily school attendance.

Part I, 8 VAC 20-730-10, defines terms, such as "attendance plan," "excused absence," "truancy," and "unexcused absence," used in these regulations.

Part II, 8 VAC 20-730-20, articulates the procedures and responsibilities for intervening with nonattendance behavior, in accordance with § 22.1-258 of the *Code of Virginia.*

Part III, 8 VAC 20-730-30, describes data collection and reporting requirements. Each school division shall provide student level attendance data for each student, that includes the number of unexcused absences, as prescribed by the Virginia Department of Education. The following data shall be collected and reported to the Virginia Department of Education:

- All excused and unexcused absences as defined in these regulations for each individual student
- For each student with five unexcused absences, whether an attendance plan was developed, and if not, the reason
- For each student with six unexcused absences, whether an attendance conference was scheduled, and if not, the reason
- For each student with six unexcused absences, whether an attendance conference was actually held, and if not, the reason
- For each student with seven unexcused absences, whether a court referral/petition was filed

Superintendent's Recommendation: The Superintendent of Public Instruction recommends that the Board of Education waive first review and au thorize the Departm ent of Education staff to proceed with the requirements of the Administrative Process Act.

Impact on Resources: There may be an administrative impact on some school divisions, depending upon current practice and available fiscal resources.

Timetable for Further Review/Action: The timetable for further action will be governed by the requirements of the Administrative Process Act.

Related Data and Student Attendance Policies

Foreword

The Virginia Board of Education is setting forth procedures for the collection and use of data to identify students at risk of academic failure due to missed days at school and to promote early intervention to improve school attendance. Students who attend school daily, kindergarten through twelfth grade, are more likely to graduate. Students who do not attend school regularly are more likely to drop out of school and experience crime and violence, unemployment, substance abuse, adult criminality and incarceration, unwanted pregnancy and social isolation. Due to the strong link between missing school and these negative consequences, it is critical to address attendance issues early and effectively. School divisions can use documented attendance data to examine and evaluate attendance patterns, and to develop policies and practices to promote student daily attendance.

The primary goal of the Virginia Board of Education, through these regulations, is to set forth definitions with data collection requirements and procedures to address nonattendance issues. The intent of the regulations is to promote consistent and accurate data collection and reporting and to improve attendance related policies.

The regulations offer definitions for the collection of data at the school building level. These regulations define data that shall be collected on students with five, six and seven unexcused absences at each interval. The data collection correlates with the requirements in § 22.1-258 of the *Code of Virginia*. Data should be used to evaluate and analyze student attendance patterns at

the school division and state levels. These regulations will generate more consistent data and effective practices that will assist continuous improvement of daily school attendance.

PART I

DEFINITIONS

8 VAC 20-730-10 Definitions.

The following words and terms, when used in this chapter, shall have the following meaning, unless the text clearly indicates otherwise:

"Attendance plan" means action steps developed by a school representative (s), parent and student (if appropriate) to engage the student in regular school attendance. The plan shall identify academic, social, emotional and familial barriers that impede daily attendance along with positive strategies to support regular attendance. This plan may include school-based activities and/or suggested referrals to community supports.

"Attendance conference" means a face-to-face meeting, at a minimum, after the sixth unexcused absence among school staff, parents and student (if appropriate). The conference may include, if necessary, community representatives to discuss the current attendance plan and make modifications to support regular school attendance.

"Court referral" means referral to the Juvenile and Domestic Relations Court intake worker after the student's seventh unexcused absence. Copies of the attendance plan and documentation of conference meetings will be provided to the intake worker.

"Excused absence" means an absence of an entire assigned instructional school day with an excuse acceptable to the school administration that is provided by the parent. If circumstances

permit, the parent should provide the school authority with the reason for the nonattendance prior to the absence. Examples of an excused absence may include, but are not limited to, the following reasons: funeral, illness (including mental health and substance abuse illnesses), injury, legal obligations, medical procedures, suspensions, religious observances and military obligation.

"Instructional school day" means the length of a regularly scheduled school day for an individual student.

"Multi-disciplinary team" means a school-based team that convenes on a regular basis to review student records and to identify an integrated system of care for the student in need, including prevention, early intervention, and support services, and school-based case management. These services should address academic, social, emotional, and familial issues in order to improve regular school attendance. Members of the team meet confidentially with the parent and the student (if appropriate) to develop, evaluate, and update action steps and supports. Team members may include, but are not limited to, the following: an administrator, school counselor, social worker or psychologist, student assistance specialist, special education and regular education teacher, and attendance officer.

"Parent" means the parent(s), guardian(s), or other person(s) having legal control of the student.

"Truancy" means the act of accruing one or more unexcused absences.

"Unexcused absence" is an absence where the student misses his/her scheduled instructional

school day in its entirety, and no indication has been received by school personnel, within three days of the absence, that the student's parent is aware and supports the absence, or the parent provides an excuse that is unacceptable to the school administration. An administrator may change an unexcused absence to an excused absence when the parent has provided an acceptable excuse for the student's absence. If the student leaves the school building or surrounding grounds without permission from an administrator, it shall be considered the same as an unexcused absence for the entire day, unless there are acceptable circumstances as determined by an administrator. Absences resulting from suspensions shall not be considered unexcused.

PART II

UNEXCUSED ABSENCES INTERVENTION PROCESS AND RESPONSIBILITIES

8 VAC 20-730-20. Unexcused Absences Intervention Process and Responsibilities.

The following intervention steps shall be implemented to respond to unexcused absences from school and to engage students in regular school attendance.

Whenever a student fails to report to school on a regularly scheduled school day and no information has been received by school personnel that the student's parent is aware of and supports the absence, the school principal or designee, attendance officer, other school personnel or volunteer will notify the parent by phone or e-mail or any other electronic means to obtain an explanation. The school staff shall record the student's absence for each day as "excused" or "unexcused."

When a student has received five unexcused absences, the school principal or designee, or the attendance officer, shall make a reasonable effort to ensure that direct contact is made with the parent. The parent shall be contacted either in a face-to-face conference or by telephone. During the direct contact with the parent and the student (if appropriate), reason(s) for nonattendance shall be documented and the consequences of nonattendance explained. An attendance plan shall be made to resolve the nonattendance issues. The student and parent may be referred to a school based multi-disciplinary team for assistance implementing the attendance plan and case management.

The school principal or designee, or the attendance officer, shall schedule a face-to-face attendance conference within ten school days from the date of the student's sixth unexcused absence for the school year. The attendance conference must be held within fifteen days from the date of the sixth unexcused absence. The conference shall include the parent, student (when applicable), and school personnel (which may be a representative(s) from the multi-disciplinary team) and may include community service providers.

The principal or designee shall notify the attendance officer or superintendent of the student's seventh unexcused absence for the school year. The division superintendent or designee shall contact the Juvenile and Domestic Relations Court intake to file a Child In Need of Supervision (CHINSup) petition or begin proceedings against the parent. In addition to documentation of compliance with the notice provisions of § 22.1-258 the *Code of Virginia*, copies of the conference meeting notes, attendance plan and supports provided prior to filing the petition shall be presented to the intake worker. The decision shall be made by the intake worker either to divert the case or to file the petition for presentation before the court.

A record shall be maintained of each meeting that includes the attendance plan, the name of individuals in attendance at each conference meeting (including telephone or electronic devices), the location and date of the conference, a summary of what occurred and follow-up steps. This record does not become a part of the student's permanent scholastic record.

PART III

DATA COLLECTION AND REPORTING

8 VAC 20-730-30 Data Collection and Reporting.

This data collection shall begin on the first day students attend for the school year. Each school division shall provide student level attendance data for each student that includes the number of unexcused absences, as prescribed by the Virginia Department of Education. A student's attendance is cumulative and begins on the first official day of the school year or the first day the student is officially enrolled. All nonattendance days are cumulative and begin with the first absence. For purposes of this data collection, truancy shall start with the first unexcused absence and will be cumulative.

Excused and unexcused absences shall be counted for each individual student and shall be reported to the Virginia Department of Education as follows:

(A) All excused and unexcused absences as defined in these regulations for each individual student shall be collected.

(B) For each student with five unexcused absences, whether an attendance plan was developed, and if not, the reason.

(C) For each student with six unexcused absences, whether an attendance conference was scheduled, and if not, the reason.

(D) For each student with six unexcused absences, whether an attendance conference was actually held, and if not, the reason.

(E) For each student with seven unexcused absences, if a court referral/petition was filed.

Proposed Regulation
Agency Background Document

Agency name	Department of Education
Virginia Administrative Code (VAC) citation	8 VAC 20 -730-10
Regulation title	Regulations Governing the Collection and Reporting of Truancy Related Data and Student Attendance Policies
Action title	Procedures for the collection of truancy data and unexcused/non-verified absence intervention process and responsibilities.
Date this document prepared	December 10, 2010

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual.*

Brief summary

In a short paragraph, please summarize all substantive provisions of new regulations or changes to existing regulations that are being proposed in this regulatory action.

The proposed regulations are new. The regulations set criteria for truancy data collection and a procedure for intervening with a student who has unexcused absences. The regulations provide definitions to promote consistent data collection and reporting among school divisions and to the Virginia Department of Education (VDOE). Attendance data will be used to establish and revise school attendance policies and best practices to engage students in daily attendance. Procedures and responsibilities are defined for providing intervention and support services to increase school attendance and attachment. Finally, the regulations direct a referral to court services when a student is noncompliant with compulsory attendance law.

Acronyms and Definitions

Please define all acronyms used in the Agency Background Document. Also, please define any technical terms that are used in the document that are not also defined in the "Definition" section of the regulations.

There are no acronyms or technical terms that are not also defined in the definitions section of the regulations.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter number(s),

if applicable, and (2) promulgating entity, i.e., the agency, board or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

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§ 22.1-16. Bylaws and regulations generally.

> "The Board of Education may adopt bylaws for its own government and promulgate such regulations as may be necessary to carry out its powers and duties and the provisions of this title."

§ 22.1-254. Compulsory attendance required; excuses and waivers; alternative education program attendance; exemptions from article.

A summation of the compulsory attendance code relevant to this regulation is as follows:

> "Any child five years old on or before September 30 of each school year and who has not reached eighteen years of age shall be enrolled and attend a public, private, denominational, or parochial school, or be home schooled in accordance with state regulations. A local school board may excuse a youth from attendance under certain circumstances as described in subsection B and C of § 22.1-254."

§ 22.1-269. Board to enforce.

The *Code of Virginia* authorizes and requires the Board of Education to enforce Virginia's compulsory school attendance statutes as follows:

> "The Board of Education shall have the authority and it shall be its duty to see that provisions of this article are properly enforced throughout the Commonwealth."

§ 22.1-258. Appointment of attendance officers; notification when pupil fails to report to school.

> In summary, the *Code of Virginia* requires each school division to create an attendance plan for any student with five unexcused absences and to schedule a conference with parents after the sixth unexcused absence ... upon the next unexcused absence by such pupil, the school attendance officer shall enforce compulsory attendance by "(i) filing a complaint with the juvenile and domestic relations court alleging the pupil is a child in need of supervision as defined in § 16.1-288 or (ii) instituting proceedings against the parent pursuant to § 18.2-371or § 22.1-262...."

§ 22.1-261. Attendance officer to make list of children not enrolled; duties of attendance officer.

> "...It shall be the duty of the attendance officer, on behalf of the local school board, to investigate all cases on nonenrollment and, when no valid reason is found therefor, to notify the parent, guardian or other person having control of the child to require the attendance of such child at the school within three days from the date of such notice."

§ 22.1-267. Proceedings against habitually absent child.

> "Any child permitted by any parent, guardian, or other person having control thereof to be habitually absent from school contrary to the provisions of this article may be proceeded against as a child in need of supervision as provided in Chapter 11 (§ 16.1-226 et seq.) of Title 16.1."

§ 22.1-262. Complaint to court when parent fails to comply with law.

> "...If the parent (i) fails to comply with the provisions of § 22.1-261 within the time specified in the notice; or (ii) fails to comply with the provisions of § 22.1-254; or

(iii) refuses to participate in the development of the plan to resolve the student's nonattendance or in the conference provided for in § 22.1-258, the attendance officer is to provide documentation to the court regarding the school division's compliance with § 22.1-258. In addition thereto, such child may be proceeded against as a child in need of services or a child in need of supervision as provided in Chapter 11 (§ 16.1-226 et seq.) of Title 16.1."

§ 22.1-265. Inducing children to absent themselves.

"Any person who induces or attempts to induce any child to be absent unlawfully from school or who knowingly employs or harbors, while school is in session, any child absent unlawfully shall be guilty of a Class 3 misdemeanor .... and willfully violated the provisions of this section ... having been convicted previously of a violation of this section, ... shall be guilty of a Class 2 misdemeanor."

§ 22.1-263. Violation constitutes misdemeanor.

"Any person violating the provisions of either § 22.1-254, except for clause (ii) of subsection A, §§ 22.1-255,22.1-258,22.1-267, or the parental responsibility provisions relating to compulsory school attendance included in § 22.1-279.3, shall be guilty of a Class 3 misdemeanor .... that such person has been convicted previously of a violation of any provision of § 22.1-254, except for clause (ii) of subsection A, or any provision of §§ 22.1-255, 22.1-258 or § 22.1-267, such person shall be guilty of a Class 2 misdemeanor."

§ 22.1-266. Law-enforcement officers and truant children.

"A. Notwithstanding the provisions of § 16.1-246, any law-enforcement officer ... or any attendance officer may pick up any child who (i) is reported to be truant from public school by a school principal or division superintendent or (ii) the law-enforcement officer or attendance officer reasonably determines to be a public school student and by reason of the child's age and circumstances is either truant from public school or has been expelled from school and has been required to attend an alternative education program... and may deliver such child to the appropriate public school, alternative education program, or truancy center and personnel thereof without charging the parent or guardian of such child with a violation of any provision of law...."

§ 22.1-260.B – Reports of children enrolled and not enrolled; nonattendance; social security numbers required.

"At the end of each school year, each public school principal shall report to the division superintendent the number of students by grade level for whom a conference was scheduled as required by § 22.1-258. The division superintendent shall compile such grade level information for the division and provide such information to the Superintendent of Public Instruction annually."

Federal regulations, Section 4112 of the No Child Left Behind Act (NCLB), mandate truancy data to be collected at the local level by each school and be reported to the State Department of Education. Data for each individual school will be made public. The aggregated state data results will be reported to the United States Department of Education (USED).

Purpose

Please explain the need for the new or amended regulation by (1) detailing the specific reasons why this regulatory action is essential to protect the health, safety, or welfare of citizens, and (2) discussing the goals of the proposal, the environmental benefits, and the problems the proposal is intended to solve.

It is the primary goal of the Virginia Board of Education, through these regulations, to set forth definitions for data collection, and procedures and responsibilities of the participants to address nonattendance issues. Enacting these regulations should enhance daily school attendance and decrease referrals to court services for truancy.

It is the intent of the Virginia Board of Education, through these regulations, to:

- Provide for consistent and accurate data collection and reporting
- Improve attendance related policies, procedures and evidence-based prevention and intervention practices
- Enhance school staff's capability to early identify students with nonattendance issues and to intervene and provide support and to case manage and monitor progress
- Create a positive impact on the family, the student, school divisions and court services in their efforts to improve school attendance
- Increase a student's opportunity to benefit from a quality education in preparation for a career or post-secondary education
- Create a climate for improving communication, cooperation, and coordination of services among community service agencies and public systems to address issues manifested in truancy behavior
- Encourage dissemination of information to increase public knowledge of the importance of regular school attendance and these regulations.

Substance

Please briefly identify and explain new substantive provisions (for new regulations), substantive changes to existing sections or both where appropriate. (More detail about all provisions or changes is requested in the "Detail of changes" section.)

The proposed regulations are organized according to the following four sections:

The first section identified as the "Foreword," which explains the regulations' purpose and goals.

Part I, which provides the definition of terms, such as "attendance plan," "excused absence," and "unexcused absence."

Part II, which articulates the procedures and responsibilities for early identification and intervention with nonattendance behavior and the issues that manifest truancy. It delineates processes for assisting the student and family in preventing non-attendance and defines the steps to intercede.

Part III, which identifies the attendance data to be reported to VDOE that includes for each individual student: (1) all excused and unexcused absences; (2) students with five, six or more unexcused absences; (3) the number of attendance plans developed and conferences scheduled and held; and (4) the number of court referrals.

Issues

Please identify the issues associated with the proposed regulatory action, including:

1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;

2) the primary advantages and disadvantages to the agency or the Commonwealth; and

3) other pertinent matters of interest to the regulated community, government officials, and the public.

If the regulatory action poses no disadvantages to the public or the Commonwealth, please so indicate.

The proposed regulations pose no disadvantage to the public or the Commonwealth. The proposed regulations will serve to more accurately collect daily school attendance and nonattendance data and guide early identification and intervention processes to remove barriers that disengage a student from school, thus improving school attendance.

Students who attend school daily, kindergarten though twelfth grade, are more likely to graduate. Students who do not attend school regularly are more likely to experience academic failure, school dropout, criminal and violent acts, unemployment, substance abuse, adult criminality and incarceration, unwanted pregnancy and social isolation. Due to the strong link between truancy and these negative consequences, it is critical to address attendance issues early and effectively.

Requirements more restrictive than federal

Please identify and describe any requirement of the proposal, which are more restrictive than applicable federal requirements. Include a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements or no requirements that exceed applicable federal requirements, include a statement to that effect.

There are no requirements more restrictive than applicable federal requirements.

The proposed regulations provide the necessary definitions and attendance data in order to report consistent and accurate data to the United States Department of Education (USED). In 2008, the Virginia Department of Education (VDOE) began collecting the number of unexcused absences as part of the Student Record Collection to comply with the reporting requirements for federal regulations, Section 4112 of the No Child Left Behind Act of 2001. The regulations mandate truancy data be collected at the local level by each school and be reported to the State Department of Education. Data for each individual school will be made public. The aggregate state data results will be reported to the USED.

An “unexcused absence” is defined by the USED Uniform Data Set of the Uniform Management Information and Reporting System (UMIRS) as a school division’s definition for a student’s unexcused absence for one day. No federal or state criteria are applied to the definition. These regulations will enable VDOE to receive more accurate and consistent attendance data from school divisions to be reported to USED.

Section 22.1-258 of the *Code of Virginia* addresses school attendance issues. It requires schools to make a reasonable effort to notify parents when a student fails to report to school. This section also requires each school division to create a plan for any student with five unexcused absences and to schedule a conference with parents after the sixth unexcused absence. This section further addresses the procedure for enforcement of attendance requirements. In the proposed regulations, data will be collected that correlates to this section of the *Code of*

Virginia, which is not a federal requirement. This data collection is necessary to evaluate and analyze student attendance patterns and issues at the school division and state levels. The resulting information will be used to strengthen efforts to engage students in daily school attendance.

Localities particularly affected

Please identify any locality particularly affected by the proposed regulation. Locality particularly affected means any locality which bears any identified disproportionate material impact which would not be experienced by other localities.

The regulations will affect all school divisions but none will be materially impacted disproportionately.

Public participation

Please include a statement that in addition to any other comments on the proposal, the agency is seeking comments on the costs and benefits of the proposal and the impacts of the regulated community.

In addition to any other comments, the board/agency is seeking comments on the costs and benefits of the proposal and the potential impacts of this regulatory proposal. Also, the agency/board is seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the *Code of Virginia.* Information may include 1) projected reporting, recordkeeping and other administrative costs, 2) probable effect of the regulation on affected small businesses, and 3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments may do so via the Regulatory Townhall Web site, www.townhall.virginia.gov, or by mail to Nancy Campbell, Virginia Department of Education, Office of Student Services, PO Box 2120, Richmond, VA 23218-2120, phone number 804-225-2910, fax number 804-786-9769 or e-mail at nancy.campbell@ doe.virginia.gov.

Written comments must include the name and address of the commenter. In order to be considered comments must be received by the last date of the public comment period.

Economic impact

Please identify the anticipated economic impact of the proposed new regulations or amendments to the existing regulation. When describing a particular economic impact, please specify which new requirement or change in requirement creates the anticipated economic impact.

Projected cost to the state to implement and enforce the proposed regulation, including (a) fund source, and (b) a delineation of one-time versus on-going expenditures.	There is a minimal cost to the state to implement and enforce the proposed regulations. However, existing budgets should be sufficient since most of these activities and practices already exist.
Projected cost of the *new regulations or changes to existing regulations* on localities.	It is not possible to estimate whether there will be an increased cost due to the varying nature of the 132 school divisions. However, it is doubtful that there will be an increased cost, since many of the activities and practices proposed in the regulations exist in school divisions.

Description of the individuals, businesses or other entities likely to be affected by the *new regulations or changes to existing regulations*.	School divisions and juvenile and domestic relations courts.
Agency's best estimate of the number of such entities that will be affected. Please include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than $6 million.	There are 132 school divisions in the Commonwealth. Each school division has a school board with varying numbers of members and a superintendent.
All projected costs of the *new regulations or changes to existing regulations* for affected individuals, businesses, or other entities. Please be specific and do include all costs. Be sure to include the projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses. Specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the proposed regulatory changes or new regulations.	It is not possible to estimate the cost of the regulations due to the varying nature of the 132 school divisions. However, any cost should be minimal since the staff to execute the scope of work proposed in these regulations already exists within school divisions. The cost should be minimal, if any, since the regulations do not impose additional requirements on small businesses, individuals or other entities.
Beneficial impact the regulation is designed to produce.	These new attendance regulations will enhance accurate and consistent data collection and reporting, and evaluation and analysis, to strengthen practices to improve student attendance. Students who attend school daily are more likely to graduate from high school and be prepared for the world of work or post-secondary education.

Alternatives

Please describe any viable alternatives to the proposal considered and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the action. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in §2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulation.

The alternative to these regulations is to continue with the current practice of the Virginia Department of Education (VDOE) providing only technical assistance. Unexcused absence data reported to the VDOE is based on the definition declared individually by each of the 132 school divisions. This data is unreliable and inconsistent and does not provide valid information for accurate reporting, evaluation or analysis. The regulations enhance consistency in data reporting and practice, which provides a foundation for evaluation and analysis.

The proposed regulations offer attendance definitions for reporting data and implementing an early identification and intervention process. The regulations offer a process for utilizing individual student data at the school building level in order to intervene and provide support services to prevent the damaging consequences of continued absences from school. The regulations will produce more consistent data and effective practices that will assist school divisions' continuous improvement of daily school attendance.

Regulatory flexibility analysis

Please describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.

This regulation does not impact small businesses.

Public comment

Please summarize all comments received during public comment period following the publication of the NOIRA, and provide the agency response.

Following the receipt of a citizen petition for rulemaking, the VDOE published the petition in the Register of Regulations in the Regulatory Town Hall as required by the Administrative Process Act in July 2010 and November 2010. Public comments were received during two 21-day public comment periods. Twelve comments were received from eleven individuals in support of the proposed regulations. No comments were received in opposition to the proposed regulations.

Commenter	Comment	Agency response
Alice Morgan-Brown, Ph.D.	"Please promulgate regulations to require more specific reporting of truancy and truancy intervention efforts."	The proposed regulations include reporting and early identification and intervention guidance.
John Butcher	Supports the promulgation of the regulation to collect the following information: students with five or more unexcused absences; number of attendance plan developed; number of conference scheduled and held; students with more unexcused absences following the conference and the number of students referred to court services and the outcome, and make it available to the public.	The proposed regulations include the collection of this information.
Tichi Pinkney Eppes, Virginia Heroes	"I support this petition."	None required.
Sarah Geddes, JustChildren, a program of Legal Aid Justice Center	Strongly supports specific reporting of truancy and truancy intervention efforts. "This data will help the state tackle truancy by setting sound policies and targeting resources where they are most needed to help improve attendance and graduation rate. Please grant the petitioner's request and draft these critical regulations."	The proposed regulations include the collection of this information.
Sue Ella Kobak	Supports the promulgation of the regulation and reporting unexcused absences and engaging and	The proposed regulations include the reporting of unexcused absences and provide a process for engaging and encouraging student and

	encouraging parents and students in classroom instruction.	parental involvement.
Christa Pierpont, Restorative Community Foundation	"I strongly support the changes which would require schools to report to the DOE the number of students who miss more than five days of school annually. Can this information be divided into excused and unexcused absence? This information gets at many issues which need to be immediately addressed on a prevention level and monitored for concerns regarding school climate."	The proposed regulations include this recommendation.
Christine Reppucci	"Please do all you can to press for regulations to require schools to report and keep clear records of truancy. These regulations will help to keep more children in school and reduce one of the major risk factors in youth truancy, school dropout, teen pregnancy, and ultimately a downward slide toward an unproductive adulthood."	The proposed regulations include this recommendation.
Liane Rozzell, Families & Allies of Virginia's Youth	Supports the Petition to Promulgate Regulations governing more specific reporting of truancy and truancy intervention efforts.	The proposed regulations include this recommendation.
John Edward Whitfield	Supports the Petition to Promulgate Regulations governing more specific reporting of truancy and truancy intervention.	The proposed regulations include this recommendation.
Brandon Wright	"I strongly support the Petition to Promulgate Regulations governing more specific reporting of truancy and truancy intervention efforts."	The proposed regulations include this recommendation.
Carrie Welch State Farm	"I think it is important we address truancy and ensure our students and their parents are held accountable for their actions. Thank you for the information."	The proposed regulations include this recommendation.

Family impact

Please assess the impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

The proposed regulations are expected to have a positive impact on the institution of the family and family stability. The intervention process is intended to: (1) empower parental authority and rights in the education of the students as well as support parents in nurturing and supervising the student; (2) engage the student in daily school

attendance in order to increase the likelihood of taking responsibility for oneself to graduate from high school to become economically self-sufficient.

Detail of changes

Please detail all changes that are being proposed and the consequences of the proposed changes. If the proposed regulation is a new chapter, describe the intent of the language and the expected impact if implemented in each section. Please detail the difference between the requirements of the new provisions and the current practice or if applicable, the requirements of other existing regulations in place.

If the proposed regulation is intended to replace an emergency regulation, please list separately (1) all provisions of the new regulation or changes to existing regulations between the pre-emergency regulation and the proposed regulation, and (2) only changes made since the publication of the emergency regulation.

This is a new regulation.

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change, rationale, and consequences

For new chapters, use this chart:

Section number	Proposed requirements	Other regulations and law that apply	Intent and likely impact of proposed requirements
20-730-10	Provides definition of terms	§ 22.1-16. Bylaws and regulations generally. § 22.1-254. Compulsory attendance required; excuses and waivers; alternative education program attendance; exemptions from article. § 22.1-258 Appointment of attendance officers; notification when pupil fails to report to school.	To assist readers in understanding regulations and provide for consistent implementation by school divisions

20-730-20	Provides an intervention process for increasing student attendance and making a court referral when necessary	§ 22.1-261. Attendance Officer to make list of children not enrolled; duties of attendance officer. § 22.1-262. Complaint to court when parent fails to comply with law. §22.1-263 Violation constitutes misdemeanor. § 22.1-265. Inducing children to absent themselves. § 22.1-266. Law-enforcement officers and truant children. § 22.1-267. Proceedings against habitually absent child.	To establish consistent and effective practices for engaging students in daily school attendance; to decrease court referrals and student dropout rates and increase graduation rates
20-730-30	Provides direction for collecting and reporting attendance data to VDOE	§ 22.1-269. Board to enforce. § 22.1-260. Reports of children enrolled and not enrolled; nonattendance; social security numbers required.	To assist school divisions in being more consistent and accurate in reporting attendance data

Enter any other statement here

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Board of Education Agenda Item

Item: F. **Date:** January 13, 2011

Topic: Final Review of a Report on Homebound Instructional Services in Response to HB 257 Passed by the 2010 General Assembly

Presenter: Ms. Anne D. Wescott, Assistant Superintendent for Policy and Communications

Telephone Numbers: (804) 225-2403 **E-Mail Address:** Anne.Wescott@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by
- __X__ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

__X__ Action requested at this meeting

____ Action requested at future meeting: _____

Previous Review/Action:

____ No previous board review/action

__X__ Previous review/action
- dates November 18, 2010
- actions First review

Background Information: The 2010 General Assembly passed HB 257, which requires the Board of Education to review its *Regulations Establishing Standards for Accrediting Public Schools in Virginia (SOA)* as they relate to homebound instructional services. The legislation passed by the 2010 General Assembly states the following:

> § 1. That the Board of Education shall review its *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131) as they relate to homebound instructional services to address whether homebound instruction may be made available to students who are confined at home or in a health care facility for periods that would prevent normal school attendance based upon evidence submitted by any person licensed to diagnose and treat mental, emotional, or behavioral disorders by a health regulatory board within the Department of Health Professions.

Currently 8 VAC 20-131-180.A of the SOA provides in part:

> Homebound instruction shall be made available to students who are confined at home or in a health care facility for periods that would prevent normal school attendance based upon certification of need by a licensed physician or licensed clinical psychologist….

The delivery of homebound instructional services is the responsibility of the school divisions. To assist school divisions with the administration of the homebound instructional program, the Virginia Department of Education (VDOE) has issued *Homebound Instructional Services Guidelines*. These VDOE guidelines cover areas such as:

1. The eligibility for homebound services;
2. The initiation, review, and termination of services;
3. The role of the teacher, physician, and licensed clinical psychologist;
4. Suggested guidelines as to the number of hours of instruction to be provided at the elementary and secondary level;
5. The use of online instruction; and
6. Reimbursement of costs by the Commonwealth.

Summary of Major Elements: In order to assist the Board in its review required by HB 257, the VDOE administered a short survey to solicit information about homebound instructional services offered by school divisions during the 2009-2010 academic year. This survey was provided to school divisions in September 2010, and it asked general questions about the number of students referred for homebound services, whether complaints were received from parents about the homebound program, including the certification process, and whether school divisions had any suggested changes to the current structure of the homebound program. Ninety-one school divisions responded to this survey.

None of the 91 school divisions responding indicated that there are any deficiencies with the current certification process. Three respondents indicated that the current certification structure is effective.

Many of the comments received from school divisions indicate that additional guidance from the VDOE would be helpful. The conclusions and recommendations section of the report suggests that the Board may want to consider directing the VDOE to review its *Homebound Instructional Services Guidelines* to determine whether revisions to the guidelines are necessary.

The Board of Education authorized a 30-day period of public comment on November 18. Twelve comments from individuals, school divisions, and organizations were received, including comments from JustChildren that included a petition with 50 signatures, many with comments. Only one commenter supported changing the regulation to allow additional health professionals to expanding the list of health professionals who could prescribe homebound services. Four commenters did not support any changes to the regulation. Most of the commenters spoke of their personal experience with homebound and home-based instruction, and many had recommendations for revisions to the guidelines.

Superintendent's Recommendation: The Superintendent of Public Instruction recommends that the Board of Education take no action to amend the regulations related to homebound services. The Department of Education will review its guidelines and revise them as may be necessary, and will continue to monitor this issue.

Impact on Resources: The impact on resources will be minimal.

Timetable for Further Review/Action: The Department of Education will review its guidelines in 2011 and will revise them as may be necessary. The department will continue to monitor this issue.

VIRGINIA DEPARTMENT OF EDUCATION

REPORT

INFORMATION ON HOMEBOUND INSTRUCTIONAL SERVICES

PRESENTED TO THE

VIRGINIA BOARD OF EDUCATION

NOVEMBER 2010

Introduction and Background

The 2010 General Assembly passed House Bill 257, which requires the Board of Education to review its *Regulations Establishing Standards for Accrediting Public Schools in Virginia (SOA)* as they relate to homebound instructional services. The law states the following:

> That the Board of Education shall review its *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131) as they relate to homebound instructional services to address whether homebound instruction may be made available to students who are confined at home or in a health care facility for periods that would prevent normal school attendance based upon evidence submitted by any person licensed to diagnose and treat mental, emotional, or behavioral disorders by a health regulatory board within the Department of Health Professions.

Currently 8 VAC 20-131-180.A of the SOA provides in part:

> Homebound instruction shall be made available to students who are confined at home or in a health care facility for periods that would prevent normal school attendance based upon certification of need by a licensed physician or licensed clinical psychologist….

The delivery of homebound instructional services is the responsibility of the school divisions. In its *Homebound Instructional Services Guidelines*, the Virginia Department of Education (VDOE) states that "…homebound instruction is designed to provide continuity of educational services between the classroom and home or health care facility, for students whose medical needs, either physical or psychiatric, do not allow school attendance for a short period of time. It is not intended to supplant school services and is by design temporary. The school division is responsible for providing instructional services for all public school students who must be temporarily confined at home or in a health care facility. The school division is also responsible for providing homebound services to a student enrolled in the school division who is confined in another county or city in Virginia and to qualified students confined in another state, if those students meet all the homebound eligibility requirements."

These VDOE guidelines cover areas such as:

1. The eligibility for homebound services;
2. The initiation, review, and termination of services;
3. The role of the teacher, physician, and licensed clinical psychologist;
4. Suggested guidelines as to the number of hours of instruction to be provided at the elementary and secondary level;
5. The use of online instruction; and
6. Reimbursement of costs by the Commonwealth.

The Commonwealth reimburses school divisions for costs incurred from the delivery of homebound services. School divisions receive this reimbursement as a percentage of hourly payments to teachers employed to provide homebound instruction to eligible children. A maximum hourly rate is established annually and the reimbursements received by a school division are adjusted for that division's local composite index of ability-to-pay.

State funding available for homebound services reimbursement is approximately $5.6 million in fiscal year 2011 and $5.9 million in fiscal year 2012. Based on the amount of state funding available in fiscal year 2010 compared to the amount of homebound expenditures reported by school divisions for the 2009-2010 academic year, it appears that school divisions were reimbursed by the Commonwealth for less than 30 percent of their total expenditures.

This report provides information on data collected from school divisions regarding homebound instructional services. These data are provided to assist the Virginia Board of Education in assessing the need for amending its existing regulations to address any changes that may be needed to the current certification process so that other individuals licensed by a health regulatory board may certify the need for a student to have homebound services. Currently, only physicians and licensed clinical psychologists can certify the need for a student to have homebound services.

Review Process

In order to assist the Board in its review of this legislation, the VDOE administered a short survey to solicit information about homebound instructional services offered by school divisions during the 2009-2010 academic year. This survey was provided to school divisions in September, 2010, and it asked general questions about the number of students referred for homebound services, whether complaints were received from parents about the homebound program, including the certification process, and whether school divisions had any suggested changes to the current structure of the homebound program. The appendix to this report contains the superintendent's memo and survey questions distributed to school divisions.

This report presents a summary of the survey responses received from 91 school divisions, representing almost 70 percent of all Virginia school divisions.

General Survey Response Information

Data

School divisions were asked the following questions about the number of students referred for homebound services.

1. **For the 2009-2010 school year, please provide the total number of students approved for homebound due to:**

Category	Total Reported by School Divisions	Percent of Total
Physical Illness	4,135	54%
Mental Illness	984	13%
Discipline Program	1,828	24%
Other 723		9%

2. **For the 2009-2010 school year, how many of these students had an individualized education program (IEP)?**

Total Reported by School Divisions
2,757

3. **For the 2009-2010 school year, how many of these students had a 504 plan?**

Total Reported by School Divisions
207

4. **For the 2009-2010 school year, how many of these students were approved for homebound services by one of the following?**

Category	Total Reported by School Divisions	Percent of Total Number of Students Reported to Have Received Homebound Services
Physician 4,285		56%
Licensed Clinical Psychologist	560	7%

Narrative Information

School divisions were asked the following questions regarding the receipt of complaints and changes that could be made to the homebound program.

1. **Has your school division received complaints from parents who have been unable to secure a homebound certification from either a licensed clinical psychologist or a physician? If so, what was the resolution?**

   Approximately 12 percent of the school divisions responding to the survey indicated that complaints have been received from parents. Eighty-eight percent of the school divisions responding indicated that they have not received any complaints regarding this issue. The following information highlights the responses received:

- Only one school division referenced the certification process addressed in House Bill 257. In its response, this school division indicated support of the current certification structure.
- The other responding school divisions had no complaints directly related to the certification issues raised in House Bill 257.
- Some school divisions reported parental complaints about the certification process. The complaints were usually related to delays in the physician's office, misunderstanding of the requirements, or the physician's determination that homebound bound services were not necessary.
- Three school divisions indicated that some parents had concerns about difficulty in securing the appropriate certification. However, this issue was usually resolved by seeking the assistance of another physician or licensed clinical psychologist. In one school division, the child did not get the certification because homebound was not the appropriate placement. In another school division, the child was able to receive homebound services through his Individualized Education Program (IEP). In the third case, truancy was an issue and the child was required to attend class.

2. Has your school division received any other complaints about the homebound program from parents? (If the answer is yes, please describe the complaints.)

Approximately 40 percent of the school divisions responding to the survey indicated that complaints have been received from parents about the program. Sixty percent of the responding school division indicated that they have not received any complaints. The following information highlights the responses received:

- None of the school divisions referenced the certification process addressed in House Bill 257 in the responses.
- Some of the school divisions reported complaints about the certification process. Some school divisions reported that parents were reluctant to follow the process. School divisions also reported that the extension of services is sometimes difficult. One school division reported that a parent of a private school student wanted to have homebound services provided by the public school division.
- School divisions reported that complaints were received when parents asked for homebound instructional services without valid medical reasons.
- One school division reported complaints due to denial of homebound instruction even when the parent provided a certification from a physician or licensed psychologist.
- Some of the school divisions reported complaints about the quality of instruction, the amount of instruction, the difficulty in getting instruction started, scheduling difficulties, problems with the teacher, and the inability to cover the laboratory requirements for related science courses and some advanced level classes.

3. Does your school division have any changes you would like to make to the homebound program to facilitate academic enhancement?

Approximately 20 percent of the school divisions responding to the survey commented on the need to make changes to the program. The following information highlights the responses received:

- Only two school divisions referenced the certification process addressed in House Bill 257 in their response and both school divisions support the current certification structure.
- One school division expressed interest in having a maximum number of hours of homebound instruction provided per grade level of instruction. Another school division expressed interest in increasing the number of instructional hours provided for high school students.
- Some school divisions reported concerns about the lack of teachers available to teach homebound instruction. One school division asked that any licensed teacher be allowed to teach any student. Another school division suggested the use of a regional pool of teachers who could provide homebound instruction.
- One school division expressed concern about teacher safety.
- Several school divisions mentioned the use of virtual education as a means to meet the needs of students requiring homebound instruction. However, one school division mentioned the challenge in using virtual instruction because many of the students' homes are not equipped with "wifi" or with "hotspots."
- One school division mentioned that many students are on home-based instruction for disciplinary reasons. This school division reported that if it received financial reimbursement for these students, it could hire additional staff.
- Another school division asked for reimbursement for students placed on homebound instruction by the IEP team.

Other General Comments

School divisions that submitted information to the VDOE commented on other issues surrounding the homebound program. The following information highlights the responses received:

- No school division reported that they would support certification for homebound instruction by any person licensed to diagnose and treat mental, emotional, or behavioral disorders by a health regulatory board within the Department of Health Professions.
- One school division reported that a child receiving homebound services was not allowed to participate in extracurricular activities.
- One school division asked for a better definition of mental health issues as students with these issues are a significant percentage of those students receiving homebound services.

- Several school divisions mentioned the need for a greater emphasis on services plans and transition plans for students receiving homebound services.
- One school division reported frustration because personnel were unable to speak to the physician about a homebound referral.
- One school division reported that parents could not understand the need for a nine week review of the homebound services provided.

Conclusions and Recommendations

No school divisions responding to the survey indicated that there are any deficiencies with the current certification process, which is the issue under examination under HB 257. Three respondents indicated that the current certification structure is effective.

During 2009, VDOE received a request from the Virginia Association of Clinical Counselors to expand the professionals that may refer a student for homebound instruction to include licensed professional counselors, licensed clinical social workers, and licensed marriage and family therapists. In response to this request, VDOE indicated that it maintains a medical orientation to homebound instruction and also indicated that it had received no requests from school divisions to expand referral authority beyond what is currently in Board regulations.

Many of the comments received from school divisions indicate that additional guidance from the VDOE would be helpful. It is not clear from the data reported how many divisions may be denying services for homebound instruction after receiving certification or how many school divisions are choosing to provide homebound services without certification under varying circumstances. For these reasons, the Board may want to consider directing the VDOE to review its *Homebound Instructional Services Guidelines* to determine whether revisions to the guidelines are necessary.

APPENDIX

SUPERINTENDENT'S MEMORANDUM

DATE: September 24, 2010 **MEMO. NO. 234**

TO: Division Superintendents

FROM: Patricia I. Wright
Superintendent of Public Instruction

SUBJECT: Survey related to House Bill 257 – Homebound Instructional Services

The 2010 General Assembly passed HB 257, which requires the Board of Education to review its *Regulations Establishing Standards for Accrediting Public Schools in Virginia (SOA)* as they relate to homebound instructional services. The law states the following:

> That the Board of Education shall review its *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131) as they relate to homebound instructional services to address whether homebound instruction may be made available to students who are confined at home or in a health care facility for periods that would prevent normal school attendance based upon evidence submitted by any person licensed to diagnose and treat mental, emotional, or behavioral disorders by a health regulatory board within the Department of Health Professions.

Currently 8 VAC 20-131-180.A of the SOA provides in part:

> Homebound instruction shall be made available to students who are confined at home or in a health care facility for periods that would prevent normal school attendance based upon certification of need by a licensed physician or licensed clinical psychologist….

In order to assist the Board in its deliberations on this issue, the Department has developed a short survey to solicit information about homebound instruction offered by school divisions. Please complete the survey, which can be found at http://www.surveymonkey.com/s/5YJYT2V, by October 22, 2010. You may contact the Office of Policy at 804-225-2092 or by e-mail at policydata@doe.virginia.gov if you have any questions regarding this matter.

Thank you for your assistance in providing the Board with information on homebound instructional services.

PIW/MMV/jcj

Virginia Department of Education
School Division Survey Instrument
Homebound Instructional Services

1. **Name of School Division**

2. **School Division Contact Information: (Please include name, title, telephone number, and e-mail address.)**

3. **For the 2009-2010 school year, please provide the total number of students approved for homebound due to:**

    a. **Physical Illness**
    b. **Mental Illness**
    c. **Discipline Program**
    d. **Other**

4. **For the 2009-2010 school year, how many of these students had an individualized education program (IEP)?**

5. **For the 2009-2010 school year, how many of these students had a 504 plan?**

6. **For the 2009-2010 school year, how many of these students were approved for homebound services by one of the following?**

    a. **Physician**
    b. **Licensed Clinical Psychologist**

7. **Has your school division received complaints from parents who have been unable to secure a homebound certification from either a licensed clinical psychologist or a physician? If so, what was the resolution?**

8. **Has your school division received any other complaints about the homebound program from parents? (If the answer is yes, please describe the complaints.)**

9. **Does your school division have any changes you would like to make to the homebound program to facilitate academic enhancement?**

Public Comments on Homebound Instruction

From: Becky Bowers-Lanier
Sent: Thursday, December 09, 2010 8:35 AM
To: Wescott, Anne (DOE)
Cc: Marcia Obenshain; 'Lisa MCDOWELL'; Davina Johnson
Subject: Comments on Report on Homebound Instructional Services in Response to HB 257

Good morning, Anne. Hope this finds you well. On behalf of the Virginia Counselors Association (VCA), I am providing comments to the "First Review of a Report on Homebound Instructional Services in Response to HB 257 Passed by the 2010 General Assembly." Thank you for this opportunity to comment on the report.

The VCA represents professional counselors working in a wide range of settings, including, but not limited to, schools, colleges, and universities; community mental health agencies; and correctional facilities. Licensed Professional Counselors (LPCs) are mental health care professionals who are trained in counseling interventions designed to remediate mental, emotional, or behavioral disorders and associated distresses that interfere with mental health and development. By statute, LPCs conduct assessments and diagnoses to establish treatment goals and objectives, and they plan, implement, and evaluate treatment plans (§ 54.1-3500).

The VCA reviewed the results of the survey distributed to all school divisions regarding homebound instructional services, including the finding that no school division indicated there were any deficiencies with the certification process. This would appear to confirm that no changes need to be made in the system at the present time. We are encouraged that the report suggests that the Board of Education may want to direct the Department to review its *Homebound Instructional Services Guidelines.*

The Department of Health Professions has found that there is a paucity of child psychiatrists in Virginia. LPCs specializing in the care of children are well qualified as children's mental health providers. We would respectfully ask the Department to continue to monitor the ability of children to access mental health services, including whether these children should be certified for homebound instruction. In doing so, the Department would be able to consider including other mental health providers in certifying children for homebound instruction.

Becky Bowers-Lanier, EdD
B2L Consulting LLC
501 E Franklin Street, Suite 511
Richmond, VA 23219

PO Box 1097
Richmond, VA 23218-1097

STAFFORD COUNTY PUBLIC SCHOOLS
Alternative Education Programs and Student Services Office
Melchers Complex/Tyler Building
610 Gayle Street
Fredericksburg, VA 22405
PH.: (540) 899-6000 FX: (540) 899-6046

November 29, 2010

Ms. Anne Wescott
Assistant Superintendent for Policy and Communications
Virginia Department of Education
P.O. Box 2120
Richmond, VA 23218-2120

Dear Ms. Wescott,

I am writing in response to your request for comments regarding the proposed changes to the Standards of Accreditation regarding Homebound Instruction. After discussing the proposed changes with our school division's homebound liaison, it is my opinion that the proposed changes are not necessary.

At the present time, parents within our school division do not have difficulty securing a recommendation for homebound services from their physician when necessary. Also, the new language of the proposal which states; ..."any person licensed to diagnose and treat mental, emotional, or behavioral disorders by a health regulatory board with the Department of Health Professions", may significantly expand the number of diagnosticians, resulting in over prescribing homebound services.

Thank you for your willingness to accept comments regarding this topic.

Sincerely,

C. Joseph Soldan, Jr.
Alternative Education Administrator

From: John Westphalen
Sent: Wednesday, December 15, 2010 10:07 AM
To: Wescott, Anne (DOE)
Subject: Public Comment: Review of Provisions Related to Homebound Instructional Services

Ms. Wescott:

I am writing in support of House Bill 257. Here in our region, there is a shortage of health professionals, including licensed physicians and licensed clinical psychologists. Many of our students are seen, diagnosed, and treated by licensed nurse practioners, physicians assistants, and licensed clinical social workers. When one of these professionals completes our request for homebound/homebased services form for a student, we have to spend (sometimes inordinate amounts of) time to track down a qualified professional to cosign the form. This frequently delays services, sometimes for more than a week. It would very much be in the best interest of our students for other health professionals to be able to legitimately sign off on homebound requests.

Sincerely,

--
John Andrew Westphalen
Director of Special Education and Support Services
Patrick County Public Schools
Stuart, VA 24171

From: Karen M. Williams
Sent: Wednesday, December 15, 2010 2:21 PM
To: Wescott, Anne (DOE)
Subject: Seeking public comment

Good afternoon,
I am writing in response to the e-mail sent about the proposed change in the qualifications of those requesting homebound services for students. I think that if this change is made we will see many more requests submitted for homebound services in the mental/emotional health area. I believe this would mean that requests would be allowed from licensed clinical social workers and nurse practitioners, which may or may not be a good idea. (?)

Karen M. Williams
Specialist
Homebound Services/ Home School Instruction
12465 Warwick Blvd.
Newport News, Virginia 23606
(

From: Kevin Kirst
Sent: Wednesday, December 22, 2010 11:17 AM
To: Wescott, Anne (DOE)
Cc: Patrick Farrell
Subject: Seeking Public Comment: Review of Provisions Related to Homebound Instructional Services

"Homebound instruction shall be made available to students who are confined at home or in a health care facility for periods that would prevent normal school attendance based upon certification of need by a licensed physician or licensed clinical psychologist. For students eligible for special education or related services, the Individualized Education Program committee must revise the IEP, as appropriate. Credit for the work shall be awarded when it is done under the supervision of a licensed teacher, a person eligible to hold a Virginia license, or other appropriately licensed professional employed by the local school board, and there is evidence that the instructional time requirements or alternative means of awarding credit adopted by the local school board in accordance with the provisions of 8VAC20-131-110 have been met."

Currently, there is a misperception of the purpose and need for "homebound" services in the community. I have personally been involved in cases where physicians "certify" the need for homebound instruction, as noted above, but provide little to no justification for the need.

Imagine the position I am in when a general practitioner certifies the need for homebound instruction for a student with "significant depression", requesting the student be left alone with only hours of homebound instruction being the substitute for the engagement of the regular school environment. As the administrator overseeing and managing homebound instruction, this regulation has frequently placed me in very uncomfortable situations.

I propose consideration of the following additional language be added to the policy:

- A requirement for the physician or licensed psychologist, that part of the certification include documentation that justifies for the need for homebound services, explicitly explaining the nature of the issue preventing the child from normal attendance school (whether in part or whole).
- A requirement for the physician or licensed psychologist, as part of the certification for homebound services, to include an indication of the end date.
- A requirement for the physician or licensed psychologist, as part of the certification to include a transition plan, noting interventions implemented to support the student's return to school, date of earliest return, indicators of improvement and potential for partial return.
- Addition of an allowance of a review of the request by the superintendent or designee and the authorization of the school system to deny the provision of services, should there be a lack of justification (i.e. evidence the student cannot attend school in part of in whole), concern of the child's welfare or well-being, or lack of appropriate documentation.
- Additional requirement, that, should the homebound request be denied by the school system, the denial must be in writing to the certifying physician and family.
- Addition of language to the effect that the parent is encouraged to sign a release of information allowing the school to communicate with the certifying physician, indicating a choice not to authorize consent for an exchange of information may result in a denial of homebound services should the documentation not be sufficient.

Thank you for your consideration.

Kevin M. Kirst
Director of Special Education
Albemarle County Schools

From: Sheila S. Magula
Sent: Wednesday, December 22, 2010 1:49 PM
To: Wescott, Anne (DOE)
Cc: James G. Merrill; Heather M. Allen
Subject: Public Comment: House Bill 257-- Review of Provisions Related to Homebound Instructional Services

Good afternoon, Ms. Wescott.
On behalf of Virginia Beach City Public Schools, we are providing comments below regarding House Bill 257. We appreciate the opportunity to respond and look forward to the outcome of the State Board's deliberations.
Sincerely,
Sheila S. Magula
Deputy Superintendent
Virginia Beach City Public Schools
2512 George Mason Drive
Virginia Beach, VA 23456

Comments from Virginia Beach City Public Schools Regarding House Bill 257

Virginia Beach City Public Schools (VBCPS) does not support House Bill 257. This bill would allow for any Department of Health Professional to certify students for homebound instruction. 8VAC20-131-180. A as written allows for a licensed physician or licensed clinical psychologist to provide certification to school divisions regarding the need for homebound services. VBCPS strongly believes that the current list of professionals identified in 8VAC20-131-180.A is sufficient and appropriate for parents to obtain the necessary certification for students who require homebound services. Students are supposed to receive homebound instruction because they are confined at home due to medical or emotional reasons; therefore, the appropriate professionals to make this determination would be licensed physicians and licensed clinical psychologists.
The proposed expanded list of professionals includes licensed professional counselors, licensed clinical social workers, and licensed marriage and family therapists. Extending the list of providers to include "any person licensed to diagnose and treat mental, emotional, or behavioral disorders by a health regulatory board within the Department of Health Professions" would provide opportunities for therapists to certify outside of their area of expertise(i.e., marriage counselors certifying students for school phobia). Broadening the list would also provide a larger group of professionals for whom a parent can "shop" around until they find one who will certify a student for homebound services.
It is the opinion of VBCPS that the extended list would not be appropriate to diagnose mental and physical disorders of students for the purpose of certifying a student for homebound instruction.

From: Margaret McGee
Sent: Monday, December 27, 2010 5:22 PM
To: Wescott, Anne (DOE)
Subject: Feedback about Hombound services

I provide non-school-based services for several students who receive homebound education services through the public school system. These students have very severe disabilities with severe health problems that prevent them from attending school. Although I am not part of the public school, I am very familiar with the homebound services that the students receive. My familiarity comes from my desire to carry over each student's IEP goals and objectives. Here are my observations:

1. For students ages 6 and older, the lessons rarely relate to their IEP goals and objectives. The goals and objectives are impressive but the actual lessons are the same: professional reads a preschool book to student, professional counts to 10 for the student, professional leaves
2. For students ages 6 and older, the lessons are not age appropriate. For example: A 12 year old student is using literature for preschool students. The literature has no visible link to the student's IEP goals and objectives.
3. All of these students are non-verbal but, for some students, no effort has been made to provide them with augmentative communication evaluations or services
4. Professionals who serve these students cancel appointments with amazing frequency
5. Professionals who serve these students seem to have no regard for parental requests regarding scheduling, even when the requests are based on the child's feeding schedule or sleep schedule related to anticonvulsant medications.
6. There is no evidence that the professionals are measuring the student's progress in an objective manner.

From: Mborff
Sent: Monday, December 27, 2010 11:52 PM
To: Wescott, Anne (DOE)
Subject: homebound feedback- from advocate's perspective.

I am a seasoned Special Ed Advocate in Va (representing clients in over 8 school districts) for the last 23 years. I am basing my opinion about Homebound Education based upon experience.

It is easiest for me to list thoughts:

1. More often than not, school systems have had to scramble to find qualified homebound instructors, at the time of request. Frequently the dates for homebound instruction have been delayed past required timelines. Many parents are unaware of the policy and accept what (and when it)is offered.

2. Frequently the homebound instruction is bound by school system policy rather than aligned with student's IEP. Standardly, the offer is 4-5 hours a week rather than what the designated delivery of Spec. Ed services are written into the IEP.

3. A serious problem is where the designated homebound services are offered. For example if homebound is offered to a disciplinary related student, that child often has to meet homebound instructor in , say a library. Transportation logistics is often problematic.

4. If a student is receiving homebound instruction for disciplanary reasons, parents often are upset that their child may only be accommodated one hour daily. I have heard numerous complaints that , because they may have to go to work, the child(student) may have to be alone unsupervised the rest of the day -

5. Teacher qualifications for homebound instruction should match their training with the types of disabilities that they are assigned. This usually does not occur.

6. Often students who receive services under the homebound instruction often welcome the attention and the relief from otherwise boredom of being isolated from peers. However I have not known a homebound instructor who would give useful feedback to an IEP committee if that input were to be appropriate in determining placement or IEP considerations.

7. I have heard complaints from parents over time that homebound instructors frequently do not show up or do not show up at appointed times.

Recommendations-

1. Homebound Instructor screening and training- with high regard for having recommendations from school personnel.

2. Budgetary considerations for improved quality of service.

3. Homebound instruction monitored for on time delivery and alignment of program with student iEP

4. Allowances for feedback of instructor to be shared with IEP committees.

5. Better considerations for safeguarding of student as to time and location of each session. Possibly an office within each school system provide with transportation included.

I hope this is helpful.

Beth(Marjorie) Orloff, M.Ed Educational Consultant/Special Ed Advocate.

From: Janet Peters
Sent: Tuesday, December 28, 2010 7:00 AM
To: Wescott, Anne (DOE)
Subject: Homebound Instruction

Dear Ms. Wescott,

I would like to respond to the homebound instruction review. I believe one area that needs to be addressed more thoroughly is those that are homebound due to special needs. Not all areas have appropriate means to provide as they should for special needs in the schools; behaviors, specifics of their childs disability. I believe there should be more specific guidelines and allowances for that education. An example; length of time for homebound; in special needs cases, indefinitely should be considered. I believe the school system should work diligently with the special needs families; provide the therapies the child needs as if they are in a classroom; offer specific guidance to the parent on IEP's, etc and have tutors available to teach the child.

There are a lot of loopholes in the way it is presented and the child ends up suffering; the parent ends up out of pocket in ways I don't believe was intended.

Thank you,

Janet Peters

From: Megan Roberts
Sent: Tuesday, December 28, 2010 8:47 AM
To: Wescott, Anne (DOE)
Cc: perobe
Subject: Homebound instruction for students with disabilities

Ms. Wescott:

I am writing to add my support for VDOE's review and improvement of homebound instruction for students with disabilities and serious medical issues. As Director of William & Mary Law School's Special Education Advocacy Clinic, I wholeheartedly support the petition that has been submitted by JustChildren, and wanted to send you some of our clinic's experiences with homebound during our two years of operation.

We have encountered IEP team members who challenge medical diagnoses requiring homebound instruction, with no evidence supporting their position; belligerence on the part of school personnel regarding a teen's return to the classroom, despite medical evidence indicating the dangers to that student's health and safety if homebound were discontinued too early; delayed implementation of homebound instruction, and then, less than adequate instruction, for instance, the APEX online program implemented with several courses, one of which the student had previously completed in school, and, when the school was notified of this mistake, no replacement course was added, thus making student even further behind; APEX assigned despite a student's ADHD - a self-paced, individually-motivated online program prescribed for a teen with attention deficit issues; only three hours per week of instructional support, at odd hours, despite parents' repeated requests of the team for more instructional time, as well as VDOE's guidelines and recommendations for additional instructional support; instructor who routinely reset the tests and quizzes on the system so that student could eventually pass, rather than assisting student in actually learning the material in the subject matter for which student had a documented learning disability; teachers who would come to the home in late afternoons or early evenings, or cancel and reschedule often, rather than offer student opportunity to work earlier in the day when more refreshed, thus creating less disruption on the learning process and the entire family; parent complaints ignored, or responded to with suggestions that the student just return to school, despite medical recommendations to the contrary; complete lack of any instructional curriculum outside of the APEX program, thus no individualized instruction and a delegation of teaching responsibilities to the computer; lack of social interaction and extracurricular learning opportunities for students on homebound instruction; and finally, complete hopelessness on the part of parents as their complaints are either ignored or disputed, all while their child falls further behind in his or her education.

These are just some of the problems we have seen anecdotally with homebound instruction, and we are hopeful that VDOE can create a more accountable and consistent approach to homebound instruction amongst Virginia's schools for those students who are not strong enough or healthy enough to receive FAPE in the regular classroom setting.

Thank you. Please let me know if I can be of further assistance or provide you additional information.

Patty Roberts
Director of Clinical Programs and
William & Mary Law School's Special Education Clinic

JUSTCHILDREN
A Program of the
LEGAL AID JUSTICE CENTER

Angela A. Ciolfi
Legal Director
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December 28, 2010

Ms. Anne Wescott
Assistant Superintendent for Policy and Communications
Virginia Department of Education
P. O. Box 2120
Richmond, VA 23218-2120
Anne.Wescott@doe.virginia.gov
Fax: 804/ 225-2524

RE: Public Comment on Homebound Instructional Services

Dear Anne:

Thank you for the opportunity to provide public comment on homebound instructional services in the Commonwealth. JustChildren represents low-income students across Central Virginia in special education and student discipline matters, among other things, and provides technical assistance to legal aid and pro bono attorneys statewide.

In representing individuals and working with other attorneys, we routinely encounter serious problems with both homebound and home-based instructional services.[1] Our concerns include:

1. Problems with the provision of services.

The provision of homebound instructional services suffers from a number of serious shortcomings:

- Poor quality. There is a wide variation in the quality of instruction, but our clients frequently express concerns that instructors are not well versed in the subject matter and that curriculum is watered down. It is common for clients to tell us that instructors simply drop off work for the student to complete on his or her own and then come back and pick it up later. We have also heard complaints that instructors do not use instruction time effectively, including one complaint that the instructor spent instruction time showing the student her myspace page.

- Missed instructional sessions. Scheduling difficulties appear to be a problem from both the students' and schools' perspectives. We have heard from school divisions that students were not available for scheduled sessions. Just as frequently, we have heard

[1] Although the Department's November 2010 report purports to cover only homebound instructional services, the data collected from school divisions appears to be relevant to both homebound and home-based instructional services. Indeed, nearly 3,000 of the students placed on homebound were not approved by a physician or licensed clinic psychologist, and many appear to be special education or disciplinary placements.

from students and parents that the instructor canceled or failed to appear for scheduled sessions.

- Gaps in coursework. It is our understanding that, in many cases, homebound assignments originate with the student's teacher at the comprehensive school and that the homebound instructor retrieves them from the teacher, shares them with the student, and then returns them to the school-based teacher for grading. Problems frequently arise when school-based teachers do not assemble assignments for the instructor or do not return graded assignments promptly.

- Incomplete curriculum. It is difficult for students to stay on track to earn a diploma due to limits on the amount of services and lack of availability of electives and advanced coursework. One client in junior high received home-based instruction for a mere two hours per week. Another had to downgrade his diploma goal from Advanced to Standard due to the limited coursework offered by his homebound placement.

Many of these common complaints are consistent with the problems school divisions reported on page 5 of the Department's report.

2. Inappropriate use of medical homebound guidelines to limit services available to students with IEPs.

We find that, almost without exception, school divisions routinely apply the guidelines for medical home*bound* instruction to students with disabilities who are placed on home-*based* instruction for disciplinary or other reasons to determine the amount of instruction the student will receive. This is objectionable on a number of levels:

- First, services in a student's IEP should be based on the student's unique needs, not on state guidelines. As the U.S. Department of Education has opined, services for students during disciplinary removal should depend on the nature and severity of the child's disability, the length of the removal and any previous removals, and the degree to which the child's performance lags behind his peers.[2]
- Second, the guideline *minimums* are employed to cap the number of hours students can receive. We rarely, if ever, see home-based IEPs that exceed the minimums established by the state, regardless of the student's needs.
- Third, use of guidelines intended for students whose medical needs require homebound instruction for "a short period of time"[3] is entirely inappropriate for students who are placed on home-based instruction for an entire semester, school-year, or longer.

3. Use of home-based instruction as the default placement for students with IEPs under disciplinary removal.

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[2] Comments on Final Regulations, 71 Fed Reg. 46,717 (2006).

[3] See Virginia Department of Education, "Homebound Instructional Services Guidelines," available at http://www.doe.virginia.gov/instruction/homebound/homebound_instructional_services.pdf.

In our experience, schools rarely consider a continuum of placement options when designing an IEP for a student on long-term disciplinary removal and immediately resort to the most restrictive placement option available – home-based instruction. Many of these students were suspended because they lack coping, social, and other adaptive skills that are difficult, if not impossible, to teach in a one-on-one setting. Typically, our clients are offered a home-based IEP written for the *minimum* number of hours stated in the state guidelines for homebound instruction, the IEP is stripped of any related services in the school-based IEP, and parents are told that they must sign this IEP or the school will not provide the student any educational services. Under the misconception that the school can withhold services if they disagree with the home-based IEP and in the desire to keep their children from falling further behind in coursework, without legal counsel, our clients usually sign the home-based IEP they believe is inadequate.

4. Lack of public information about disciplinary home-based instruction distorts discipline data reported by local school divisions.

Discipline data collected by the Department is distorted by the failure to collect information on disciplinary home-based instruction and other alternative placements. The Safe School Information Resource online database does collect information in the category of "special education interim placement," but these numbers are often much lower than we would expect given the volume of calls we receive from clients placed on home-based instruction.[4] We suspect that when a parent signs an IEP for a disciplinary home-based instruction placement, schools consider it an agreed upon change in placement pursuant to the IEP and do not code it as a disciplinary placement, even though the student is not permitted to return to his or her home school.

Accordingly, we recommend that the Department revise its guidelines in the following manner:

- Issue guidance regarding placement on home-based instruction, emphasizing the obligation to consider a continuum of placements, and to provide services sufficient to enable the child to make progress on IEP goals and participate in the general curriculum, and to provide behavioral support and related services to enable the child to benefit from his or her education.

- Require schools to establish a mechanism for processing complaints regarding homebound and home-based instruction, and provide parents and students receiving such services information about how to register a complaint.

- Collect and publish information on homebound, home-based, and other alternative education placements at the state level so that discipline data is not distorted by these disciplinary placements and policy can be formulated to address the quality and effectiveness of these placements.

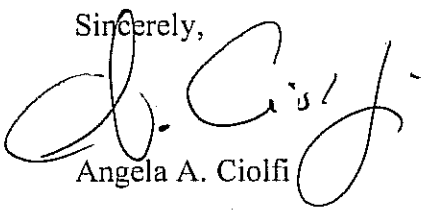
[4] For example, in 2009-2010, only 119 interim alternative education placements were recorded by the entire state. The Report on Homebound Instructional Services indicates that 2,825 students were not placed on homebound instruction by a physician or licensed clinical psychologist, leaving one to wonder who approved the placement and whether these were in fact disciplinary placements.

In order to collect information from other parents and service providers, we circulated an online petition. The petition received 50 signatures (see attached Excel spreadsheet) from all over the state, and many people added comments about their own experiences with homebound and home-based instruction. The petition language was as follows:

> *We, the undersigned, believe the following problems exist with homebound instruction in the Commonwealth:*
>
> *1. Homebound instruction is often of lesser quality than classroom instruction. Homebound instructors are often poorly trained, scheduling difficulties can arise, and a limited curriculum can make it hard for students to stay on track to earn their diplomas.*
> *2. Homebound guidelines for short-term medical absences are inappropriately applied to students with disabilities who are placed long-term on home-based instruction for disciplinary reasons, limiting the hours and services available to students with IEPs.*
> *3. Schools often make home-based instruction the default placement for students with IEPs under disciplinary removal, rather than considering a continuum of placement options.*
> *4. The lack of public information about disciplinary home-based instruction distorts discipline data reported by local school divisions.*
>
> *Accordingly, we recommend that the Department revise its guidelines in the following manner:*
>
> *1. Issue guidance regarding placement on home-based instruction, emphasizing the obligation to consider a continuum of placements, and to provide special education and related services sufficient to enable the child to make progress on IEP goals and participate in the general curriculum.*
> *2. Require schools to establish a mechanism for processing complaints regarding homebound and home-based instruction, and provide students and their parents information about how to register a complaint.*
> *3. Collect and publish information on homebound, home-based, and other alternative education placements at the state level so that discipline data is not distorted by these disciplinary placements and policy can be formulated to address the quality and effectiveness of these placements.*

Thank you for your review of homebound instruction and your consideration of these comments. Please let me know if you have any questions or concerns.

Sincerely,



Angela A. Ciolfi

First Name	Last Name	Email	Zip	State	Organization	Comment	Date
Angela	Ciolfi	angela@justice4all.org	22903	VA	JustChildren	My clients face numerous obstacles when placed on home-based instruction, often for disciplinary reasons. Some clients benefit from home-based instruction, but more often, clients fall behind in coursework and lose out on important socializing experiences. Some clients tell me the instructor simply drops off work for the student to do and then picks it up later.	12/20/2010 17:20
Margaret	Hein	rose0479@hotmail.com	22407	VA	Autism Support Specialist	The students need to have an online system and access to learning materials such websites with curriculum and practice examples. I would like to see homebound instruction become completely online and interactive.	12/20/2010 17:42
Alex and Joan	Gulotta	gulotta@comcast.net	22901-2937	VA			12/20/2010 17:43
Kandise	Lucas	clucasklucas@yahoo.com	23150	VA			12/20/2010 18:01
Joyce	Stratton	joyce.stratton@peopleplaces.org	22903	VA		For our clients, it is never sufficient and they are always behind their peers when they return to the classroom even though they should be on grade level.	12/20/2010 18:06
Michele	Mattioli	mattioli@ntelos.net	22903	VA			12/20/2010 18:30
Joanie	Freeman	freeman.joanie@gmail.com	22902	VA			12/20/2010 18:47
Cheryl	Poe	yourbusychild@yahoo.com	23452	VA	Advocating 4 Kids	My clients who receive homebound services are frustrated with the limitations that LEA/IEP teams puts on the amount of time allowed. The LEA misrepresents the VDOE "recommendations" for hours as thats all they are allowed to provided under the law. The amount of homebound services are never granted in the individual needs of the student, but are instead limited to set amount of time the district allows. The quality of providers for homebound services are weak. I have never had a client be able to get services from a special education teacher, the communication between the homebound instructor and the school is always poor. Especially in the city of Virginia Beach VA	12/20/2010 19:57
sharon	Middleton	pychicfakes@gmail.com	23666	VA		My child was not offered home bound services at all.	12/20/2010 20:54
MARK	JACOB	SIG55@COX.NET	23696	VA		I have worked as an educational disability advocate for over 20 years. Many of my client's children have been on homebased/homebound through the years. My observation is that the instruction is minimal and cursory. Many of the "off-site providers" are slightly removed from messengers. A more comprehensive approach to bringing curriculum to the child with a disability is sorely needed.	12/20/2010 21:07
LoisS	Manes	prmanes@pol.net	23185	VA		permits); for high school, not all subjects available, teachers not certified in special education although child has IEP, teacher don't know subject matter they are trying to teach, some teachers "cheat" on hours- come late, leave early, cancel. don't provice IEP accomodatins	12/20/2010 21:16
Pat	Levy-Lavelle	pslavelle@yahoo.com	23226-1213	VA			12/20/2010 21:44
Sylvester	Mayo	slmayo@mindspring.com	24541	VA			12/20/2010 21:47
Sharon	Tropf	stropf@verizon.net	20147	VA		Teachers were inconsistent with showing up, being prepared with school curriculum, requested parents to sign off on blank time sheets and generally were ill prepared to meet the students learning needs.	12/20/2010 22:17
Angela	Cimmino	acimmino@vcu.org	23139	VA		For acquaintances w/children in the school division, major concerns re: gross lack of adequate number of contact hours per week	12/20/2010 22:34
Sheila	Hommema	shommema@comcast.net	24333	WV			12/20/2010 22:41
Dylan	Rosenthal	dylan@restorativecommunity.org	?22902	VA			12/20/2010 22:56
Carol	Castle	c.j.castle@hotmail.com	23692	VA		For my child the teacher was very knowledgeable of the material. However I am not sure he got the same information as if he were in the classroom. He also did not get anything but the core classes and that makes it hard.	12/20/2010 23:10
Carlos	Williams	CarlosWilliams@embarqmail.com	23970	VA	Commonwealth Neuro Specialists		12/20/2010 23:18

Jill	Gushue	jmras4@cox.net	23185	VA		1. Rarely are the number of hours a day/week needed for the student to make progress discussed and as a result the LEA only provides 10 hrs. a week, despite the fact that student could possibly needs more. 2. As a result of the LEAs providing so little compensation, aka pay, they have difficulties finding individuals qualified to do the work during school hours. (Most students learn best during school hours and some students are unable to retain information when it is taught after 3:00 pm.) 3. The compensation the LEAs offer is insufficient to attract qualified individuals. 4. The individuals that are found to do the teaching are not trained in special education, for student with IEPs. 5. Some of the teachers only are only available for a short period of time. The student then has to frequently adjust to new teachers. 6. Many times the students are not provided the books and materials to learn. 7. Many times the teacher does not have the training needed to address the curriculum being taught. 8. And rarely, it works perfectly and the student makes more progress in the homebound/based	12/21/2010 1:34
Janette	Martin	jbm80@comcast.net	22901	VA		I have always been concerned with the relationship and involvement of the home bound instructors with classroom teachers . I feel that coordination of the identified grade level subject matter is critical as to how subject matter is delivered Focusing on the child's continued motivation to learning.is a must. To what extent will / are the appropriate SOL'S being integrated into the IEP/ LEA,? How much time is given for instruction and frequency of... to prevent the child from getting behind at their grade level ? .Continued monitoring of the homebound intructional program should be encouraged to assure that all children are receiving a quality education. .	12/21/2010 6:27
Tracy	Parker	turtlesma@yahoo.com	24502	VA	Support Services of Virginia	Homebound instruction is currently second rate. It needs to be improved so that students with disabilities who are instructed outside the normal school setting get a better education.	12/21/2010 7:22
Veronica	Chapman	veronica23608@yahoo.com	23608	VA		Often not the same quality as in the classroom. The few hours a week concerns me that my son was getting the instructional time needed.	12/21/2010 7:59
Wayne	Blanchard	gwb16@yahoo.com	23430	VA		I can relate two different stories. 1. My oldest son was homebound due to an injury that required him to be at home. He was middle school aged. The county offered a homebound teacher who actually worked at the high school. She offered NO INSTRUCTION at all. She would hand him classroom worksheets, tell him to finish them and then turn them over to the middle school teachers that prepared the assignments. Thankfully he was an above average student and wasn't struggling in any of his classes. 2. My youngest son had a severe allergic reaction to his ADHD medication, lashed out at school and was promptly sent off to Alternative School. We felt that it was unjustified, fought it and requested homebound instruction while we were trying to find the correct dose for his new medication and we were flatly denied. All in all, I feel like a more "defined" and "refined" process needs to be in place. However, special attention should be mandated to those ROGUE school administrations that continuously violate Special Education Laws and Guidelines.	12/21/2010 8:47
David	BEIDLER	david@lasrv.org	24011	VA	Legal Aid Society Of Roanoke Valley		12/21/2010 8:50
Crystal	Shin	crystal@justice4all.org	22903	VA			12/21/2010 9:08
Heather	Garrett	garretthd@embarqmail.com	22963	VA			12/21/2010 9:48
Lisa	Parker	wt9902@cox.net	23453	VA			12/21/2010 10:15
Joanne	Lehman, EDD	jrlehmanedconsult@gmail.com	24551	VA			12/21/2010 10:18
Thomasine	Wilson	thomasinewilson@yahoo.com	22901	VA			12/21/2010 10:19

Herb	De Groft	hwdg@verizon.net	23430	VA		As a school bd mbr I am very concerned that in any # of cases I am aware of, the quality and timeliness of Home-bound instruct suffers to the student's detriment. Assigned personnel's skills and experience need to dovetail w/ student's educational needs. I think there is a tendency to assign "junior" instructors or those who "volunteer" just for the extra remuneration. Significant improvement needed overall; specific UNSAT case experiences need to be brought to attention of local Suptdt (unless therein lies the problem), local school bd mbrs, and/or appropriate VaDOE official, such as State Suptdt of Public Instruction, etc.	12/21/2010 10:46
Rita	Jones	ritahj49@aol.com	23803	VA			12/21/2010 10:47
Heather	Mathews	muldymat@yahoo.com	23602	VA			12/21/2010 10:56
Hank	Bostwick	hank@lasrv.org	24015	VA			12/21/2010 10:57
Jennifer	Henkel	jennifer.henkel@leagueoftherapists.com	22968	VA		As in an in-home therapist I have noticed the following issues with home based: limited time spent on learning (2 hours, 3 times per week), no chance to interact with peers, used as a stop gap for behavioral problems, and parental difficulty interacting with the school to determine how to get the child back into the school setting.	12/21/2010 13:14
Jay	Rachmel	jay.rachmel@peopleplaces.org	22980	VA			12/21/2010 16:04
Patricia	Dangelo	triciaelda@yahoo.com	22901	VA			12/21/2010 16:06
Amy	Woolard	amy@justice4all.org	22902	VA		My clients are often children in foster care, who sometimes experience homebound instruction as a kind of 'holding pattern' while transitioning from school to school. Others face homebound during disciplinary matters, and often lose out on the necessary, in-depth classroom instruction that will prepare them for graduation and beyond.	12/21/2010 17:58
Sylvia	Williams	sswilliams333@yahoo.com	23320	VA		A complete and utter nightmare!	12/21/2010 20:20
Jenine	Kaznowski	Jeninekaz@gmail.com	24521	VA			12/21/2010 20:45
Jim	Williams	dj_mellowsmooth@yahoo.com	23803	VA		I feel that the entire home bound instruction need a major face lift and need to be monitored at the state level to ensure that the CHILDREN get the best benifit.	12/21/2010 22:52
Teresa	champion	teechamp@gmail.com	22153	VA		This has been a nightmare. untrained teachers for working with students with special needs. no curriculum support. who is responsible for providing materials if the child is expelled from a private school placement (via contract services)? no one is the answer. there is no education going on in Virginia in homebound....and I live in Fairfax County!	12/22/2010 7:28
Maria	Retan	m_retan@hotmail.com	22153	VA			12/22/2010 8:59
christina	rees	reescares@gmail.com	22902	VA			12/22/2010 10:06
Alison	Hymes	alison@alisonhymes.com	22911	VA			12/22/2010 18:03
Kate	Duvall	kate.duvall@gmail.com	22903	VA	JustChildren		12/23/2010 10:30
Georgia	Davis	ghdavis306@embarqmail.com	23970	Va	Delta Kappa Gamma		12/23/2010 10:49
Mary-Ellen	Chewning	ExecDir@hrarc.org	22802	VA			12/23/2010 13:36
Margaret	Woolard	meg.woolard@gmail.com	22958	VA			12/23/2010 19:46
Irene	Moore	tidbm@yahoo.com	22079	VA			12/27/2010 13:42
Sheree	Brown	shereebrown74@verizon.net	22181	VA		It was difficult to get the school division to agree to homebound services even with certification by a physician. Also, when the required medical certification was presented at an IEP meeting (at which the principal was present), the school staff said they could not agree without approval of higher administrative staff. This additional layer of approval circumvented the IEP team's authority and prevented my child from receiving any services for 3 weeks. The services she has been receiving through homebound (as a high school student) are not sufficient to give her the credits she needs to advance to the next grade level.	12/27/2010 17:02

From: Angela Ciolfi
Sent: Tuesday, December 28, 2010 5:11 PM
To: Wescott, Anne (DOE)
Subject: RE: Comments on Homebound Instruction

Thanks! One other little thing I noticed and forgot to include – the guidelines on homebound instruction are fairly comprehensive, but the guidelines on home-based instruction under IDEA are minimal. See http://www.doe.virginia.gov/instruction/homebound/provision_homebound_iep.pdf I'm not sure revising the guidelines will fix the implementation problems identified by parents, but that might be a place to start.

All the best,
Angela

Angela A. Ciolfi
JustChildren Program

From: Panarelli, MaryAnn M
Sent: Wednesday, December 29, 2010 4:09 PM
To: Wescott, Anne (DOE)
Cc: Dockery, Kim P.; Marcotte, Hallie; Mills, Kurt S
Subject: Comments regarding House Bill 257

Dear Mrs. Wescott,

Please find attached comments on House Bill 257 from Fairfax County Public Schools. We have been in contact with surrounding divisions regarding the new language, and find we share concerns about extending the professionals allowed to document the need to homebound instruction. Our data indicates that requests for homebound services due to mental health issues has increased significantly, and now represents 25% of our current homebound population. Students who are receiving ongoing treatment and medication management are more likely to return to school within the school year, and a partnership with the treating physician and the school team is essential to a positive outcome. Parents have supported our work with psychiatrists and clinical psychologists who are treating their children, and have not reported difficulty with accessing these professionals nor the services they provide.

Thank you for your consideration of these comments.

Mary Ann Panarelli, EdD
Director, Intervention and Prevention Services
Fairfax County Public Schools
3877 Fairfax Ridge Road
Fairfax, VA 22020

Fairfax County Public Schools (FCPS) input regarding House Bill 257: Extension of individuals who may determine whether a student has significant psychological issues requiring homebound instruction to any individual licensed by the Board of Health Practices to diagnose mental health issues.

We do not support expansion of the definition of providers who can make a recommendation for homebound instruction. Review of our data indicates that in 2009-2010 21% of students receiving homebound instruction in FCPS did so based on the recommendation of a psychiatrist of licensed clinical psychologist due to mental health issues. Current year data suggests these students now represent 25% of students receiving homebound services. Parents do not report having difficulty accessing these professionals, nor do they report having to seek an evaluation from these individuals solely to justify homebound placement.

Students receiving homebound services for mental health reasons are far more likely to remain on homebound past the initial return date and are more likely to remain on homebound for the entire school year than other homebound subgroups. In addition, students placed on homebound due to psychiatric reasons are less successful than other homebound groups when comparing class grades and SOL test scores.

In response, FCPS has formed a focus group of school psychologists, school social workers and homebound specialists to look at the psychological/mental health reasons students ask for homebound services and to increase services available in the schools that would maintain student attendance in the

regular school program. Part of this effort has been to educate mental health professionals about the many alternatives to a completely homebound program, including shortened or modified schedules, special education services, 504 plans, school counseling, and treatment planning involving school staff.

Homebound placement constitutes the most restrictive placement option available, and it is critical that the treatment team consider a full range of options, and develop a plan for reintegration into the school community following homebound services. In addition, we feel that dialogue with psychiatrists and licensed psychologists provides a deeper understanding of the resources available, leading to shorter time out of school and better outcomes for students.

Passage of this bill could create a large pool of possible referring agents, making it more difficult to engage in the dialogue necessary to work as a team to develop a plan of ongoing therapy, medical management, and school interventions. We believe extension to a wider range of professionals will lead to a large influx of students recommended for homebound services based on a single evaluation, without ongoing treatment and re-evaluation to determine how to transition the student back to the school community.

Our data suggests that many students require medication and close supervision of medications as part of their overall treatment plan, reinforcing the need for a medical professional when working with students who are being removed from the school environment for extended periods of time.
FCPS school personnel and members of our focus groups believe the current practice of requiring documentation from a psychiatrist or licensed clinical psychologist is fair, accessible and appropriate for determining the need for homebound instruction and a plan for future reintegration of the student. Expansion to a wider range of professions will increase the burden on the school system for sharing information, building partnerships, developing long range planning and ensuring the most positive outcomes for students without measurably improving access to mental health services for students and families.

Board of Education Agenda Item

Item: G. **Date:** January 13, 2011

Topic: Final Review of the Criteria for Charter Schools, the Application for Charter Schools, and the Procedures for Receiving and Reviewing Charter School Applications

Presenter: Ms. Anne D. Wescott, Assistant Superintendent for Policy and Communications

Telephone Numbers: (804) 225-2403 **E-Mail Addresses** Anne.Wescott@doe.virginia.gov

Origin:

___ Topic presented for information only (no board action required)

_X_ Board review required by
- _X_ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

_X_ Action requested at this meeting

___ Action requested at future meeting: _____

Previous Review/Action:

___ No previous board review/action

_X_ Previous review/action
- dates November 18, 2010
- actions First review

Background Information: HB 1390 (Lingamfelter) and SB 737 (Newman), passed by the 2010 General Assembly and signed by the Governor, amended the provisions in the *Code of Virginia* related to charter schools. The legislation requires a public charter school applicant to submit its proposed charter application to the Board of Education for review, comment, and a determination as to whether the application meets approval criteria developed by the Board, prior to submission to the local school board.

The legislation also provides for an opportunity for a public charter school applicant to petition for reconsideration of a decision by a local school board to deny an application. Prior to such petition for reconsideration, an applicant may seek technical assistance from the Superintendent of Public Instruction.

Section 22.1-212.5 of the *Code of Virginia* defines a public charter school as "a public, nonreligious, or non-home-based alternative school located within a public school division. A public charter school may

be created as a new public school or through the conversion of all or part of an existing public school; however, no public charter school shall be established through the conversion of a private school or a nonpublic home-based educational program. A charter school for at-risk pupils may be established as a residential school."

Section 22.1-212.9 of the *Code of Virginia* requires all applications for public charter schools to be submitted to the Virginia Board of Education for review prior to submission of the application to the local school board. The Board is required to establish procedures of receiving and reviewing applications, and making a determination as to whether the application meets approval criteria developed by the Board. The *Code* further provides that the Board's review would examine such applications for feasibility, curriculum, financial soundness, and other objective criteria as the Board may establish, consistent with existing state law.

§ 22.1-212.9. Review of public charter school applications.

A. Public charter school applications shall be received and reviewed by the Board of Education and local school boards or, in the case of a regional public charter school, by all of the relevant school boards, as provided in subsection C.

The Board of Education and each local school board shall establish procedures for receiving, reviewing, and, in the case of local school boards, ruling upon applications. The Board of Education and local school boards shall post their procedures on their websites and make a copy of the procedures available to all interested parties upon request. If any such board finds the public charter school application is incomplete, the board shall request the necessary information from the charter applicant.

B. To provide appropriate opportunity for input from parents, teachers, citizens, and other interested parties and to obtain information to assist local school boards in their decisions to grant or deny a public charter school application, local school boards shall establish a procedure for public notice and to receive comment on public charter school applications. A local school board shall give at least 14 days' notice of its intent to receive public comment on an application.

C. Prior to submission of an application to a local school board for review, the public charter school applicant shall submit its proposed charter application to the Board of Education for its review, comment, and a determination as to whether the application meets the approval criteria developed by the Board. The Board's review shall examine such applications for feasibility, curriculum, financial soundness, and other objective criteria as the Board may establish, consistent with existing state law. The Board's review and comment shall be for the purpose of ensuring that the application conforms to such criteria, and the Board shall make a determination as to whether the application meets the approval criteria developed by the Board. Nothing in this section shall prevent a local school division from working with a charter school applicant before the application is submitted to the Board of Education for review and recommendation.

Section 22.1-212.8 of the *Code of Virginia* specifies what the public charter school application must include:

§ 22.1-212.8. Charter application.

…B. The public charter school application shall be a proposed agreement and shall include:

1. The mission statement of the public charter school that must be consistent with the principles of the Standards of Quality.

2. The goals and educational objectives to be achieved by the public charter school, which educational objectives must meet or exceed the Standards of Learning.

3. Evidence that an adequate number of parents, teachers, pupils, or any combination thereof, support the formation of a public charter school.

4. A statement of the need for a public charter school in a school division or relevant school divisions in the case of a regional public charter school, or in a geographic area within a school division or relevant school divisions, as the case may be.

5. A description of the public charter school's educational program, pupil performance standards, and curriculum, which must meet or exceed any applicable Standards of Quality; any assessments to be used to measure pupil progress towards achievement of the school's pupil performance standards, in addition to the Standards of Learning assessments prescribed by § 22.1-253.13:3; the timeline for achievement of such standards; and the procedures for taking corrective action in the event that pupil performance at the public charter school falls below such standards.

6. A description of the lottery process to be used to determine enrollment. A lottery process shall also be developed for the establishment of a waiting list for such students for whom space is unavailable and, if appropriate, a tailored admission policy that meets the specific mission or focus of the public charter school and is consistent with all federal and state laws and regulations and constitutional provisions prohibiting discrimination that are applicable to public schools and with any court-ordered desegregation plan in effect for the school division or, in the case of a regional public charter school, in effect for any of the relevant school divisions.

7. Evidence that the plan for the public charter school is economically sound for both the public charter school and the school division or relevant school divisions, as the case may be; a proposed budget for the term of the charter; and a description of the manner in which an annual audit of the financial and administrative operations of the public charter school, including any services provided by the school division or relevant school divisions, as the case may be, is to be conducted.

8. A plan for the displacement of pupils, teachers, and other employees who will not attend or be employed in the public charter school, in instances of the conversion of an existing public school to a public charter school, and for the placement of public charter school pupils, teachers, and employees upon termination or revocation of the charter.

9. A description of the management and operation of the public charter school, including the nature and extent of parental, professional educator, and community involvement in the management and operation of the public charter school.

10. An explanation of the relationship that will exist between the proposed public charter school and its employees, including evidence that the terms and conditions of employment have been addressed with affected employees.

11. An agreement between the parties regarding their respective legal liability and applicable insurance coverage.

12. A description of how the public charter school plans to meet the transportation needs of its pupils.

13. Assurances that the public charter school (i) is nonreligious in its programs, admission policies, employment practices, and all other operations and (ii) does not charge tuition.

14. In the case of a residential charter school for at-risk students, a description of (i) the residential program, facilities, and staffing; (ii) any parental education and after-care initiatives; (iii) the funding sources for the residential and other services provided; and (iv) any counseling or other social services to be provided and their coordination with any current state or local initiatives.

15. [Expired.]

16. Disclosure of any ownership or financial interest in the public charter school, by the charter applicant and the governing body, administrators, and other personnel of the proposed public charter school, and a requirement that the successful applicant and the governing body, administrators, and other personnel of the public charter school shall have a continuing duty to disclose such interests during the term of any charter.

C. [Expired.]

D. The charter applicant shall include in the proposed agreement the results of any Board of Education review of the public charter school application that may have been conducted as provided in subsection C of § 22.1-212.9.

The Board of Education's Charter School Committee met on June 23, July 21, September 22, and November 17.

At the June 23 meeting, the committee held a forum with national experts on charter schools:

- Mr. Randy Dowell, KIPP Foundation
- Mr. James W. Dyke, Jr and Mr. Curtiss Stancil, Edison Learning
- Mr. Todd Ziebarth, National Alliance for Public Charter Schools
- Mr. Andrew Broy, Illinois Charter School Network
- Mr. Don Soifer, Lexington Institute

At the July 21 meeting, staff presented background information to the committee.

At the September 22 meeting, the committee held a forum with Virginia stakeholders:

- Mr. Pat Lacy and Mr. Stuart Gibson, Virginia School Boards Association
- Dr. Phil Worrell, Virginia Association of School Superintendents
- Dr. Kitty Boitnott, Virginia Education Association
- Ms. Susan Bridges, Virginia Association of Elementary School Principals
- Dr. Randy Barrack, Virginia Association of Secondary School Principals
- Mrs. Anne Carson, Virginia PTA
- Mrs. Marcia Obenshain, Virginia Counselors Association

Two of the principals and one founder of three Virginia charter schools gave presentations at the November 17 meeting. They are:

- Mr. Walter Cross, Principal, York River Academy;
- Ms. Sandy Richardson, Founder, Albemarle Community Public Charter School; and
- Ms. Pamela Boyd, Principal, Patrick Henry School of Science and Arts.

This was followed by a joint meeting with the College Partnership Laboratory School Committee reviewing the draft procedures and the application package.

Summary of Major Elements: The criteria for public charter schools are found in Attachment A.

The procedures for receiving, reviewing, and ruling upon an application are found in Attachment B. They include:

- Directions for submitting the application;
- Technical assistance provided upon request;
- Receipt of the application and determination of whether the application is complete;
- Review of the application by the Charter School Committee; and
- Review by the Board of Education.

The application package, found in Attachment C, includes the following:

1. Applicant fact sheet;

2. Narrative information

    - ✓ Executive summary;
    - ✓ Mission and vision;
    - ✓ Goals and educational objectives;
    - ✓ Evidence of support;
    - ✓ Statement of need;
    - ✓ Educational program;
    - ✓ Enrollment policies;

- ✓ Economic soundness;
- ✓ Displacement;
- ✓ Management and operation;
- ✓ Employment terms and conditions;
- ✓ Liability and insurance;
- ✓ Transportation;
- ✓ Assurances required by the *Code*;
- ✓ Residential charter school;
- ✓ Disclosures;
- ✓ Additional assurances and requirements; and

3. Certification.

The Board of Education authorized a 30-day period of public comment on the criteria, procedures, and application. Eleven comments were received from the following: Virginia State Conference NAACP Education Committee and the Powhatan Branch NAACP; two prospective charter school applicants, Imagine Schools and Mason District Leadership Academy; JustChildren; the Arlington School Board; Chesapeake Public Schools; Lexington Institute; a member of the board of Patrick Henry School of Science and Arts; the co-founder of the Community Public Charter School; and the Virginia PTA. The comments included at the end of this item.

In response to the comments, six changes are recommended:

1. Page 10, Submission Procedures and Board of Education Review. Under Technical Assistance, language would be added to the first sentence to clarify that the prospective applicant may work with the local school board and the school division leadership and staff prior to any formal action taken by the Board of Education or the local school board:

   "There is nothing that prohibits a prospective applicant from contacting a school division for assistance in advance of submitting an application to the Board **or the school division and its leadership from communicating with any applicant or potential applicant.**"

2. Page 11, Submission Procedures and Board of Education Review. Under Review by the Charter Schools Committee, a timeframe would be set for the meeting of the Charter Schools Committee:

   "**The Charter School Committee will meet not later than 60 business days after the completed application is received by VDOE.**"

3. Page 14, Application Package. Under Goals and Objectives, language would clarify that the data would be measured each year of the term of the charter, which could be five years, or could be less than five years, as approved by the local school board:

   "The applicant must address how these data will be established and documented in the first year of operation and how the data will be measured over ~~**the successive four-year period before the charter of such school is renewed**~~ **each year of the term of the charter as approved** by the local school board."

4. Page 18, Application Package. Under Economic Soundness, the applicant would be required to submit start-up and three-year budgets and cash flow projections, instead of five-year budgets and cash flow projections, as the tem of the charter could be less than five years:

   "The following components must be addressed: Start-up and ~~**five**~~ **three**-year budgets with clearly stated assumptions and information regarding projected revenues and expenditures; [and] Start-up and ~~**five**~~ **three**-year cash flow projections with clearly stated assumptions and indications of short- and long-term sources of revenue…"

5. Page 19, Application Package. Under Management and Operation, reference would be made to the section of the Code that defines the charter school's management committee:

   "A description of the functions, roles, and duties of the management committee **as defined in § 22.1-212.6 of the *Code of Virginia*** and its proposed composition and bylaws."

6. Page 22, Application Package. Under Additional Assurances and Requirements, the provision requiring the contract for the leadership of the charter school would be revised from six months prior to the opening date of the school to 60 days prior to the opening of school:

   "The applicant must provide an assurance that, if an application is approved by a local school board, the school leadership of the public charter school will be retained on contract no later than ~~**six months**~~ **60 days** prior to the opening date of the school…"

There were several comments that the Charter Schools Committee or the full Board of Education may want to address through technical assistance and guidance. The guidance and technical assistance could include, but not be limited to, the following topics:

1. Options for the provision of transportation for students attending charter schools;
2. Serving students with behavioral challenges;
3. Providing opportunities for parents and the community to participate in decisions affecting students, and policy decisions affecting the school;
4. Application fees and other fees that might be charged to charter schools; and
5. Funding that may be available to charter schools, including funds available through the Elementary and Secondary Education Act, Individuals with Disabilities Education Act, and the National School Lunch Program.

Superintendent's Recommendation: The Superintendent of Public Instruction recommends that the Board of Education approve the proposed criteria, procedures, and application package.

Impact on Resources: The impact on resources is not expected to be significant.

Timetable for Further Review/Action: The Department of Education will notify school divisions and other individuals and organizations on the Board of Education's list-serv, and will post the criteria, procedures, and application package on the department's Web site.

Attachment A
Virginia Board of Education
Criteria for Public Charter Schools

- The mission statement of the public charter school must be consistent with the principles of the Standards of Quality.

- The goals and educational objectives to be achieved by the public charter school must meet or exceed the Standards of Learning.

- There must be evidence that an adequate number of parents, teachers, pupils, or any combination thereof, supports the formation of a public charter school.

- There must be evidence of the need for the charter school in the school division (or relevant school divisions in the case of a regional public charter school), or in a geographic area within a school division (or relevant school divisions, as the case may be) as documented in the statement of need.

- There must be a description of the public charter school's:

  - ✓ Educational program, pupil performance standards, and curriculum, which must meet or exceed any applicable Standards of Quality;
  - ✓ Any assessments to be used to measure pupil progress towards achievement of the school's pupil performance standards, in addition to the Standards of Learning assessments prescribed by §22.1-253.13:3; and
  - ✓ The timeline for achievement of such standards; and the procedures for taking corrective action in the event that pupil performance at the public charter school falls below such standards.

- There must be a description of the lottery process to be used to determine enrollment. A lottery process must also be developed for the establishment of a waiting list for such students for whom space is unavailable and, if appropriate, a tailored admission policy that meets the specific mission or focus of the public charter school and is consistent with all federal and state laws and regulations and constitutional provisions prohibiting discrimination that are applicable to public schools and with any court-ordered desegregation plan in effect for the school division or, in the case of a regional public charter school, in effect for any of the relevant school divisions. (Reference: § 22.1-212.6 of the *Code of Virginia.*)

- There must be evidence that the plan for the public charter school is economically sound for both the public charter school and the school division (or relevant school divisions, as the case may be), including:

  - ✓ A proposed budget for the term of the charter;
  - ✓ A description of the manner in which an annual audit of the financial and administrative operations of the public charter school; and

- ✓ Information about any services to be provided by the school division (or relevant school divisions, as the case may be).

- There must be a plan for:

  - ✓ The displacement of pupils, teachers, and other employees who will not attend or be employed in the public charter school if the charter school is converted from an existing public school to a public charter school, and
  - ✓ The placement of public charter school pupils, teachers, and employees upon termination or revocation of the charter. (Reference: § 22.1-212.12, *Code of Virginia.*)

- There must be a description of the management and operation of the public charter school, including the nature and extent of parental, professional educator, and community involvement in the management and operation of the public charter school. (Reference: § 22.1-212.7, *Code of Virginia*.)

- There must be an explanation of the relationship that will exist between the proposed public charter school and its employees, including evidence that the terms and conditions of employment have been addressed with affected employees. (References: §§ 22.1-212.13, § 22.1-296.1 and § 22.1-296.2, *Code of Virginia*.)

- There must be an agreement between the parties regarding their respective legal liability and applicable insurance coverage. (References: § 22.1-212.16, *Code of Virginia*.)

- There must be a description of how the public charter school plans to meet the transportation needs of its pupils.

- There must be assurances that the public charter school is nonreligious in its programs, admission policies, employment practices, and all other operations.

- There must be an assurance that the public charter school does not charge tuition.

- In the case of a residential charter school for at-risk students, there must be a description of (i) the residential program, facilities, and staffing; (ii) any parental education and after-care initiatives; (iii) the funding sources for the residential and other services provided; and (iv) any counseling or other social services to be provided and their coordination with any current state or local initiatives.

- There must be disclosure of any ownership or financial interest in the public charter school by the charter applicant and the governing body, administrators, and other personnel of the proposed public charter school, and a requirement that the successful applicant and the governing body, administrators, and other personnel of the public charter school shall have a continuing duty to disclose such interests during the term of any charter.

Attachment B
Virginia Board of Education
Virginia Public Charter Schools - Submission Procedures and Board of Education Review

Submission of the Application

Applications for public charter schools should be submitted to the Board of Education within a time frame that is adequate to ensure that the public charter school application will be submitted to the respective local school board in a manner that takes into consideration application policies of the local school board. Unless otherwise addressed by such local school board policies, an applicant should consider allowing for at least 18 months from the time the application is submitted to the local school board to the proposed opening date for the public charter school.

Applicants must adhere to the form prescribed by the Board, which addresses the application elements stated in § 22.1-212.8, *Code of Virginia.* Applications may be submitted electronically or by hard copy to the Executive Assistant for the Board of Education.

Technical Assistance

There is nothing that prohibits a prospective applicant from contacting a school division for assistance in advance of submitting an application to the Board **[or the school division and its leadership from communicating with any applicant or potential applicant]**. The Board encourages an applicant to do so as working with a school division prior to submission helps ensure a smooth transition for any public charter school that may be approved by a local school board and then established within a school division.

If an applicant submits its application to a local school board and the application is not approved, or if the charter of a current school is revoked or not renewed by a local school board, then the applicant or charter school operator may petition the local school board for reconsideration. Prior to such petition, the applicant or charter school operator may seek technical assistance from the Virginia Department of Education (VDOE). VDOE staff will work with each applicant or charter school operator on a case-by-case basis in order to address individual needs.

Receipt of the Application

When the Board receives an application, VDOE staff, on behalf of the Board, will send an acknowledgement to the applicant. VDOE will determine, on behalf of the Board that an application is complete when all of the required application elements have been submitted in the required format.

If the application is deemed incomplete, the VDOE will notify the applicant within 15 business days of receipt of the application and request that the outstanding information be submitted within 30 business days of such notification to the applicant that additional information is needed.

If an applicant fails to respond to the initial request for additional information, the VDOE will contact the applicant and will make a second request for any outstanding information. In this communication, VDOE will indicate that the application will not be considered for review by the Board's Charter Schools

Committee until all information is received. The applicant may withdraw his application at any time during the initial process and resubmit it at a later time.

If the application is deemed complete by VDOE, it will be sent to the Board's Charter Schools Committee members. The committee may appoint an advisory work group to review the application and provide the committee with technical expertise.

Review by the Charter Schools Committee

[The Charter School Committee will meet not later than 60 business days after the completed application is received by VDOE.] he applicant must attend a meeting with the Board committee. VDOE staff, on behalf of the Board, may also invite representatives of the applicable local school board to attend the meeting.

All meetings of the Board's Charter Schools Committee are publicly noticed at: http://www.doe.virginia.gov/boe/committees_standing/index.shtml#lab and all meetings are open to the public.

At the meeting with the Charter Schools Committee, the applicant will be asked to discuss the contents of the application and address the committee members' questions. The committee may request public comment or schedule public hearings on the application to provide appropriate opportunity for input from parents, teachers, and other interested parties and to obtain information to assist the Board in its evaluation of a public charter school application.

Action by the Board of Education

Following the meeting of the applicant with the Board's Charter Schools Committee, VDOE will assist the committee in preparing a report to the full Board with the recommendation of the committee as to whether the application meets the Board's approval criteria. A copy of the report will be provided to the applicant within ten business days of the committee meeting.

The report will be presented to the full Board at the next regularly scheduled Board meeting. The applicant will be requested to attend this meeting to answer questions or make comments on the application.

At this meeting, the Board will take one of the following actions:

1. The Board will render a decision that the application meets the Board's approval criteria.

   Following action by the Board, the applicant will be formally notified by the VDOE of the Board's action within five business days. Concurrent with its notification to the applicant, the applicable local school board will also receive a formal notification of the Board's action.

2. The Board will render a decision that the application does not meet the Board's approval criteria.

   The Board will provide the applicant with an opportunity to address any deficiencies in the application. The applicant may also withdraw his application at any time and resubmit it at a later date.

Following action by the Board, the applicant will be formally notified by the VDOE of the Board's action within five business days. Concurrent with its notification to the applicant, the applicable local school board will also receive a formal notification of the Board's action.

Attachment C
Virginia Board of Education
Virginia Public Charter Schools - Application Package

For the purpose of full disclosure and to benefit the local school board, the application package submitted to the Board must be included as part of the application made to the local school board.

Applicant Fact Sheet

The applicant fact sheet provides basic information concerning the nature of the proposed public charter school, contact information for the applicant, and the applicant's prior experience. The fact sheet contains the following information:

- Applicable local school board;
- Applicant contact information, including name, title/affiliation, address, telephone number, e-mail address;
- Name of the proposed school;
- If the applicant has identified a facility suitable for a school, information about the location and ownership of the facility;
- Proposed opening date of the school;
- Proposed date that an application for charter approval will be made to the applicable local school board;
- Grades to be served by the school;
- A description of any specialized focus (such as, but not limited to: science, technology, engineering, mathematics [STEM]; at-risk students; special education; career and technical education; and gifted education), if applicable;
- A description of any prior experience with establishing charter schools and/or similar schools, including the name of the applicable state, the name of the school, years of operation, contact information, and (if the school is no longer operating) the reasons for closure; and
- A description of the prior or relevant experience of the members of the management committee.

Narrative Information

I. **Executive Summary**: This summary must be included and must address the need for the public charter school and its goals and objectives.

II. **Mission and Vision**: The statement must be consistent with the principles of the Standards of Quality. The following components must be addressed:

1. A description of the public charter school's mission and show how it is consistent with the principles of the Standards of Quality (Reference: § 22.1-253.13:1, paragraph A, *Code of Virginia*);

2. A description of any specific area of academic concentration; and

3. Information about the public charter school's anticipated student population, consistent with § 22.1-212.6 of the *Code of Virginia*.

III. **Goals and Educational Objectives***:* The goals and objectives to be achieved by the public charter school, which educational objectives must meet or exceed the Standards of Learning. The following components must be addressed:

1. A description of the performance-based goals and related measurable educational objectives to be achieved by the public charter school (Reference: § 22.1-253.13:1.B, paragraph A, *Code of Virginia*);

2. For each grade or course in the public charter school, please provide a detailed description of how the Standards of Learning and the corresponding Standards of Learning Curriculum Framework will be used as the foundation for curricula to be implemented. Include within the description how the goals and objectives of the curricula will meet or exceed the Standards of Learning, address student performance standards, relate to state and federal assessment standards, and include measurable student outcomes;

3. A description of the public charter school assessment plan to obtain student performance data, which includes how these data will be used to monitor and improve achievement and how program effectiveness will be measured over a specified period of time. The applicant also needs to provide benchmark data for how student achievement will be measured. The applicant must address how these data will be established and documented in the first year of operation and how the data will be measured over **[~~the successive four-year period before the charter of such school is renewed~~ each year of the term of the charter as approved]** by the local school board. The benchmark data should address targets for student improvement to be met in each year; and

4. A description of any assessment other than the Standards of Learning assessments that may be used to measure progress during the academic year.

IV. **Evidence of Support:** The applicant should provide evidence that an adequate number of parents, teachers, pupils, or any combination thereof, supports the formation of a public charter school. The following components must be addressed:

1. Information and materials indicating how parents, the community, and other stakeholders were involved in supporting the application for the public charter school;

2. Tangible evidence of support for the public charter school from parents, teachers, students, and residents, or any combination thereof, including but not limited to information regarding the number of persons and organizations involved in the process and petitions related to the establishment of the charter school; and

3. A description of how parental involvement will be used to support the educational needs of the students, the school's mission and philosophy, and its educational focus.

V. **Statement of Need**: The applicant should provide a statement of the need for a public charter school in a school division or relevant school divisions in the case of a regional public charter school, or in a geographic area within a school division or relevant school divisions, as the case may be. The following components must be addressed:

1. A statement of the need for a public charter school that addresses the anticipated school population to be served and the reasons for locating the school within a particular school division;

2. An explanation as to why the public charter school is being formed - for example, if the school is being formed at the requests of parents or community organizations, and how the need was determined; and

3. An explanation as to why a public charter school is the appropriate vehicle to address the need as outlined in the mission statement.

VI. **Educational Program**: The applicant should provide a description of the public charter school's educational program, pupil performance standards, and curriculum, which must meet or exceed any applicable Standards of Quality; any assessments to be used to measure pupil progress towards achievement of the school's pupil performance standards, in addition to the Standards of Learning assessments prescribed by §22.1-253.13:3; the timeline for achievement of such standards; and the procedures for taking corrective action in the event that pupil performance at the public charter school falls below such standards. The following components must be addressed:

1. A description of the public charter school's educational program;

2. A description of the pupil performance standards, and curriculum, which must meet or exceed any applicable Standards of Quality, §§ 22.1-253.13:1 through 22.1-253.13:9, *Code of Virginia*;

3. Any assessments to be used to measure pupil progress towards achievement of the school's pupil performance standards, in addition to the Standards of Learning assessments prescribed by § 22.1-253.13:3, *Code of Virginia*;

4. The timeline for achievement of pupil performance standards, in accordance with the Standards of Learning;

5. An explanation of the general procedures for corrective actions needed in the event that pupil performance at the public charter school falls below the standards outlined in the Board of Education's *Regulations Establishing Standards for Accrediting Public Schools in Virginia*, 8 VAC 20-131-310;

6. Information regarding the minimum and maximum enrollment per grade as well as class size and structure for each grade served by the public charter school;

7. Information regarding the proposed calendar and daily schedule, including any plans to open prior to Labor Day and, if so, how and when a waiver to open early will be submitted by the local school board to the Board of Education, under § 22.1-79.1, *Code of Virginia;*

8. A description of plans for identifying and serving students who are:

    - Students with disabilities;
    - English Language Learners (ELL)
    - Academically at-risk; or
    - Gifted and talented.

    Such plans must comply with state and federal laws and regulations.

9. A description of the learning environment and instructional strategies to be used at the public charter school, including scientifically research-based instructional strategies to ensure that student engagement and achievement are occurring;

The following components should be addressed if applicable to the public charter school:

10. If the public charter school plans to utilize virtual learning in its educational program, a description of how virtual learning will be used and estimates of how many students may participate;

11. A general description of any alternative accreditation plan, in accordance with the Board of Education's *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131-280), that the public charter school would request the local school board to submit to the Board of Education for approval; and

12. In reference to serving students with disabilities, a general description of any alternative accreditation plan, in accordance with the Board of Education's *Regulations Governing Special Education Programs For Children With Disabilities in Virginia* (8 VAC 20-80-40) that the public charter school would request the local school board to submit to the Board of Education for approval.

VII. **Enrollment Policies**: A description of the lottery process to be used to determine enrollment, should the number of applications for admission exceed available enrollment slots.

A lottery process shall also be developed for the establishment of a waiting list for such students for whom space is unavailable and, if appropriate, a tailored admission policy that meets the specific mission or focus of the public charter school and is consistent with all federal and state laws and regulations and constitutional provisions prohibiting discrimination that are applicable to public schools and with any court-ordered desegregation plan in effect for the school division or, in the case of a regional public charter school, in effect for any of the relevant school divisions. (Reference: § 22.1-212.6 of the *Code of Virginia,* which states*:* "Enrollment shall be open to any child who is deemed to reside within the relevant school division or, in the case of a regional public charter school, within any of the relevant school divisions, as set forth in § 22.1-3, through a lottery process on a space-available basis. A waiting list shall be established if adequate space is not available to accommodate all students whose parents have requested to be entered in the lottery process. Such waiting list shall also be prioritized through a lottery process and parents shall be informed of their student's position on the list.")

The following components must be addressed:

1. A description of the lottery process to be used to determine public charter school enrollment on a space-available basis, including the establishment of a waiting list for students for whom space is not available;

2. If appropriate, a description of a tailored admission policy that meets the specific mission or focus of the public charter school;

   This policy shall be consistent with all federal and state laws and regulations and constitutional provisions prohibiting discrimination that are applicable to public schools and with any court-ordered desegregation plan in effect for the school division or, in the case of a regional public charter school, in effect for any of the relevant school divisions.

3. A timeline for when the lottery process will begin for the first academic year of enrollment and when parents will be notified of the outcome of the lottery process;

4. Any enrollment-related policies and procedures that address special situations, such as the enrollment of siblings and children of faculty and founders and the enrollment of nonresident students, if applicable. Consistent with a public charter school's mission and purpose that may address special populations of students, the applicant must indicate how it will ensure that community outreach has been undertaken so that special populations are aware of the formation of the public charter school and that enrollment is open to all students residing in the school division where the public charter school is located or in school divisions participating in a regional charter school; and

5. A description of how the transfer of students to and from the public charter school will be accomplished and how the enrollment of students after the school year begins will be accommodated.

VIII. **Economic Soundness**: Evidence that the plan for the public charter school is economically sound for both the public charter school and the school division or relevant school divisions, as the case may be; a proposed budget for the term of the charter; and a description of the manner in which an annual audit of the financial and administrative operations of the public charter school, including

any services provided by the school division or relevant school divisions, as the case may be, is to be conducted. The following components must be addressed:

a. A description of the public charter school's financial plan, including financial controls and audit requirements in accordance with generally accepted accounting principles;

b. Start-up and **[~~five~~ three]**-year budgets with clearly stated assumptions and information regarding projected revenues and expenditures;

c. Start-up and **[~~five~~ three]**-year cash flow projections with clearly stated assumptions and indications of short- and long-term sources of revenue;

d. Description of anticipated fundraising contributions, if applicable; and

e. A description of the funding agreement that the public charter school intends to have with the local education agency, including information regarding anticipated local, state, and federal per-pupil-amounts to be received and any information pertaining to the maintenance of facilities.

IX. **Displacement**: A plan for the displacement of pupils, teachers, and other employees who will not attend or be employed in the public charter school, in instances of the conversion of an existing public school to a public charter school, and for the placement of public charter school pupils, teachers, and employees upon termination or revocation of the charter. (Reference: § 22.1-212.12, *Code of Virginia.*) The following components must be addressed:

1. Identification of a member of the school's leadership who will serve as a single point of contact for all that may need to take place in order for the school to close including, but not limited to, the transfer of students to another school, the management of student records, and the settlement of financial obligations;

2. A notification process for parents or guardians of students attending the school and teachers and administrators of the closure date;

3. A notification process to parents or guardians of students attending the public charter school of alternative public school placements within a set time period from the date that the closure is announced;

4. Provisions for ensuring that student records are provided to the parents or guardians or another school identified by the parent or guardian within a set time period. If the student transfers to another school division, provisions must be made for the transfer of the student's record to the school division to which the student transfers upon the request of that school division. (Reference: § 22.1-289 of the *Code of Virginia.*);

5. Notification to the local school board of a list of all students in the school and the names of the schools to which these students will transfer;

6. A placement plan for school employees that details the level of assistance to be provided within a set period of time from the date of closure. For teachers and administrators, the level

of assistance should address finding employment within the school division where the public charter school is located or other public school divisions; and

7. A close-out plan related to financial obligations and audits, the termination of contracts and leases, and the sale and disposition of assets within a set period of time from the date of closure. The plan shall include the disposition of the schools' records and financial accounts upon closure.

X. **Management and Operation**: A description of the management and operation of the public charter school, including the nature and extent of parental, professional educator, and community involvement in the management and operation of the public charter school. (Reference: § 22.1-212.7, *Code of Virginia*.) The following components must be addressed:

1. A description of the functions, roles, and duties of the management committee **[as defined in § 22.1-212.6 of the *Code of Virginia*]** and its proposed composition and bylaws. The description must detail the specific role of the management committee in the operation and oversight of the public charter school;

2. An explanation of how support services will be provided. These services include, but are not limited to:

   - Food services;
   - School health services;
   - Custodial services;
   - Extracurricular activities; and
   - Security services;

3. An explanation of any partnerships or contractual relationships central to the school's operations or mission, including information regarding the relationship of all contractors to the governing board of the public charter school, and information regarding how contractors and the employees of the contractors having direct contact with students will comply with the provisions of § 22.1-296.1, *Code of Virginia*. (Contractual relationships include procuring the services of an education management organization, food services, school health services, custodial services, and security services.);

4. A detailed start-up plan, identifying tasks, timelines, and responsible individuals;

5. A proposed organization chart; and

6. Plans for recruiting school leadership and staff.

XI. **Employment Terms and Conditions:** An explanation of the relationship that will exist between the proposed public charter school and its employees, including evidence that the terms and conditions of employment have been addressed with affected employees. (References: §§ 22.1-212.13, § 22.1-296.1 and § 22.1-296.2, *Code of Virginia*.) The following components must be addressed:

1. A plan that addresses the qualifications of teachers and administrators at the public charter school, including compliance with state law and regulation regarding Board of Education licensing endorsements;

2. A plan to provide high quality professional development programs (Reference: § 22.1-253.13:5, *Code of Virginia*);

3. Provisions for the evaluation of staff at regular intervals and in accordance with state law and regulation;

4. Provisions for a human resource policy for the public charter school that is consistent with state and federal law;

5. Notification to all school employees of the terms and conditions of employment; and

6. A staffing chart for the school's first year and a staffing plan for the term of the contract.

XII. **Liability and Insurance:** An agreement between the parties regarding their respective legal liability and applicable insurance coverage. (Reference: § 22.1-212.16, *Code of Virginia*.) The following components must be addressed:

1. The types of insurance for the charter school, its property, its employees, the charter school management committee, and the board and the levels of coverage sought. Types of insurance include, but are not limited to:

   - General liability;
   - Health; and
   - Property;

2. A justification for each type of coverage sought; and

3. A description of any plans of the public charter school to provide indemnity for the local school division.

XIII. **Transportation:** A description of how the public charter school plans to meet the transportation needs of its pupils. The following components must be addressed:

1. A description of how the transportation of students will be addressed. This plan should address whether transportation will be provided by:

   - The local school division;
   - The public charter school;
   - The parent(s); or
   - A combination of these options;

2. If transportation services will be provided to students by the public charter school, indicate whether the school will contract for transportation with the local education agency or with

another entity or have its own means of providing transportation, and describe those means. Please indicate whether transportation will be provided to all students attending the school;

3. A description of transportation services for students with disabilities. (Section 22.1-221, *Code of Virginia*, states that each "disabled child enrolled in and attending a special education program provided by the school division pursuant to any of the provisions of § 22.1-216 or § 22.1-218 shall be entitled to transportation to and from such school or class at no cost if such transportation is necessary to enable such child to obtain the benefit of educational programs and opportunities." Also, the Board's *Regulations Governing Special Education Programs for Children with Disabilities in Virginia* state the following: "Each child with a disability, aged two to 21, inclusive, placed in an education program, including private special education day or residential placements, by the local school division shall be entitled to transportation to and from such program at no cost if such transportation is necessary to enable such child to benefit from educational programs and opportunities. Children with disabilities and children without disabilities shall share the same transportation unless a child's IEP requires specialized transportation."); and

4. An assurance that transportation will be provided consistent with state law and regulation. (Reference: §§ 22.1-176, 22.1-182, 22.1-186, 22.1-191, 22.1-221, 22.1-216, 22.1-218, *Code of Virginia* and the Board of Education's *Regulation Governing Pupil Transportation*.)

XIV. **Assurances Required by the *Code of Virginia*:** By signing and submitting this application, the applicant expressly assures the Board that:

1. No tuition will be charged to students;

2. The school is nonreligious in its admission policies, employment practices, and all other operations;

3. The public charter school policies and procedures are in compliance with the federal *Family Educational Rights and Privacy Act* (FERPA) and the records retention schedules for public schools, and evidence that such policies and schedules will be acceptable to the local education agency; and

4. The proposed public charter school programs, services, and activities will operate in accordance with all applicable federal and state laws and regulations, including the Virginia Freedom of Information Act.

XV. **Residential Charter School:** In the case of a residential charter school for at-risk students, a description of (i) the residential program, facilities, and staffing; (ii) any parental education and after-care initiatives; (iii) the funding sources for the residential and other services provided; and (iv) any counseling or other social services to be provided and their coordination with any current state or local initiatives. The following components must be addressed:

1. A description of the residential program to include: a) the educational program; b) a facilities description to include grounds and dormitories; c) a program for parental education and involvement; d) a description of after-care initiatives; e) funding sources to support the costs

of maintaining the residential facility; f) counseling and other social services to be provided; and g) a description of enrichment activities available to students; and

2. A description of how the facility will be maintained including, but not limited to: a) janitorial and regular maintenance services and b) security services to ensure the safety of students and staff.

XVI. **Disclosures:** Disclosure of any ownership or financial interest in the public charter school, by the charter applicant and the governing body, administrators, and other personnel of the proposed public charter school, and a requirement that the successful applicant and the governing body, administrators, and other personnel of the public charter school shall have a continuing duty to disclose such interests during the term of any charter. The following components must be addressed:

1. A description of how the applicant and members of the management committee will disclose any ownership or financial interest.

2. Information regarding the frequency by which such disclosures will be made. (Reference: § 2.2-3114, *Code of Virginia*.)

3. A description of ownership or financial interest of the applicant and/or members of the management committee in the proposed charter school. This includes any relationships that parties may have with vendors performing services at the school.

4. An assurance that the applicant has knowledge of the Virginia Conflict of Interest Act and the Virginia Public Procurement Act.

XVII. **Additional Assurances and Requirements:** Additional components of the application that are not contained in the *Code of Virginia*. The following components must be addressed:

1. The applicant must provide an assurance that, if an application is approved by a local school board, the applicant will take all actions necessary to enter into a contract with the local school board no later than nine months prior to the opening date of the public charter school;

2. The application must provide information regarding the proposed term of its contract with a local school board. Section 22.1-212.12, *Code of Virginia*, states: "A charter may be approved or renewed for a period not to exceed five school years." The applicant must also provide information regarding its proposed agreement with the local school board regarding notice should a charter be revoked or fail to be renewed;

3. The applicant must provide an assurance that, if an application is approved by a local school board, the school leadership of the public charter school will be retained on contract no later than **[~~six months~~ 60 days]** prior to the opening date of the school;

4. The applicant must include a listing of all waivers to state regulations needed for the public charter school at the time of its opening. This does not preclude a public charter school from working with the local school board to request additional waivers once the school is operational. Along with this listing, the applicant must also provide an assurance that, if an

application is approved by a local school board, all requests for waivers from the Board of Education will be made by the local school board, on behalf of the applicant, no later than six months prior to the opening date of the school;

5. The applicant must provide facilities information including, but not limited to:

   - The provision of suitable instructional space;
   - Provisions for library services;
   - Provisions for the safe administration and storage of student records and student medications;
   - Information regarding compliance with building and fire codes and compliance with the federal *Americans with Disabilities Act* (ADA);
   - General information on emergency evacuation plans;
   - Information regarding site location and preparation;
   - The structure of operation and maintenance services; and
   - Financial arrangements for facilities, including any lease arrangements with school divisions or other entities and whether debt will be incurred;

6. In reference to serving students with disabilities, the applicant must provide a description of how services will be rendered to this population of students attending the public charter school, including the extent of the involvement of the local school board in providing for such services. The public charter school must assure that it will comply with all provisions of the Board of Education's *Regulations Governing Special Education Programs For Children With Disabilities in Virginia*; and

7. The applicant must provide a model Student Code of Conduct policy that addresses student behavior, discipline and participation in school activities. The plan should identify the role of teachers and administrators in discipline and mentoring and must demonstrate compliance with the code of conduct policy of the applicable local school board.

Certification

The applicant must certify that to the best of his/her knowledge, the information in this application is correct, that the applicant has completed all elements of the application, and that the applicant understands the assurances given in this application and will comply with them.

Public Comments on the Proposed Criteria, Procedures, and Application for Public Charter Schools

From: jbm
Sent: Monday, December 13, 2010 11:50 AM
To: Wescott, Anne (DOE)
Cc: State NAACP; Rev. Vines
Subject: Proposed Criteria, Procedures and Application for Public Charter Schools

The following questions /comments are being forwarded in regards to the above subject:

* Will charter schools adhere to the same standards as traditional public schools; i.e. SOL's and AYP ?

* Will teachers be subjected to the same background checks and certification requirements that are in place for teachers who seek employment in traditional public schools?

* Will pay scales be modified or remain the same , ex. merit pay for teachers who teach the critical needs subjects such as science & math ?

* The criteria set for children who will be selected to enroll in charter schools could be an issue. What happens to those students who could not be accommodated, will they be on a waiting list? What would determine when / if they could be enrolled ?

* Who decides the curriculum ? With the necessary funding, resources and teachers, why can't the needs of these children be met in the classrooms of their specific schools ?

* Realizing that charter schools are public schools; but funding will need to be allocated to those schools that will serve some of the children.....would this then be a possibility that some of the schools serving some of the neediest children..... closing ? What would happen to those children ?

* Will there be legislation and / or policies written that will discourage discrimination, especially in the selection process of children being chosen to attend charter schools ?

We are aware that there is evidence to support the fact that some children do perform better in charter schools, just as there is evidence to the contrary. However, by the same token; we support good public schools that would allow ALL children in Virginia to be able to receive a quality education in the public schools of the Commonwealth.

Virginia State Conference NAACP Education Committee
Janette Boyd Martin, Chair

From: Roy Gamse
Sent: Thursday, December 16, 2010 6:05 PM
To: Wescott, Anne (DOE)
Cc: Michael DePass
Subject: Comments on the Criteria, Application, and Procedures for Reviewing Charter SChool Applications

Thank you for the opportunity to comment on the proposed "Criteria for Charter Schools, the Application for Charter Schools, and the Procedures for Receiving and Reviewing Charter School Applications. I am filing these comments on behalf of Imagine Schools. Headquartered in Arlington, VA, Imagine Schools is the nation's largest operator of charter schools, with 72 schools in 12 states and DC, serving 40,000 students (which is larger student enrollment than Norfolk and larger than Richmond and Roanoke combined). We are currently developing an application for one or more charter schools in Loudoun County to open in 2012, so we appreciate the effort of the Board of Education to implement the recent legislative changes in Virginia's charter law, which were intended to facilitate approval of high quality charter schools in Virginia.

Here are our comments on the November 18 draft:

1. SPECIFIED DURATION OF STATE BOARD REVIEW. By far our greatest concern is with the indeterminate length of time involved in the Board carrying out the review process. The Board should commit to a specific length of time, during which it will complete its review. Otherwise the Board's review could easily prevent the applicant from meeting the requirements it imposes.

   For example, Attachment B says in the 1st paragraph of p. 9 that an applicant should allow 18 months from the time the application is submitted to the local school board to the proposed opening date for the public charter school. Without knowing how long the State Board's review will take, the applicant can only guess how long in advance to submit the application to the State Board for review.

   Further, Section XVII of the application requirements on p. 20 specifies that the applicant will take actions necessary to enter into a contract with the local school board no later than 9 months prior to the opening date; that the school leadership must be retained on contract no later than 6 months prior to the opening date; and that state waivers must be made by the local school board 6 months prior to opening. All those depend on timely action by the local school board, but all of them could be impossible if the State review takes too long. Delays during the state review or by the local board could force delay of school opening if these are mandatory time intervals.

   For the applicant to know how far in advance it must submit its application for State Board review, the State Board should specify the length of time it needs for review of an adequate application and commit to acting within that time limit. I suggest that 60 days should be ample for such a review. If these procedures

cannot be implemented within 60 days, perhaps some modification of the process is warranted. After all, the purpose of the legislation was to facilitate opening of charter schools, not to delay them.

2. DEFINE MANAGEMENT COMMITTEE. Attachment C requests at the bottom of page 11 "A description of the prior or relevant experience of the members of the management committee." What is the management committee? Could that possibly be the founding board of the school or the school's board that holds the charter? Could it be the operator of the school (e.g., Imagine Schools)? If the management committee is not the board of the charter school or the operator, what responsibilities should it have?

3. RELATIONSHIP BETWEEN THE SCHOOL AND ITS EMPLOYEES. Page 4 #10 and page 17 XI ask for evidence of the relationship between the school and its employees, including evidence that the terms and conditions of employment will have been addressed with affected employees. We understand that teachers and staff of the school are employees of the local school division hired upon the recommendation of the charter school. If that is the case, wouldn't the terms and conditions of employment be addressed by the school division when it completes the hiring process? How would the applicant provide evidence that the school division would address terms and conditions with its own employees? I would appreciate being told if my understanding that these are school division employees is incorrect.

4. RETAINING SCHOOL LEADERSHIP ON CONTRACT SIX MONTHS PRIOR TO OPENING. Section XVII of the application requirements on p. 20 specifies that the school leadership must be retained on contract no later than six months prior to the opening date. That is an excellent concept, but may not be practical. First, most excellent school leaders will be employed at other schools six months prior to opening and may not be able to sign such a contract. Further, there is the question of who pays the school leadership's salaries during that time period. If the local or state boards delay the approval process so that this time frame cannot be met, is there no provision to allow it to be waived? Also, if the school leaders are to be school district employees, will the school district pay their salaries six months prior to opening? If so, how will that be implemented, since the funding for the charter school only comes when the school is open with an enrollment that determines the level of funding? Will the State Board direct the school divisions to hire these individuals prior to funds being available to the charter schools? Will the costs of hiring them be borne ultimately by the school divisions, or will they then be able to reduce the later funding of the schools to cover that cost (which would then constrain their ability to operate within available funds)?

5. LENGTH OF CHARTER. In some places the document refers to a charter life of five years (III, 3. on page 12), and in other places it refers to up to five years. Which is correct? We prefer five years, since studies of charter schools have

shown that it takes more than three years for them to reach peak academic performance.

6. INFORMAL COMMUNICATION WITH LOCAL SCHOOL BOARD MEMBERS. I hope that the intention of the legislation and the Board's implementation of it is to accelerate the approval of high quality applications. Yet it could actually slow down the approval process if local school boards interpret it to mean that they should not interact constructively with applicants until the State Board's review is complete. It would be helpful if the Board's final documents were to encourage local school divisions to meet with and communicate with prospective applicants and if the final documents were to encourage applicants to submit applications informally to the school divisions for informal review when they are submitted to the State Board. That would help accelerate the process, which could be unintentionally slowed down by the State reviews.

Thank you for considering these comments. I would be happy to discuss them with Board members or staff if that would help improve the process.

Roy Gamse
EVP, Imagine Schools
1005 N. Glebe Road, Suite 610
Arlington, VA 22201

From: Stella Edwards
Sent: Wednesday, December 22, 2010 4:58 PM
To: Wescott, Anne (DOE)
Subject: Public Comments on Criteria for Public Charter Schools

Commenter:
JustChildren Program of Legal Aid Justice Center
Comments:
Current requirements JustChildren agrees with, and supports as a critical component to the proposed criteria:

- Serve students with disabilities, provide them with a free appropriate public education, and comply with all state and federal special education laws.

In order to ensure that all students have an equal and meaningful opportunity to be successful in the charter school setting, we believe that, like all public schools, charter schools should also meet the following minimum requirements:

- Provide free transportation; not just a plan to meet the transportation needs
- Serve students with behavioral challenges, implement a research-based positive behavioral support program, and refrain from using suspension and expulsion
- Provide frequent opportunities for parents and the community to participate in educational decisions affecting their children and in policy decisions affecting the school
- Meet or exceed the Commonwealth's standards for SOL pass rates and graduation rates, even if alternative accreditation plans are considered
- Ensure a strong governance and oversight (whether for-profit or non-profit)
- Provide, as part of the charter school report, data on students with disabilities (how many served, discipline, or other change in placement) and data on suspensions and expulsions by offense, age, grade, ethnicity, etc.

In addition, we believe charter schools should have an obligation to focus on meeting the needs of educationally at-risk students or, in cases where the proposed specialized focus is STEM, special education, career and technical education, or gifted education, provide a plan for recruiting economically disadvantaged and other at-risk students to apply for admission.

Thank you,

Stella

Stella Y. Edwards
Community Organizer
JustChildren Program
Legal Aid Justice Center
37 Bollingbrook Street
Petersburg, VA 23803

From: Eric Wolf Welch
Sent: Thursday, December 30, 2010 11:55 AM
To: Wescott, Anne (DOE)
Cc: Don Soifer; Philip Bernhardt; Vince O'Neill; spderose@fcps.edu; Chris Braunlich
Subject: Comments on State Board of Education's Proposed Criteria for Charter Schools

Mrs. Wescott,

Thank you for accepting comments on the State Board of Education's Proposed Criteria for Charter Schools. I have the following comments that I would like the Board of Education to consider:

COMMENT 1: Can the Board of Education clarify whether a charter school can be made for a specific geographic location within a school division? There seems to be some contradictory statements in the proposed regulations. The state code and the proposed policy the Board of Education is considering lists on p. 1:

"There must be evidence of the need for the charter school in the school division (or relevant school divisions in the case of a regional public charter school), ***or in a geographic area within a school division*** *(or relevant school divisions, as the case may be) as documented in the statement of need."*

However, later in the Board of Education's proposed policy (on p. 9), it states:

"Enrollment shall be open to any child who is deemed to reside within the relevant school division."

While I understand the latter statement is there to prevent any discrimination and promote more educational options for all children, it makes it more difficult to create a school for a specific "geographic area within a school division" that has a specific need. Take for example a charter school that is designed to serve the needs of a particular community that has at-risk students. If that charter school must open its enrollment to the entire county, it makes it more difficult to specifically target the needs of those at-risk students if other students from other communities (possibly not at-risk) are now open to enroll in the school. **My recommendation is for the Board of Education to amend the statement on p. 9 to add:**

"A charter school applicant in agreement with the local school division may target its enrollment to serve a specific geographic area within a school division, and based on geographic boundaries established by the school division, may give priority for enrollment of pupils living within those boundaries."

This is already how public schools function around the state – pupils are limited to attend schools based on boundaries set by the school division. Those boundaries reflect the community in which pupils live. Why can't this also be the case for a public charter school? Adding this statement would give the power to the local school division, if they choose, to establish a charter school to serve the need of a specific geographic area (as stated on p. 1).

Many counties in Virginia a quite large and they have specific communities who could use additional educational options like a charter school. It does not seem logical for a school division to be forced to have a charter school enroll students from the entire county when the charter school is for a specific community.

Please consider this change to p. 9.

COMMENT 2: On p. 12, under Item "XIII: Transportation" can the Board of Education please list "other transportation source, such as public transportation" as a transportation option.

Many public charter schools in other states and jurisdictions have pupils use the public transportation system to go to and from school (sometimes with agreed upon discounted rates for pupils). While the way the policy is currently written does not prohibit a charter school having pupils use public transportation, I believe it is important for clarification that the Board of Education specifically list "other transportation source, such as public transportation" as on option. In particular, in urban areas where public transportation is an option for students, I believe it is important the Board of Education list this in its policy. The local school division and State Board of Education would still have the power when they review a charter application that proposes using public transportation as whether such an option is viable.

COMMENT 3: On p. 3 and 4, the process of reviewing a charter school application by the State Board of Education is described. **Can the Board of Education put a specific timeline for how long it will take the Board's Charter School Committee to review the application before scheduling a meeting with the applicant? My recommendation would be 30 business days.**

There are specific time limits listed for the Committee completing its report after the meeting with the applicant (10 business days), for when the full Board will meet to review the application (at the next scheduled Board meeting after the Committee's report is complete), and for when the Board notifies the applicant of its decision on the application (within five business days of the Board meeting).

I feel it is important for the charter school applicant and local school division that a specific time limit is given to the Committee for it to schedule a meeting with the applicant. The local school division will have its own deadline for when it requires the application, and it would be helpful to know what is the maximum time the state will take in reviewing an application. This will allow the applicant to gauge when they must submit the application to the state in order to have it returned from the state in time to submit to the local school division with the state Board of Education's comments.

COMMENT 4: On p. 15, the requirements regarding a school facility are described. Considering having a viable facility is often the most important factor as to whether a charter school can exist, **the Board of Education should list these facility requirements earlier in its policy. I would suggest making facilities a separate category with its own Roman numeral.**

COMMENT 5: Items "III: Goals and Educational Objectives" and "VI: Educational Program" ask for very similar information. Is it possible to combine these two separate items into one item? I would suggest "Goals, Objectives and Educational Program." Having this is one item would allow the applicant to more clearly list all of the curriculum and other educational matters in one place rather than repeating much of the information if these are left as two separate items. Or if they are separate items, put them back to back rather than having them be items III and then VI.

COMMENT 6: Some school divisions are including in their local policy on charter schools that charter school applicants that focus on "at risk" student populations be given priority. Does the state need to make a statement on at risk students being given a priority for a local school division to list that in their policy? Or does a local school division have the autonomy to give applicants that serve "at risk" students a priority? Can a local school division, without any mention of at-risk students getting a priority in the state policy, put in its policy a quota that "at least one-half of charter schools approved by the (school division) shall be designated for academically at-risk students?"

COMMENT 7: Some local school divisions are charging applicants an "application fee" (as much as $2,000 per application). Does the State Board of Education need to make a statement in its policy about local school divisions charging an application fee? Does state law allow local school divisions to charge such a fee?

COMMENT 8: Some local school divisions are adopting in their local policy on charter schools that the charter school can be charged for specific items, such as the cost of any disciplinary hearings on charter students. Does the State Board of Education need to clarify what items a local school division may charge a charter school? It seems without any statement from the State Board of Education, much may be left to a local school division to charge a charter school for many items. **I suggest at the least, the State Board of Education provide a general statement in its policy that a local school division cannot place charges on a charter school that are out of the ordinary from the functions of other public schools or that are exorbitant as compared to the costs found in other public schools.**

Thank you for your consideration of these comments.

Sincerely,

Eric Wolf Welch
Public High School Teacher
Development Team Director for Mason District Leadership Academy
A Proposed Public Charter School for Fairfax County, Virginia

From: Kristen Larson
Sent: Friday, December 31, 2010 10:02 AM
To: Wescott, Anne (DOE)
Subject: Comments to Charter School Applications

Dear Ms. Wescott,

Don Soifer from the Lexington Institute forwarded me Superintendent Wright's memo asking for comments about the Virginia Board of Education's application process for charter schools. I have been involved as a member of the Board of Directors with Patrick Henry School of Science and Arts, Virginia's first elementary charter school, for nearly two years. The comments I am submitting are my own opinions and thoughts and are not representative of the board at large. We didn't have time to convene and review this document over the holiday, so I am submitting these comments on my own.

Introduction - Technical Assistance: It would be extremely useful to have a VDOE contact who is well versed in charter school norms on a state and national level. Although I was not involved with PHSSA during the application process, I understand that the feedback the board received from VDOE and the feedback they received from our LEA, Richmond Public Schools, varied greatly. Because RPS ultimately had the authority to approve or reject the charter, the school followed the feedback from the LEA. Having a VDOE contact who could work more closely with the LEA and/or prospective charter to provide information to both parties about 'national charter school norms' would be helpful. Additionally, having a 'go-to' person on the state level who could provide ongoing technical support on state charter school funding opportunities, law changes, and any other state related information would be extremely helpful.

Section VII - Enrollment Policies: In regards to the mention about mid-year transfer students, this issue is somewhat complicated. Since the Virginia state code says that any for space available there must be "a lottery process on a space-available basis," it appears that the transfer policy of students mid-year would need to be the same as the initial enrollment process. To do anything different would seem to be in conflict with Virginia State Code. This does make the process of mid-year transfers somewhat complicated and cumbersome, so it may be something that the Board could examine more closely.

Section VIII - Economic Soundness: Obviously, the financial soundness of a charter is one of the most closely examined aspects of charter schools. In regards to technical assistance provided by VDOE, it would be helpful to receive details of what charter schools in Virginia are legally entitled to in regards to funding, and what other schools currently receive. That may include per pupil funding, Title I money, National School Lunch Program or any other local, state or federal education funding that the schools in the state use to operate their districts. Additionally, this would be a great area where VDOE could provide information on national or state norms for funding, if such data

exists. Knowing what different funding streams are available to charter schools and what the charter needs to do to access those funds, would make it easier to put together a comprehensive and realistic budget.

Section XVII - The wording in point #1 about the contract, I would recommend not placing so much of the responsibility of the contract and that time limit (of 9 months) on the charter school. While it makes sense for the charter to enter into a contract at least 9 months to opening this school, saying that the charter should "take all actions necessary" may imply that the school may enter into a contract with the LEA that would not be in the best interest of the school. Perhaps if the LEA and charter were having problems with their contract negotiations, could VDOE provide a mediator to move the process along.

Thank you for considering my opinions and for allowing public comment. I have called VDOE several times over the last two years and have always received useful information.

Please call me if you have any questions.

Sincerely,
Kristen Nye Larson

From: Roberta Snow
Sent: Friday, December 31, 2010 12:22 PM
To: Wescott, Anne (DOE)
Subject: Proposed Criteria and process for Charter Schools

Dear Anne Wescott,

Thank you for collecting comments on the proposed criteria and the state process for Charter Schools. I read the document several times and found it to be thorough and covered all the possible areas a charter applicant must consider.

I do have some comments:

A charter applicant will have to have a very close relationship with the chartering district to get much of the information. Sometimes the process takes time and it is the negotiation at the time of chartering that reveals some of the information (busing, space, food services, etc.)

The application process does not suggest anything about innovation or raising the bar for education. It seems to be the same old model. Use the same process, use the same data collection, and use the same structures. Is there any way to suggest that you might be looking for more alternative ways of meeting the needs of students? If not, why have these schools? Can the document itself be a bit loftier? Can it suggest that this is really hard work to start a school and there are wonderful opportunities to reach constituencies that are not being reached yet?

My biggest concern is that the applicant does not seem to get any help from anyone. Why not put together a charter help group from existing charter schools and advocates to help support applicants as they proceed through the process. Maybe a manual could be developed. Also some examples of successful charter applications could guide people.

To be honest, the document does not sound like the state WANTS more charter schools. I want it to be inviting AND comprehensive.

Again, thank you for asking for commentary.

Bobbi Snow, Co-founder
The Community Public Charter School

Debra Abadie, President
Virginia PTA
1027 Wilmer Avenue
Richmond, Virginia 23227-2419
State Office Telephone Contact:
804.264.1234
www.vapta.org

TO: Mrs. Anne D. Wescott, Assistant Superintendent for Policy and Communications

FROM: Virginia PTA

RE: BOE Superintendent's Memo #304-10 Criteria for Public Charter Schools

Date: December 31, 2010

Thank you for providing an opportunity for public comment on the proposed criteria, procedures, and application for public charter schools.

During the Charter School Committee meeting on September 22, 2010, Debi Abadie, Virginia PTA President, participated on the panel and provided information about the Virginia PTA's positions regarding Charter Schools. We appreciate the opportunity to make contributions to the Committee's criteria proposals as outlined in Memo 304-10.

During the fall of this year, our state membership (over 300,000 members), was given the opportunity to vote on a new Policy Statement regarding Charter Schools. This policy passed and is now part of our VA PTA Legislation Program.

We are very pleased to note that many of our Virginia PTA positions have become part of the BOE proposed Public Charter Schools Application Package (sections in compliance with our positions are in blue highlights):

- Parental and school staff involvement in the charter's design, implementation, and governance (Section IV. Evidence of Support)
- Meet the same state regulations as other public schools including required testing (SOLs), reporting and other requirements in the Standards of Accreditation unless these regulations are also waived for all public schools (Section III. Goals and Education Objectives)
- Provide adequate procedures for assessment and evaluation as required by the local school division (Section VI. Educational Program)
- Staffed by licensed professionals with adequate safeguards covering contract and employment provisions (Section XI. Employment Terms and Conditions)

- Maintain health and safety standards for all students (Section X. Management and Operations – School health services and Security services)
- Offer equal educational opportunity and be non-discriminatory (Section VII. Enrollment Policies)

While we are pleased that BOE has implemented many of our recommendations, we maintain our concerns regarding planned funding for Public Charter Schools as noted from our position below:

- No negative impact on the regular public school programs, including no diversion of funds

As President Abadie noted in her comments to the committee, Virginia PTA's position is that public charter schools should be supported by specifically allocated public funds that do not exceed, and do not divert, funding from traditional public schools. We are well aware that when per pupil state funding is taken from one school, programs in that school may need to be cut back or even eliminated for the students who remain at the public school.

We value the options that charter school may give some families, however, the importance of maintaining and upgrading public schools currently being operated by each school division should be evaluated by the Board of Education when considering approval of new schools.

In closing, while Virginia PTA and National PTA support educational choices for all students to include charter schools, public funding of any school should require fiscal responsibility and accountability in order to provide a quality public education for all Virginia children.

Respectfully submitted by: Debi Abadie, VA PTA President, president@vapta.org

Debbie Kilpatrick, VA PTA Education Chair, education@vapta.org

Arlington School Board

1426 N. Quincy Street Arlington, VA 22207

PHONE: (703) 228-6015 **FAX:** (703) 228-7640 **E-MAIL:** schoolbd@arlington.k12.va.us

December 9, 2010

Hon. Eleanor B. Saslaw, President
Board of Education
Commonwealth of Virginia
PO Box 2120
Richmond, VA 23218

Dear Ms. Saslaw: Eleanor

I understand the Board of Education is reviewing the recommendations of the Charter School Committee, and that the Board will receive public comments, review the public comments, and prepare the document for the Board's review and approval at the January meeting.

On behalf of the Arlington School Board, I am writing to set forth the position of our Board with regard to charter schools and the legal framework for such schools in the Commonwealth. It is important that it be clear to taxpayers who is accountable for the performance of schools funded with taxpayer dollars. Those who are accountable for student performance, i.e., local school boards, must have the authority to ensure that each school in the district performs as it should for the good of its students and the district as a whole.

- **The Arlington School Board strongly supports the principle of local control of public schools, including the oversight of public funds, the hiring of teachers and other employees, the setting of curricula and the selection of text materials.** The decision on whether to approve charter schools and under what circumstances should be left to local school boards, especially where those boards represent local opinion. (In this connection, we would point out that in the November 2 referendum on $102.8 million in bonds, 76.5% of the voters supported the School Board's proposal.) As an example of the wisdom of maintaining the responsibility for public education in the hands of local boards, and perhaps a reason for the high level of public satisfaction in Arlington Public Schools, we point to the wide variety of schools in APS that permit choice and experimentation:
    - Most schools have an Exemplary Project "theme" to their offerings. Some focus on the arts, or technology, or community schooling. Others have adopted the International Baccalaureate as their Exemplary Project. Some schools offer Spanish Immersion, one offers a "traditional" approach to education, one focuses on science.

  - We point to these themes as examples of the innovation at the local level that result when education is in the hands of local school boards.
- **Local school boards should have the sole prerogative to decide whether to create charter schools and other innovative programs, to evaluate their operations and effectiveness, to set educational standards and outcomes, and determine attendance, employment, fiscal, and other policies of such schools.**
- Charter Schools can:
  - lead to segregation by race, socioeconomic class or disability;
  - divert funds from regular public schools and focus funds on a select group of students at the cost of students in the public schools;
  - be exempted from certain state regulations, including, but not limited to, required testing, reporting and other requirements in the Standards of Accreditation, without offering the same waivers to regular public schools;
  - fail to guarantee equal access for all students;
  - be insulated from the challenges of special populations that the regular public schools encounter.
- **Research suggests that Charter Schools are no more likely to result in increased student performance than "regular" public schools:**
  - A November 2003 NAEP study found: "In reading, there was no measurable difference in performance between charter school students in the fourth grade and their public school counterparts as a whole. This was true, even though, on average, charter schools have higher proportions of students from groups that typically perform lower on NAEP than other public schools have. In reading, as in mathematics, the performance of fourth-grade students with similar racial/ethnic backgrounds in charter schools and other public schools was not measurably different.

    "There are also instances where the performance of students with shared characteristics differed. For example, among students eligible for free or reduced-price lunch, fourth-graders in charter schools did not score as high in reading or mathematics, on average, as fourth-graders in other public schools."*
  - An August 2006 NAEP study found:
    Reading
    "In the first phase of the combined analysis, all charter schools were compared to all public noncharter schools. The average charter school mean was 5.2 points lower than the average public noncharter school mean. After adjusting for multiple student characteristics, the difference in means was 4.2 points. Both differences were statistically significant. The adjusted difference corresponds to an effect size of 0.11 standard deviations. (Typically, about two-thirds of scale scores fall within one standard deviation of the mean.)

* http://nces.ed.gov/nationsreportcard/studies/charter/2005456.asp.

"In the second phase, charter schools were classified into two categories based on whether or not they were affiliated with a public school district (PSD). Each category was compared separately with public noncharter schools. On average, the mean scores for charter schools affiliated with a PSD were not significantly different from those of public noncharter schools. However, on average, the means of charter schools not affiliated with a PSD were significantly lower than the means for public noncharter schools, both with and without adjustment. The effect size of the adjusted difference was 0.17 standard deviations.

"In the third phase, the comparison between school types was restricted to schools having a central city location and serving a high-minority population, as there has been particular interest in those students who have traditionally not fared well in public schools. For this subset of 61 charter schools, there were no significant differences (for any fitted model) between the average charter school mean and the average public noncharter school mean.

Mathematics

"In the first phase of the combined analysis for mathematics, all charter schools were compared to all public noncharter schools. The average charter school mean was 5.8 points lower than the average public noncharter school mean. After adjusting for student characteristics, the difference in means was 4.7 points. Both differences were statistically significant. The adjusted difference corresponds to an effect size of 0.17 standard deviations.

"In the second phase, charter schools were classified into two categories based on whether or not they were affiliated with a PSD. Each category was compared separately with public noncharter schools. On average, the mean scores for charter schools affiliated with a PSD were not significantly different from those for public noncharter schools. However, on average, the means of charter schools not affiliated with a PSD were significantly lower than the means for public noncharter schools, both with and without adjustment. The effect size of the adjusted difference was 0.23 standard deviations.

"In the third phase, the comparison between school types was restricted to schools having a central city location and also serving a high-minority population. There was a significant difference between the average of all charter school means and the average of public noncharter school means, as well as between charter school means not affiliated with a PSD and public noncharter school means. In both cases, the difference favored public noncharter schools, and the effect size of the adjusted difference was 0.17 standard deviations. However, there were no significant

differences between the average of public noncharter school means and the means of charter schools affiliated with a PSD."[†]

- A June 13, 2010, issue of *Newsweek* that reported on the nation's top high schools (among them, all four of Arlington's high schools), revealed: "...it came as a bit of a shock to the community of educational reformers last year when a study by Stanford University's Center for Research on Educational Outcomes (CREDO) found that 37 percent of charter schools produce academic results that are worse than public schools, while only 17 percent perform significantly better."[‡]

As others have noted, **Charter schools encourage social fragmentation rather than common experiences.** An important historic role of the public school has been to provide a meeting place and common experiences for students from a variety of cultures and homes. With the increasing diversity in our society, it is more important than ever to have students from different backgrounds in classrooms and playgrounds together. Charter schools lead to balkanization as groups create schools to reflect their special interests. Charter schools make a priority of the private benefit determined by the parents, rather than balancing and accommodating both the individual and public good.

Furthermore, the basis of the charter schools model is that competition between schools will solve the problems of K-12 education. **A market-driven model of educational competition does not encourage the sharing of successful strategies, whereas in education, cooperation is a necessity.** Rather than shaming schools into improving, we should be supporting low-achieving schools partnering with successful schools. As one superintendent has noted, "continuing to advocate a politically-motivated, market-driven system of education will only delay the real work that needs to be done to help our public schools grow."[§]

For all of these reasons, we hope the Board of Education and the Commonwealth of Virginia will continue to recognize the importance of local control of education and not undermine the efforts of jurisdictions like Arlington by imposing new laws about charter schools.

Sincerely,

Libby Garvey
Chair

[†] http://nces.ed.gov/nationsreportcard/pubs/studies/2006460.asp.
[‡] http://www.newsweek.com/2010/06/13/understanding-charter-schools.html.
[§] http://www.aasa.org/SchoolAdministratorArticle.aspx?id=7336.

Chesapeake Public Schools

Office of the Superintendent

Post Office Box 16496
Chesapeake, Virginia 23328

December 21, 2010

Mrs. Anne D. Wescott
Assistant Superintendent
Division of Policy and Communications
Virginia Department of Education
P.O. Box 2120
Richmond, Virginia 23218

Dear Mrs. Wescott:

Thank you for allowing me to comment on the proposed criteria for Charter Schools.

The *Code of Virginia* defines and addresses the requirements for establishing charter schools in VA Code 22.1-212. The Code provides clear direction for the charter school application process including specific direction on the process for reviewing such applications. Additionally, the Code grants the local school board the authority to grant or deny a public charter school application or to revoke or fail to renew a charter agreement. Further, the Code ensures that the decision of the local school board shall be final and not subject to appeal.

The School Board of the City of Chesapeake opposes any changes to this current legislation that ensures the authority of the local school board with respect to charter school applications.

Sincerely,

James T. Roberts

James T. Roberts, Ph.D.
Superintendent

Lexington Institute

December 28, 2010

The Honorable Anne D. Wescott
Assistant Superintendent for Policy and Communications
Virginia Department of Education
PO Box 2120
Richmond, VA 23218

Dear Anne:

I hope you are enjoying a relaxing and enjoyable holiday break. I've just finished reviewing the November 18 draft criteria and procedures for charter school applications. As always, I deeply appreciate the thoroughness and thoughtful approach you and the board have taken with the draft, which I expect to lead to some very useful policies. I did want to impose briefly on your time to offer some suggestions on the draft that I hope you and the board find useful.

1. Section XVII (3) of Attachment C requires that "school leadership of the public charter school be retained on contract no later than six months prior to the opening date of the school." I believe this is too long, and would severely limit the ability of charter schools to hire many of the best leaders who would likely still be working at their prior job, which loyalty and professionalism would prevent them from leaving before the school year concludes. I believe that 60 days prior to the opening of the school would be adequate, a shorter period extremely helpful to attracting the highest-quality candidates.

2. A specific timeframe for Board of Education review of applications would be a helpful addition. While I appreciate the board's commitment to thoroughness, would specifying a 60-day review for the state committee be unreasonable? Articulating a specific timeframe would be helpful for both applicants and potential authorizers.

3. Section VIII of Attachment C requires applications to include five-year budgets and cash flow projections. While state law permits the approval of five year charters, some school division policies continue to limit the term of charters to three years. While I believe this is within their authority to do so, it seems counterproductive for state policies to require five year budgets and projections where school division policy limits charters to three years.

1600 Wilson Boulevard, Suite 900 • Arlington, VA 22209 • Phone: 703.522.5828 • Fax: 703.522.5837
http://www.lexingtoninstitute.org email: mail@lexingtoninstitute.org

4. At least one school division has circulated a draft policy that would require a $2,000 application fee for all charter applicants. While some application fee seems fair to me, this unusually high cost strikes me as difficult to justify, and I wonder if the state board would consider providing guidance on what constitutes a reasonable application fee?

5. The technical assistance provision under attachment B is very helpful. I would also suggest adding, to the end of the first sentence in that section, "or the school division, and its leadership, from communicating with any applicant or potential applicant." Questions over this question have actually come up and this clarification would prove useful.

6. There appears to be some tension between two sections in statute that perhaps the state board could help clarify. Section 221.212.8 (4) requires a statement of need "in a school division.... or in a geographic area within a school division... as the case may be." This is aptly noted in the third bullet point in Attachment A of the draft.

   It also refers (6) to, "if appropriate, a tailored admission policy that meets the specific mission or focus of the public charter school and is consistent with all federal and state laws and regulations."

   It appears clear to me that any student desiring to apply for an available slot in a charter school in their school division may do so. But what obligations, if any, would either charter school or authorizer have to provide transportation for students living within the district but outside the attendance zone or cluster in which the charter may be located?

   I would suggest that it would be helpful, particularly for school divisions that currently utilize attendance zones or clusters, for the board to offer specific guidance as to options available to potential authorizers regarding what forms of tailored attendance policy are allowable. I fear that to remain mute on this important point will lead to confusion which may jeopardize progress for high-quality applicants.

I deeply appreciate your and the Board's commitment to getting this right, and this draft is an excellent start. I would be happy to discuss these questions anytime, or any others you might have.

Happy New Year.

Best regards,

Don Soifer
Executive Vice President

cc: Secretary Robinson

Powhatan Branch NAACP
Post Office Box 601
Powhatan, VA 23139

December 31, 2010

Mrs. Anne D. Wescott, assistant superintendent
for policy and communications,
by e-mail Anne.Wescott@doe.virginia.gov;
by phone at (804) 225-2403; or by FAX at (804) 225-2524.

Dear Mrs. Wescott:

The Powhatan Branch NAACP, even not in an urban area has great concerns for the matter of Charter Schools, in Virginia in particular. Our local schools have been to the point of having to call in the US Justice Department for issues related to race in our schools, we find this effort of Charter Schools are not in the best interest of all children. Not to change the subject, we realize the winds of times are changing but they have not change that much in this century to even warrant a suggested change that Virginia be removed from the Section 5 pre-clearance section of the voting rights act, which will also have an adverse impact on schools and re-seregration.

The proposed changes in the laws of charter schools is not supported by the NAACP to say why are we just interested in educating some of the Virginia's children and not all of them in the Public school system supported by the State of Virginia. It would appear this would be a conflict of interest for the State of Virginia to support charter schools and not just public schools where all of the children are being educated. I would think there are enough private schools that could handle those who would want to pay for an education. This method of supporting public charter schools is just another method of the public being forced to support private schools since everyone in the system cannot attend. We support the *Promotion of High Standards for All Public Schools as outlined in our Resolution to support Public Education.*

The Powhatan Branch NAACP has concerns as they relate to any process that would remove children out of the public school system. Our unit in Powhatan supports the Resolution confirmed at the October 2010 National Board in which we have attached. It is hard not to support Federal and State government that will support the public school system that has produced President, Governors, legislators, public school teachers, Nobel Prize winners, inventors, lawyers, physicians and others.

Public Notice: Proposed Criteria, Procedures, and Application for Public Charter Schools

The Board of Education is seeking public comment on its proposed criteria, procedures, and application for public charter schools, pursuant to HB 1390 and SB 737. Section 22.1-212.9 of the Code of Virginia requires all applications for public charter schools to be submitted to the Virginia Board of Education for review prior to submission of the application to the local school board. The Board is required to establish procedures of receiving and reviewing applications, and making a determination as to whether the application meets approval criteria developed by the Board. The Code further provides that the Board's review would examine such applications for feasibility, curriculum, financial soundness, and other objective criteria as the Board may establish, consistent with existing state law.

The Board of Education authorized 30 days of public comment on the proposed criteria (attached) at its November 18, 2010 meeting. The Board is expected to review the public comment and take final action on this item at its meeting on January 13, 2011.

The Powhatan Branch NAACP has concerns as they relate to any process that would remove children out of the public school system. Our unit in Powhatan supports the Resolution confirmed at the October 2010 National Board in which we have *attached.* It is hard not to support Federal and State government that will support the public school system that has produced Presidents, Governors, legislators, public school teachers, Nobel Peace Prize winners, inventors, lawyers, physicians and others that have contributed to society. If public schools staff was more friendly and inviting parents would want to participate in their children's education, which would make a difference.

The Harlem School Zone is what everyone seems to be shooting for when they talk about charter schools, however, these comments were recently published.

"All children who live in the zone have access to many of its services, including after-school programs, asthma care, precollege advice and adult classes for expectant parents, called Baby College. The organization has placed young teaching assistants, known as peacemakers, in many of the elementary school classrooms in the area and poured money into organizing block associations, helping tenants buy buildings from the city, and refurbishing parks and playgrounds. By linking services, the program aims to improve on early-childhood programs like Head Start, whose impact has been shown to evaporate as children age. "

How many of Virginia's Public Schools provides this type of support?

R. J. Vaughan, President

Public Comments on the Proposed Criteria, Procedures, and Application for Public Charter Schools

From: jbm
Sent: Monday, December 13, 2010 11:50 AM
To: Wescott, Anne (DOE)
Cc: State NAACP; Rev. Vines
Subject: Proposed Criteria, Procedures and Application for Public Charter Schools

The following questions /comments are being forwarded in regards to the above subject:

* Will charter schools adhere to the same standards as traditional public schools; i.e. SOL's and AYP ?

* Will teachers be subjected to the same background checks and certification requirements that are in place for teachers who seek employment in traditional public schools?

* Will pay scales be modified or remain the same , ex. merit pay for teachers who teach the critical needs subjects such as science & math ?

* The criteria set for children who will be selected to enroll in charter schools could be an issue. What happens to those students who could not be accommodated, will they be on a waiting list? What would determine when / if they could be enrolled ?

* Who decides the curriculum ? With the necessary funding, resources and teachers, why can't the needs of these children be met in the classrooms of their specific schools ?

* Realizing that charter schools are public schools; but funding will need to be allocated to those schools that will serve some of the children.....would this then be a possibility that some of the schools serving some of the neediest children..... closing ? What would happen to those children ?

* Will there be legislation and / or policies written that will discourage discrimination, especially in the selection process of children being chosen to attend charter schools ?

We are aware that there is evidence to support the fact that some children do perform better in charter schools, just as there is evidence to the contrary. However, by the same token; we support good public schools that would allow ALL children in Virginia to be able to receive a quality education in the public schools of the Commonwealth.

Virginia State Conference NAACP Education Committee
Janette Boyd Martin, Chair

From: Roy Gamse
Sent: Thursday, December 16, 2010 6:05 PM
To: Wescott, Anne (DOE)
Cc: Michael DePass
Subject: Comments on the Criteria, Application, and Procedures for Reviewing Charter SChool Applications

Thank you for the opportunity to comment on the proposed "Criteria for Charter Schools, the Application for Charter Schools, and the Procedures for Receiving and Reviewing Charter School Applications. I am filing these comments on behalf of Imagine Schools. Headquartered in Arlington, VA, Imagine Schools is the nation's largest operator of charter schools, with 72 schools in 12 states and DC, serving 40,000 students (which is larger student enrollment than Norfolk and larger than Richmond and Roanoke combined). We are currently developing an application for one or more charter schools in Loudoun County to open in 2012, so we appreciate the effort of the Board of Education to implement the recent legislative changes in Virginia's charter law, which were intended to facilitate approval of high quality charter schools in Virginia.

Here are our comments on the November 18 draft:

1. SPECIFIED DURATION OF STATE BOARD REVIEW. By far our greatest concern is with the indeterminate length of time involved in the Board carrying out the review process. The Board should commit to a specific length of time, during which it will complete its review. Otherwise the Board's review could easily prevent the applicant from meeting the requirements it imposes.

   For example, Attachment B says in the 1st paragraph of p. 9 that an applicant should allow 18 months from the time the application is submitted to the local school board to the proposed opening date for the public charter school. Without knowing how long the State Board's review will take, the applicant can only guess how long in advance to submit the application to the State Board for review.

   Further, Section XVII of the application requirements on p. 20 specifies that the applicant will take actions necessary to enter into a contract with the local school board no later than 9 months prior to the opening date; that the school leadership must be retained on contract no later than 6 months prior to the opening date; and that state waivers must be made by the local school board 6 months prior to opening. All those depend on timely action by the local school board, but all of them could be impossible if the State review takes too long. Delays during the state review or by the local board could force delay of school opening if these are mandatory time intervals.

   For the applicant to know how far in advance it must submit its application for State Board review, the State Board should specify the length of time it needs for review of an adequate application and commit to acting within that time limit. I suggest that 60 days should be ample for such a review. If these procedures

cannot be implemented within 60 days, perhaps some modification of the process is warranted. After all, the purpose of the legislation was to facilitate opening of charter schools, not to delay them.

2. DEFINE MANAGEMENT COMMITTEE. Attachment C requests at the bottom of page 11 "A description of the prior or relevant experience of the members of the management committee." What is the management committee? Could that possibly be the founding board of the school or the school's board that holds the charter? Could it be the operator of the school (e.g., Imagine Schools)? If the management committee is not the board of the charter school or the operator, what responsibilities should it have?

3. RELATIONSHIP BETWEEN THE SCHOOL AND ITS EMPLOYEES. Page 4 #10 and page 17 XI ask for evidence of the relationship between the school and its employees, including evidence that the terms and conditions of employment will have been addressed with affected employees. We understand that teachers and staff of the school are employees of the local school division hired upon the recommendation of the charter school. If that is the case, wouldn't the terms and conditions of employment be addressed by the school division when it completes the hiring process? How would the applicant provide evidence that the school division would address terms and conditions with its own employees? I would appreciate being told if my understanding that these are school division employees is incorrect.

4. RETAINING SCHOOL LEADERSHIP ON CONTRACT SIX MONTHS PRIOR TO OPENING. Section XVII of the application requirements on p. 20 specifies that the school leadership must be retained on contract no later than six months prior to the opening date. That is an excellent concept, but may not be practical. First, most excellent school leaders will be employed at other schools six months prior to opening and may not be able to sign such a contract. Further, there is the question of who pays the school leadership's salaries during that time period. If the local or state boards delay the approval process so that this time frame cannot be met, is there no provision to allow it to be waived? Also, if the school leaders are to be school district employees, will the school district pay their salaries six months prior to opening? If so, how will that be implemented, since the funding for the charter school only comes when the school is open with an enrollment that determines the level of funding? Will the State Board direct the school divisions to hire these individuals prior to funds being available to the charter schools? Will the costs of hiring them be borne ultimately by the school divisions, or will they then be able to reduce the later funding of the schools to cover that cost (which would then constrain their ability to operate within available funds)?

5. LENGTH OF CHARTER. In some places the document refers to a charter life of five years (III, 3. on page 12), and in other places it refers to up to five years. Which is correct? We prefer five years, since studies of charter schools have

shown that it takes more than three years for them to reach peak academic performance.

6. INFORMAL COMMUNICATION WITH LOCAL SCHOOL BOARD MEMBERS. I hope that the intention of the legislation and the Board's implementation of it is to accelerate the approval of high quality applications. Yet it could actually slow down the approval process if local school boards interpret it to mean that they should not interact constructively with applicants until the State Board's review is complete. It would be helpful if the Board's final documents were to encourage local school divisions to meet with and communicate with prospective applicants and if the final documents were to encourage applicants to submit applications informally to the school divisions for informal review when they are submitted to the State Board. That would help accelerate the process, which could be unintentionally slowed down by the State reviews.

Thank you for considering these comments. I would be happy to discuss them with Board members or staff if that would help improve the process.

Roy Gamse
EVP, Imagine Schools
1005 N. Glebe Road, Suite 610
Arlington, VA 22201

From: Stella Edwards
Sent: Wednesday, December 22, 2010 4:58 PM
To: Wescott, Anne (DOE)
Subject: Public Comments on Criteria for Public Charter Schools

Commenter:
JustChildren Program of Legal Aid Justice Center
Comments:
Current requirements JustChildren agrees with, and supports as a critical component to the proposed criteria:

- Serve students with disabilities, provide them with a free appropriate public education, and comply with all state and federal special education laws.

In order to ensure that all students have an equal and meaningful opportunity to be successful in the charter school setting, we believe that, like all public schools, charter schools should also meet the following minimum requirements:

- Provide free transportation; not just a plan to meet the transportation needs
- Serve students with behavioral challenges, implement a research-based positive behavioral support program, and refrain from using suspension and expulsion
- Provide frequent opportunities for parents and the community to participate in educational decisions affecting their children and in policy decisions affecting the school
- Meet or exceed the Commonwealth's standards for SOL pass rates and graduation rates, even if alternative accreditation plans are considered
- Ensure a strong governance and oversight (whether for-profit or non-profit)
- Provide, as part of the charter school report, data on students with disabilities (how many served, discipline, or other change in placement) and data on suspensions and expulsions by offense, age, grade, ethnicity, etc.

In addition, we believe charter schools should have an obligation to focus on meeting the needs of educationally at-risk students or, in cases where the proposed specialized focus is STEM, special education, career and technical education, or gifted education, provide a plan for recruiting economically disadvantaged and other at-risk students to apply for admission.

Thank you,

Stella

Stella Y. Edwards
Community Organizer
JustChildren Program
Legal Aid Justice Center
37 Bollingbrook Street
Petersburg, VA 23803

From: Eric Wolf Welch
Sent: Thursday, December 30, 2010 11:55 AM
To: Wescott, Anne (DOE)
Cc: Don Soifer; Philip Bernhardt; Vince O'Neill; spderose@fcps.edu; Chris Braunlich
Subject: Comments on State Board of Education's Proposed Criteria for Charter Schools

Mrs. Wescott,

Thank you for accepting comments on the State Board of Education's Proposed Criteria for Charter Schools. I have the following comments that I would like the Board of Education to consider:

COMMENT 1: Can the Board of Education clarify whether a charter school can be made for a specific geographic location within a school division? There seems to be some contradictory statements in the proposed regulations. The state code and the proposed policy the Board of Education is considering lists on p. 1:

"There must be evidence of the need for the charter school in the school division (or relevant school divisions in the case of a regional public charter school), ***or in a geographic area within a school division*** *(or relevant school divisions, as the case may be) as documented in the statement of need."*

However, later in the Board of Education's proposed policy (on p. 9), it states:

"Enrollment shall be open to any child who is deemed to reside within the relevant school division."

While I understand the latter statement is there to prevent any discrimination and promote more educational options for all children, it makes it more difficult to create a school for a specific "geographic area within a school division" that has a specific need. Take for example a charter school that is designed to serve the needs of a particular community that has at-risk students. If that charter school must open its enrollment to the entire county, it makes it more difficult to specifically target the needs of those at-risk students if other students from other communities (possibly not at-risk) are now open to enroll in the school. **My recommendation is for the Board of Education to amend the statement on p. 9 to add:**

"A charter school applicant in agreement with the local school division may target its enrollment to serve a specific geographic area within a school division, and based on geographic boundaries established by the school division, may give priority for enrollment of pupils living within those boundaries."

This is already how public schools function around the state – pupils are limited to attend schools based on boundaries set by the school division. Those boundaries reflect the community in which pupils live. Why can't this also be the case for a public charter school? Adding this statement would give the power to the local school division, if they choose, to establish a charter school to serve the need of a specific geographic area (as stated on p. 1).

Many counties in Virginia a quite large and they have specific communities who could use additional educational options like a charter school. It does not seem logical for a school division to be forced to have a charter school enroll students from the entire county when the charter school is for a specific community.

Please consider this change to p. 9.

COMMENT 2: On p. 12, under Item "XIII: Transportation" can the Board of Education please list "other transportation source, such as public transportation" as a transportation option.

Many public charter schools in other states and jurisdictions have pupils use the public transportation system to go to and from school (sometimes with agreed upon discounted rates for pupils). While the way the policy is currently written does not prohibit a charter school having pupils use public transportation, I believe it is important for clarification that the Board of Education specifically list "other transportation source, such as public transportation" as on option. In particular, in urban areas where public transportation is an option for students, I believe it is important the Board of Education list this in its policy. The local school division and State Board of Education would still have the power when they review a charter application that proposes using public transportation as whether such an option is viable.

COMMENT 3: On p. 3 and 4, the process of reviewing a charter school application by the State Board of Education is described. **Can the Board of Education put a specific timeline for how long it will take the Board's Charter School Committee to review the application before scheduling a meeting with the applicant? My recommendation would be 30 business days.**

There are specific time limits listed for the Committee completing its report after the meeting with the applicant (10 business days), for when the full Board will meet to review the application (at the next scheduled Board meeting after the Committee's report is complete), and for when the Board notifies the applicant of its decision on the application (within five business days of the Board meeting).

I feel it is important for the charter school applicant and local school division that a specific time limit is given to the Committee for it to schedule a meeting with the applicant. The local school division will have its own deadline for when it requires the application, and it would be helpful to know what is the maximum time the state will take in reviewing an application. This will allow the applicant to gauge when they must submit the application to the state in order to have it returned from the state in time to submit to the local school division with the state Board of Education's comments.

COMMENT 4: On p. 15, the requirements regarding a school facility are described. Considering having a viable facility is often the most important factor as to whether a charter school can exist, **the Board of Education should list these facility requirements earlier in its policy. I would suggest making facilities a separate category with its own Roman numeral.**

COMMENT 5: Items "III: Goals and Educational Objectives" and "VI: Educational Program" ask for very similar information. Is it possible to combine these two separate items into one item? I would suggest "Goals, Objectives and Educational Program." Having this is one item would allow the applicant to more clearly list all of the curriculum and other educational matters in one place rather than repeating much of the information if these are left as two separate items. Or if they are separate items, put them back to back rather than having them be items III and then VI.

COMMENT 6: Some school divisions are including in their local policy on charter schools that charter school applicants that focus on "at risk" student populations be given priority. Does the state need to make a statement on at risk students being given a priority for a local school division to list that in their policy? Or does a local school division have the autonomy to give applicants that serve "at risk" students a priority? Can a local school division, without any mention of at-risk students getting a priority in the state policy, put in its policy a quota that "at least one-half of charter schools approved by the (school division) shall be designated for academically at-risk students?"

COMMENT 7: Some local school divisions are charging applicants an "application fee" (as much as $2,000 per application). Does the State Board of Education need to make a statement in its policy about local school divisions charging an application fee? Does state law allow local school divisions to charge such a fee?

COMMENT 8: Some local school divisions are adopting in their local policy on charter schools that the charter school can be charged for specific items, such as the cost of any disciplinary hearings on charter students. Does the State Board of Education need to clarify what items a local school division may charge a charter school? It seems without any statement from the State Board of Education, much may be left to a local school division to charge a charter school for many items. **I suggest at the least, the State Board of Education provide a general statement in its policy that a local school division cannot place charges on a charter school that are out of the ordinary from the functions of other public schools or that are exorbitant as compared to the costs found in other public schools.**

Thank you for your consideration of these comments.

Sincerely,

Eric Wolf Welch
Public High School Teacher
Development Team Director for Mason District Leadership Academy
A Proposed Public Charter School for Fairfax County, Virginia

From: Kristen Larson
Sent: Friday, December 31, 2010 10:02 AM
To: Wescott, Anne (DOE)
Subject: Comments to Charter School Applications

Dear Ms. Wescott,

Don Soifer from the Lexington Institute forwarded me Superintendent Wright's memo asking for comments about the Virginia Board of Education's application process for charter schools. I have been involved as a member of the Board of Directors with Patrick Henry School of Science and Arts, Virginia's first elementary charter school, for nearly two years. The comments I am submitting are my own opinions and thoughts and are not representative of the board at large. We didn't have time to convene and review this document over the holiday, so I am submitting these comments on my own.

Introduction - Technical Assistance: It would be extremely useful to have a VDOE contact who is well versed in charter school norms on a state and national level. Although I was not involved with PHSSA during the application process, I understand that the feedback the board received from VDOE and the feedback they received from our LEA, Richmond Public Schools, varied greatly. Because RPS ultimately had the authority to approve or reject the charter, the school followed the feedback from the LEA. Having a VDOE contact who could work more closely with the LEA and/or prospective charter to provide information to both parties about 'national charter school norms' would be helpful. Additionally, having a 'go-to' person on the state level who could provide ongoing technical support on state charter school funding opportunities, law changes, and any other state related information would be extremely helpful.

Section VII - Enrollment Policies: In regards to the mention about mid-year transfer students, this issue is somewhat complicated. Since the Virginia state code says that any for space available there must be "a lottery process on a space-available basis," it appears that the transfer policy of students mid-year would need to be the same as the initial enrollment process. To do anything different would seem to be in conflict with Virginia State Code. This does make the process of mid-year transfers somewhat complicated and cumbersome, so it may be something that the Board could examine more closely.

Section VIII - Economic Soundness: Obviously, the financial soundness of a charter is one of the most closely examined aspects of charter schools. In regards to technical assistance provided by VDOE, it would be helpful to receive details of what charter schools in Virginia are legally entitled to in regards to funding, and what other schools currently receive. That may include per pupil funding, Title I money, National School Lunch Program or any other local, state or federal education funding that the schools in the state use to operate their districts. Additionally, this would be a great area where VDOE could provide information on national or state norms for funding, if such data

exists. Knowing what different funding streams are available to charter schools and what the charter needs to do to access those funds, would make it easier to put together a comprehensive and realistic budget.

Section XVII - The wording in point #1 about the contract, I would recommend not placing so much of the responsibility of the contract and that time limit (of 9 months) on the charter school. While it makes sense for the charter to enter into a contract at least 9 months to opening this school, saying that the charter should "take all actions necessary" may imply that the school may enter into a contract with the LEA that would not be in the best interest of the school. Perhaps if the LEA and charter were having problems with their contract negotiations, could VDOE provide a mediator to move the process along.

Thank you for considering my opinions and for allowing public comment. I have called VDOE several times over the last two years and have always received useful information.

Please call me if you have any questions.

Sincerely,
Kristen Nye Larson

From: Roberta Snow
Sent: Friday, December 31, 2010 12:22 PM
To: Wescott, Anne (DOE)
Subject: Proposed Criteria and process for Charter Schools

Dear Anne Wescott,

Thank you for collecting comments on the proposed criteria and the state process for Charter Schools. I read the document several times and found it to be thorough and covered all the possible areas a charter applicant must consider.

I do have some comments:

A charter applicant will have to have a very close relationship with the chartering district to get much of the information. Sometimes the process takes time and it is the negotiation at the time of chartering that reveals some of the information (busing, space, food services, etc.)

The application process does not suggest anything about innovation or raising the bar for education. It seems to be the same old model. Use the same process, use the same data collection, and use the same structures. Is there any way to suggest that you might be looking for more alternative ways of meeting the needs of students? If not, why have these schools? Can the document itself be a bit loftier? Can it suggest that this is really hard work to start a school and there are wonderful opportunities to reach constituencies that are not being reached yet?

My biggest concern is that the applicant does not seem to get any help from anyone. Why not put together a charter help group from existing charter schools and advocates to help support applicants as they proceed through the process. Maybe a manual could be developed. Also some examples of successful charter applications could guide people.

To be honest, the document does not sound like the state WANTS more charter schools. I want it to be inviting AND comprehensive.

Again, thank you for asking for commentary.

Bobbi Snow, Co-founder
The Community Public Charter School

Debra Abadie, President
Virginia PTA
1027 Wilmer Avenue
Richmond, Virginia 23227-2419
State Office Telephone Contact:
804.264.1234
www.vapta.org

TO: Mrs. Anne D. Wescott, Assistant Superintendent for Policy and Communications

FROM: Virginia PTA

RE: BOE Superintendent's Memo #304-10 Criteria for Public Charter Schools

Date: December 31, 2010

Thank you for providing an opportunity for public comment on the proposed criteria, procedures, and application for public charter schools.

During the Charter School Committee meeting on September 22, 2010, Debi Abadie, Virginia PTA President, participated on the panel and provided information about the Virginia PTA's positions regarding Charter Schools. We appreciate the opportunity to make contributions to the Committee's criteria proposals as outlined in Memo 304-10.

During the fall of this year, our state membership (over 300,000 members), was given the opportunity to vote on a new Policy Statement regarding Charter Schools. This policy passed and is now part of our VA PTA Legislation Program.

We are very pleased to note that many of our Virginia PTA positions have become part of the BOE proposed Public Charter Schools Application Package (sections in compliance with our positions are in blue highlights):

- Parental and school staff involvement in the charter's design, implementation, and governance (Section IV. Evidence of Support)
- Meet the same state regulations as other public schools including required testing (SOLs), reporting and other requirements in the Standards of Accreditation unless these regulations are also waived for all public schools (Section III. Goals and Education Objectives)
- Provide adequate procedures for assessment and evaluation as required by the local school division (Section VI. Educational Program)
- Staffed by licensed professionals with adequate safeguards covering contract and employment provisions (Section XI. Employment Terms and Conditions)

- Maintain health and safety standards for all students (Section X. Management and Operations – School health services and Security services)
- Offer equal educational opportunity and be non-discriminatory (Section VII. Enrollment Policies)

While we are pleased that BOE has implemented many of our recommendations, we maintain our concerns regarding planned funding for Public Charter Schools as noted from our position below:

- No negative impact on the regular public school programs, including no diversion of funds

As President Abadie noted in her comments to the committee, Virginia PTA's position is that public charter schools should be supported by specifically allocated public funds that do not exceed, and do not divert, funding from traditional public schools. We are well aware that when per pupil state funding is taken from one school, programs in that school may need to be cut back or even eliminated for the students who remain at the public school.

We value the options that charter school may give some families, however, the importance of maintaining and upgrading public schools currently being operated by each school division should be evaluated by the Board of Education when considering approval of new schools.

In closing, while Virginia PTA and National PTA support educational choices for all students to include charter schools, public funding of any school should require fiscal responsibility and accountability in order to provide a quality public education for all Virginia children.

Respectfully submitted by: Debi Abadie, VA PTA President, president@vapta.org

Debbie Kilpatrick, VA PTA Education Chair, education@vapta.org

Arlington School Board

1426 N. Quincy Street Arlington, VA 22207

PHONE: (703) 228-6015 **FAX:** (703) 228-7640 **E-MAIL:** schoolbd@arlington.k12.va.us

December 9, 2010

Hon. Eleanor B. Saslaw, President
Board of Education
Commonwealth of Virginia
PO Box 2120
Richmond, VA 23218

Dear Ms. Saslaw: Eleanor

I understand the Board of Education is reviewing the recommendations of the Charter School Committee, and that the Board will receive public comments, review the public comments, and prepare the document for the Board's review and approval at the January meeting.

On behalf of the Arlington School Board, I am writing to set forth the position of our Board with regard to charter schools and the legal framework for such schools in the Commonwealth. It is important that it be clear to taxpayers who is accountable for the performance of schools funded with taxpayer dollars. Those who are accountable for student performance, i.e., local school boards, must have the authority to ensure that each school in the district performs as it should for the good of its students and the district as a whole.

- **The Arlington School Board strongly supports the principle of local control of public schools, including the oversight of public funds, the hiring of teachers and other employees, the setting of curricula and the selection of text materials.** The decision on whether to approve charter schools and under what circumstances should be left to local school boards, especially where those boards represent local opinion. (In this connection, we would point out that in the November 2 referendum on $102.8 million in bonds, 76.5% of the voters supported the School Board's proposal.) As an example of the wisdom of maintaining the responsibility for public education in the hands of local boards, and perhaps a reason for the high level of public satisfaction in Arlington Public Schools, we point to the wide variety of schools in APS that permit choice and experimentation:
    - Most schools have an Exemplary Project "theme" to their offerings. Some focus on the arts, or technology, or community schooling. Others have adopted the International Baccalaureate as their Exemplary Project. Some schools offer Spanish Immersion, one offers a "traditional" approach to education, one focuses on science.

  - We point to these themes as examples of the innovation at the local level that result when education is in the hands of local school boards.
- **Local school boards should have the sole prerogative to decide whether to create charter schools and other innovative programs, to evaluate their operations and effectiveness, to set educational standards and outcomes, and determine attendance, employment, fiscal, and other policies of such schools.**
- Charter Schools can:
  - lead to segregation by race, socioeconomic class or disability;
  - divert funds from regular public schools and focus funds on a select group of students at the cost of students in the public schools;
  - be exempted from certain state regulations, including, but not limited to, required testing, reporting and other requirements in the Standards of Accreditation, without offering the same waivers to regular public schools;
  - fail to guarantee equal access for all students;
  - be insulated from the challenges of special populations that the regular public schools encounter.
- **Research suggests that Charter Schools are no more likely to result in increased student performance than "regular" public schools:**
  - A November 2003 NAEP study found: "In reading, there was no measurable difference in performance between charter school students in the fourth grade and their public school counterparts as a whole. This was true, even though, on average, charter schools have higher proportions of students from groups that typically perform lower on NAEP than other public schools have. In reading, as in mathematics, the performance of fourth-grade students with similar racial/ethnic backgrounds in charter schools and other public schools was not measurably different.

    "There are also instances where the performance of students with shared characteristics differed. For example, among students eligible for free or reduced-price lunch, fourth-graders in charter schools did not score as high in reading or mathematics, on average, as fourth-graders in other public schools."*
  - An August 2006 NAEP study found:
    Reading
    "In the first phase of the combined analysis, all charter schools were compared to all public noncharter schools. The average charter school mean was 5.2 points lower than the average public noncharter school mean. After adjusting for multiple student characteristics, the difference in means was 4.2 points. Both differences were statistically significant. The adjusted difference corresponds to an effect size of 0.11 standard deviations. (Typically, about two-thirds of scale scores fall within one standard deviation of the mean.)

* http://nces.ed.gov/nationsreportcard/studies/charter/2005456.asp.

"In the second phase, charter schools were classified into two categories based on whether or not they were affiliated with a public school district (PSD). Each category was compared separately with public noncharter schools. On average, the mean scores for charter schools affiliated with a PSD were not significantly different from those of public noncharter schools. However, on average, the means of charter schools not affiliated with a PSD were significantly lower than the means for public noncharter schools, both with and without adjustment. The effect size of the adjusted difference was 0.17 standard deviations.

"In the third phase, the comparison between school types was restricted to schools having a central city location and serving a high-minority population, as there has been particular interest in those students who have traditionally not fared well in public schools. For this subset of 61 charter schools, there were no significant differences (for any fitted model) between the average charter school mean and the average public noncharter school mean.

Mathematics

"In the first phase of the combined analysis for mathematics, all charter schools were compared to all public noncharter schools. The average charter school mean was 5.8 points lower than the average public noncharter school mean. After adjusting for student characteristics, the difference in means was 4.7 points. Both differences were statistically significant. The adjusted difference corresponds to an effect size of 0.17 standard deviations.

"In the second phase, charter schools were classified into two categories based on whether or not they were affiliated with a PSD. Each category was compared separately with public noncharter schools. On average, the mean scores for charter schools affiliated with a PSD were not significantly different from those for public noncharter schools. However, on average, the means of charter schools not affiliated with a PSD were significantly lower than the means for public noncharter schools, both with and without adjustment. The effect size of the adjusted difference was 0.23 standard deviations.

"In the third phase, the comparison between school types was restricted to schools having a central city location and also serving a high-minority population. There was a significant difference between the average of all charter school means and the average of public noncharter school means, as well as between charter school means not affiliated with a PSD and public noncharter school means. In both cases, the difference favored public noncharter schools, and the effect size of the adjusted difference was 0.17 standard deviations. However, there were no significant

differences between the average of public noncharter school means and the means of charter schools affiliated with a PSD."[†]

- A June 13, 2010, issue of *Newsweek* that reported on the nation's top high schools (among them, all four of Arlington's high schools), revealed: "...it came as a bit of a shock to the community of educational reformers last year when a study by Stanford University's Center for Research on Educational Outcomes (CREDO) found that 37 percent of charter schools produce academic results that are worse than public schools, while only 17 percent perform significantly better."[‡]

As others have noted, **Charter schools encourage social fragmentation rather than common experiences.** An important historic role of the public school has been to provide a meeting place and common experiences for students from a variety of cultures and homes. With the increasing diversity in our society, it is more important than ever to have students from different backgrounds in classrooms and playgrounds together. Charter schools lead to balkanization as groups create schools to reflect their special interests. Charter schools make a priority of the private benefit determined by the parents, rather than balancing and accommodating both the individual and public good.

Furthermore, the basis of the charter schools model is that competition between schools will solve the problems of K-12 education. **A market-driven model of educational competition does not encourage the sharing of successful strategies, whereas in education, cooperation is a necessity.** Rather than shaming schools into improving, we should be supporting low-achieving schools partnering with successful schools. As one superintendent has noted, "continuing to advocate a politically-motivated, market-driven system of education will only delay the real work that needs to be done to help our public schools grow."[§]

For all of these reasons, we hope the Board of Education and the Commonwealth of Virginia will continue to recognize the importance of local control of education and not undermine the efforts of jurisdictions like Arlington by imposing new laws about charter schools.

Sincerely,

Libby Garvey
Chair

[†] http://nces.ed.gov/nationsreportcard/pubs/studies/2006460.asp.
[‡] http://www.newsweek.com/2010/06/13/understanding-charter-schools.html.
[§] http://www.aasa.org/SchoolAdministratorArticle.aspx?id=7336.

Chesapeake Public Schools

Office of the Superintendent

Post Office Box 16496
Chesapeake, Virginia 23328

December 21, 2010

Mrs. Anne D. Wescott
Assistant Superintendent
Division of Policy and Communications
Virginia Department of Education
P.O. Box 2120
Richmond, Virginia 23218

Dear Mrs. Wescott:

Thank you for allowing me to comment on the proposed criteria for Charter Schools.

The *Code of Virginia* defines and addresses the requirements for establishing charter schools in VA Code 22.1-212. The Code provides clear direction for the charter school application process including specific direction on the process for reviewing such applications. Additionally, the Code grants the local school board the authority to grant or deny a public charter school application or to revoke or fail to renew a charter agreement. Further, the Code ensures that the decision of the local school board shall be final and not subject to appeal.

The School Board of the City of Chesapeake opposes any changes to this current legislation that ensures the authority of the local school board with respect to charter school applications.

Sincerely,

James T. Roberts

James T. Roberts, Ph.D.
Superintendent

Lexington Institute

December 28, 2010

The Honorable Anne D. Wescott
Assistant Superintendent for Policy and Communications
Virginia Department of Education
PO Box 2120
Richmond, VA 23218

Dear Anne:

I hope you are enjoying a relaxing and enjoyable holiday break. I've just finished reviewing the November 18 draft criteria and procedures for charter school applications. As always, I deeply appreciate the thoroughness and thoughtful approach you and the board have taken with the draft, which I expect to lead to some very useful policies. I did want to impose briefly on your time to offer some suggestions on the draft that I hope you and the board find useful.

1. Section XVII (3) of Attachment C requires that "school leadership of the public charter school be retained on contract no later than six months prior to the opening date of the school." I believe this is too long, and would severely limit the ability of charter schools to hire many of the best leaders who would likely still be working at their prior job, which loyalty and professionalism would prevent them from leaving before the school year concludes. I believe that 60 days prior to the opening of the school would be adequate, a shorter period extremely helpful to attracting the highest-quality candidates.

2. A specific timeframe for Board of Education review of applications would be a helpful addition. While I appreciate the board's commitment to thoroughness, would specifying a 60-day review for the state committee be unreasonable? Articulating a specific timeframe would be helpful for both applicants and potential authorizers.

3. Section VIII of Attachment C requires applications to include five-year budgets and cash flow projections. While state law permits the approval of five year charters, some school division policies continue to limit the term of charters to three years. While I believe this is within their authority to do so, it seems counterproductive for state policies to require five year budgets and projections where school division policy limits charters to three years.

1600 Wilson Boulevard, Suite 900 • Arlington, VA 22209 • Phone: 703.522.5828 • Fax: 703.522.5837
http://www.lexingtoninstitute.org email: mail@lexingtoninstitute.org

4. At least one school division has circulated a draft policy that would require a $2,000 application fee for all charter applicants. While some application fee seems fair to me, this unusually high cost strikes me as difficult to justify, and I wonder if the state board would consider providing guidance on what constitutes a reasonable application fee?

5. The technical assistance provision under attachment B is very helpful. I would also suggest adding, to the end of the first sentence in that section, "or the school division, and its leadership, from communicating with any applicant or potential applicant." Questions over this question have actually come up and this clarification would prove useful.

6. There appears to be some tension between two sections in statute that perhaps the state board could help clarify. Section 221.212.8 (4) requires a statement of need "in a school division.... or in a geographic area within a school division... as the case may be." This is aptly noted in the third bullet point in Attachment A of the draft.

   It also refers (6) to, "if appropriate, a tailored admission policy that meets the specific mission or focus of the public charter school and is consistent with all federal and state laws and regulations."

   It appears clear to me that any student desiring to apply for an available slot in a charter school in their school division may do so. But what obligations, if any, would either charter school or authorizer have to provide transportation for students living within the district but outside the attendance zone or cluster in which the charter may be located?

   I would suggest that it would be helpful, particularly for school divisions that currently utilize attendance zones or clusters, for the board to offer specific guidance as to options available to potential authorizers regarding what forms of tailored attendance policy are allowable. I fear that to remain mute on this important point will lead to confusion which may jeopardize progress for high-quality applicants.

I deeply appreciate your and the Board's commitment to getting this right, and this draft is an excellent start. I would be happy to discuss these questions anytime, or any others you might have.

Happy New Year.

Best regards,

Don Soifer
Executive Vice President

cc: Secretary Robinson

Powhatan Branch NAACP
Post Office Box 601
Powhatan, VA 23139

December 31, 2010

Mrs. Anne D. Wescott, assistant superintendent
for policy and communications,
by e-mail Anne.Wescott@doe.virginia.gov;
by phone at (804) 225-2403; or by FAX at (804) 225-2524.

Dear Mrs. Wescott:

The Powhatan Branch NAACP, even not in an urban area has great concerns for the matter of Charter Schools, in Virginia in particular. Our local schools have been to the point of having to call in the US Justice Department for issues related to race in our schools, we find this effort of Charter Schools are not in the best interest of all children. Not to change the subject, we realize the winds of times are changing but they have not change that much in this century to even warrant a suggested change that Virginia be removed from the Section 5 pre-clearance section of the voting rights act, which will also have an adverse impact on schools and re-seregration.

The proposed changes in the laws of charter schools is not supported by the NAACP to say why are we just interested in educating some of the Virginia's children and not all of them in the Public school system supported by the State of Virginia. It would appear this would be a conflict of interest for the State of Virginia to support charter schools and not just public schools where all of the children are being educated. I would think there are enough private schools that could handle those who would want to pay for an education. This method of supporting public charter schools is just another method of the public being forced to support private schools since everyone in the system cannot attend. We support the *Promotion of High Standards for All Public Schools as outlined in our Resolution to support Public Education.*

The Powhatan Branch NAACP has concerns as they relate to any process that would remove children out of the public school system. Our unit in Powhatan supports the Resolution confirmed at the October 2010 National Board in which we have attached. It is hard not to support Federal and State government that will support the public school system that has produced President, Governors, legislators, public school teachers, Nobel Prize winners, inventors, lawyers, physicians and others.

Public Notice: Proposed Criteria, Procedures, and Application for Public Charter Schools

The Board of Education is seeking public comment on its proposed criteria, procedures, and application for public charter schools, pursuant to HB 1390 and SB 737. Section 22.1-212.9 of the Code of Virginia requires all applications for public charter schools to be submitted to the Virginia Board of Education for review prior to submission of the application to the local school board. The Board is required to establish procedures of receiving and reviewing applications, and making a determination as to whether the application meets approval criteria developed by the Board. The Code further provides that the Board's review would examine such applications for feasibility, curriculum, financial soundness, and other objective criteria as the Board may establish, consistent with existing state law.

The Board of Education authorized 30 days of public comment on the proposed criteria (attached) at its November 18, 2010 meeting. The Board is expected to review the public comment and take final action on this item at its meeting on January 13, 2011.

The Powhatan Branch NAACP has concerns as they relate to any process that would remove children out of the public school system. Our unit in Powhatan supports the Resolution confirmed at the October 2010 National Board in which we have *attached.* It is hard not to support Federal and State government that will support the public school system that has produced Presidents, Governors, legislators, public school teachers, Nobel Peace Prize winners, inventors, lawyers, physicians and others that have contributed to society. If public schools staff was more friendly and inviting parents would want to participate in their children's education, which would make a difference.

The Harlem School Zone is what everyone seems to be shooting for when they talk about charter schools, however, these comments were recently published.

"All children who live in the zone have access to many of its services, including after-school programs, asthma care, precollege advice and adult classes for expectant parents, called Baby College. The organization has placed young teaching assistants, known as peacemakers, in many of the elementary school classrooms in the area and poured money into organizing block associations, helping tenants buy buildings from the city, and refurbishing parks and playgrounds. By linking services, the program aims to improve on early-childhood programs like Head Start, whose impact has been shown to evaporate as children age. "

How many of Virginia's Public Schools provides this type of support?

R. J. Vaughan, President

Board of Education Agenda Item

Item: H. **Date:** January 13, 2011

Topic: Final Review of the Application for College Partnership Laboratory Schools and the Procedures for Receiving, Reviewing, and Ruling on College Partnership Laboratory School Applications

Presenter: Ms. Anne D. Wescott, Assistant Superintendent for Policy and Communications

Telephone Numbers: (804) 225-2403 **E-Mail Addresses** Anne.Wescott@doe.virginia.gov

Origin:

___ Topic presented for information only (no board action required)

__X__ Board review required by
- __X__ State or federal law or regulation
- ____ Board of Education regulation
- _____ Other: _____

__X__ Action requested at this meeting

___ Action requested at future meeting: _____

Previous Review/Action:

___ No previous board review/action

__X__ Previous review/action
- dates November 18, 2010
- actions First review

Background Information: HB 1389 (Peace) and SB 736 (Newman), passed by the 2010 General Assembly and signed by the Governor, added sections to the *Code of Virginia* providing for the establishment of college partnership laboratory schools.

Section 23-299 of the *Code of Virginia* defines a college partnership laboratory school as "a public, nonsectarian, nonreligious school established by a public institution of higher education that operates a teacher education program approved by the Virginia Board of Education (Board)." College partnership laboratory schools are public schools established by contract between the governing board of a college partnership laboratory school and the Board of Education. The members of the governing board are selected by the institution of higher education establishing the college partnership laboratory school.

As provided in § 23-299 of the *Code*, a college partnership laboratory school may be established to:

- Stimulate the development of innovative programs for preschool through grade twelve students;
- Provide opportunities for innovative instruction and assessment;
- Provide teachers with a vehicle for establishing schools with alternative innovative instruction and school scheduling, management, and structure;
- Encourage the use of performance-based educational programs;
- Establish high standards for both teachers and administrators;
- Encourage greater collaboration between education providers from preschool to the postsecondary level; and
- Develop models for replication in other public schools.

Section 23-299.4 of the Code specifies the essential elements of the proposed school plan. It says:

§ 23-299.4. College partnership laboratory school application.

A. Any public institution of higher education operating within the Commonwealth and having a teacher education program approved by the Board of Education may submit an application for formation of a college partnership laboratory school.

B. Each college partnership laboratory school application shall provide or describe thoroughly all of the following essential elements of the proposed school plan:

1. An executive summary;

2. The mission and vision of the proposed college partnership laboratory school, including identification of the targeted student population;

3. The proposed location of the school;

4. The grades to be served each year for the full term of the contract;

5. Minimum, planned, and maximum enrollment per grade per year for the term of the contract;

6. Background information on the proposed founding governing board members and, if identified, the proposed school leadership and management team;

7. The school's proposed calendar and sample daily schedule;

8. A description of the academic program aligned with state standards;

9. A description of the school's educational program, including the type of learning environment (such as classroom-based or independent study), class size and structure, curriculum overview, and teaching methods;

10. The school's plan for using internal and external assessments to measure and report student progress in accordance with the Standards of Learning;

11. The school's plans for identifying and successfully serving students with disabilities, students who are English language learners, students who are academically behind, and gifted students, including but not limited to compliance with applicable laws and regulations;

12. A description of co-curricular and extracurricular programs and how they will be funded and delivered;

13. Plans and timelines for student recruitment and enrollment, including lottery procedures if sufficient space is unavailable;

14. The school's student disciplinary policies, including those for special education students;

15. An organization chart that clearly presents the school's organizational structure, including lines of authority and reporting between the governing board, staff, any related bodies (such as advisory bodies or parent and teacher councils), Board of Education, and any external organizations that will play a role in managing the school;

16. A clear description of the roles and responsibilities for the governing board, the school's leadership and management team, and any other entities shown in the organization chart;

17. A staffing chart for the school's first year and a staffing plan for the term of the contract;

18. Plans for recruiting and developing school leadership and staff;

19. The school's leadership and teacher employment policies, including performance evaluation plans;

20. A plan for the placement of college partnership laboratory school pupils, teachers, and employees upon termination or revocation of the contract;

21. Explanation of any partnerships or contractual relationships central to the school's operations or mission;

22. The school's plans for providing transportation, food service, and all other significant operational or ancillary services;

23. Opportunities and expectations for parent involvement;

24. A detailed school start-up plan, identifying tasks, timelines, and responsible individuals;

25. Description of the school's financial plan and policies, including financial controls and audit requirements;

26. A description of the insurance coverage the school will obtain;

27. Start-up and five-year budgets with clearly stated assumptions;

28. Start-up and first-year cash-flow projections with clearly stated assumptions;

29. Evidence of anticipated fundraising contributions, if claimed in the application;

30. A sound facilities plan, including backup or contingency plans if appropriate; and

31. Assurances that the college partnership laboratory school (i) is nonreligious in its programs, admission policies, employment practices, and all other operations and (ii) does not charge tuition.

The purposes of the college partnership laboratory school application are to present the proposed school's academic and operational vision and plans, demonstrate the applicant's capacities to execute the proposed vision and plans, and provide the Board of Education a clear basis for assessing the applicant's plans and capacities….

Section 23-299.5 of the *Code* requires the Board to establish procedures for receiving, reviewing, and ruling on applications. It says:

§ 23-299.5. Review of college partnership laboratory school applications.

A. The Board of Education shall establish procedures for receiving, reviewing, and ruling upon applications and shall make a copy of any such procedures available to all interested parties upon request. If the Board finds the application is incomplete, the Board shall request the necessary information from the applicant. The Board of Education's review procedures shall establish a review committee that may include experts with the operation of similar schools located in other states.

B. To provide appropriate opportunity for input from parents, teachers, and other interested parties and to obtain information to assist the Board of Education in its evaluation of a college partnership laboratory school application, the Board of Education may establish a procedure for public notice, comment, or hearings on such applications.

The Board of Education's College Partnership Laboratory School Committee met on June 23, July 21, September 2, September 22, and November 17.

At the June 23 meeting, staff presented background information to the committee, and the committee reviewed the work plan.

At the July 21 and the September 2 meetings, the committee held a forum with national experts on college laboratory schools:

- Dr. John Jacobson, Dean, Teachers College, Ball State University
- Dr. Jay McGee, Principal and Chair of the Burris Laboratory School Ball State University, and Board of Directors, National Association of Laboratory Schools
- Mr. Glen Thomas, Principal and Director, A.D. Henderson University (Elementary and Middle) school, Florida Atlantic University, and Board of Directors, National Association of Laboratory Schools

- Dr. Beverly Warren, Interim Provost and Vice President for Academic Affairs, Virginia Commonwealth University

At the September 22 meeting, the committee held forums with provosts and deans of Virginia institutions of higher education. The provosts were:

- Dr. Bill Gannon, Radford University, representing the Vice President for Academic Affairs
- Dr. Jerry Benson, Provost and Senior Vice President, James Madison University
- Dr. Weldon Hill, Provost and Vice President for Academic Affairs, Virginia State University

The deans were:

- Dr. Susan Magliaro, Associate Dean for Professional Education and Director, School of Education, Virginia Tech
- Dr. Phil Wishon, Dean of the School of Education, James Madison University
- Dr. Patricia Shoemaker, Dean of the College of Education and Human Development, Radford University
- Dr. Rebecca Kneedler, Associate Dean for Academic Partnerships and International Initiatives, University of Virginia

The November 17 meeting was a joint meeting with the Charter School Committee to review the draft procedures and the application package.

Summary of Major Elements: The criteria are found in Attachment A.

The procedures for receiving, reviewing, and ruling upon an application are found in Attachment B. They include:

- Directions for submitting the application;
- Technical assistance provided upon request;
- Receipt of the application and determination of whether the application is complete;
- Review of the application by the College Partnership Laboratory School Committee;
- Review by the Board of Education;
- Execution of the contract after an application is approved;
- Renewal of an application; and
- Revocation.

The application package, found in Attachment C, includes the following:

- Applicant fact sheet;

- Narrative information
  - ✓ Executive summary;
  - ✓ Mission and vision;
  - ✓ Educational program;
  - ✓ Governance;
  - ✓ Management structure;

- ✓ Financial and operational information;
- ✓ Placement plan;
- ✓ Other requirements;
- ✓ Assurances; and

- Certification.

The Board of Education authorized a 30-day period of public comment on the criteria, procedures, and application. No comments were received.

Superintendent's Recommendation: The Superintendent of Public Instruction recommends that the Board of Education approve the criteria, procedures, and application package.

Impact on Resources: The impact on resources is not expected to be significant.

Timetable for Further Review/Action: The Department of Education will notify school divisions, Virginia public institutions of higher education with teacher preparation programs, and other individuals and organizations on the Board of Education's list-serv, and will post the criteria, procedures, and application package on the department's Web site.

Attachment A

Virginia Board of Education

Criteria for College Partnership Laboratory Schools

- The mission and vision of the proposed college partnership laboratory school, including identification of the targeted student population.
- The proposed location of the school.
- The grades to be served each year for the full term of the contract.
- Minimum, planned, and maximum enrollment per grade per year for the term of the contract.
- Background information on the proposed founding governing board members and, if identified, the proposed school leadership and management team.
- The school's proposed calendar and sample daily schedule.
- A description of the academic program aligned with state standards.
- A description of the school's educational program, including the type of learning environment (such as classroom-based or independent study), class size and structure, curriculum overview, and teaching methods.
- The school's plan for using internal and external assessments to measure and report student progress in accordance with the Standards of Learning.
- The school's plans for identifying, evaluating and successfully serving students with disabilities, students who are English language learners, students who are academically behind, and gifted students, including but not limited to compliance with applicable laws and regulations.
- A description of co-curricular and extracurricular programs and how they will be funded and delivered.
- Plans and timelines for student recruitment and enrollment, including lottery procedures if sufficient space is unavailable.
- The school's student disciplinary policies, including those for special education students.
- An organization chart that clearly presents the school's organizational structure, including lines of authority and reporting between the governing board, staff, any related bodies (such as advisory bodies or parent and teacher councils), Board of Education, and any external organizations that will play a role in managing the school.

- A clear description of the roles and responsibilities for the governing board, the school's leadership and management team, and any other entities shown in the organization chart.
- A staffing chart for the school's first year and a staffing plan for the term of the contract.
- Plans for recruiting and developing school leadership and staff.
- The school's leadership and teacher employment policies, including performance evaluation plans.
- A plan for the placement of college partnership laboratory school pupils, teachers, and employees upon termination or revocation of the contract.
- Explanation of any partnerships or contractual relationships central to the school's operations or mission.
- The school's plans for providing transportation, food service, and all other significant operational or ancillary services.
- The school's leadership and teacher employment policies, including performance evaluation plans.
- A plan for the placement of college partnership laboratory school pupils, teachers, and employees upon termination or revocation of the contract.
- Explanation of any partnerships or contractual relationships central to the school's operations or mission.
- The school's plans for providing transportation, food service, and all other significant operational or ancillary services.
- Opportunities and expectations for parent involvement.
- A detailed school start-up plan, identifying tasks, timelines, and responsible individuals.
- Description of the school's financial plan and policies, including financial controls and audit requirements.
- A description of the insurance coverage the school will obtain.
- Start-up and five-year budgets with clearly stated assumptions.
- Start-up and first-year cash-flow projections with clearly stated assumptions.
- Evidence of anticipated fundraising contributions, if claimed in the application.
- A sound facilities plan, including backup or contingency plans if appropriate.
- Assurances that the college partnership laboratory school (i) is nonreligious in its programs, admission policies, employment practices, and all other operations and (ii) does not charge tuition.

Attachment B

Virginia Board of Education

Procedures for Receiving, Reviewing, and Ruling on Virginia College Partnership Laboratory School Applications

Submission of the Application

Applicants must adhere to the form prescribed by the Board of Education. The format provided addresses the application elements included in § 23-299.4, *Code of Virginia.* Applications for college partnership laboratory schools should be submitted to the Board at least 12 months prior to the proposed opening day of the school.

Applications may be submitted electronically or by hard copy to the Executive Assistant for the Board of Education.

Technical Assistance

Prior to submitting an application, the applicant may seek technical assistance from the Virginia Department of Education (VDOE). VDOE staff will work with each applicant on a case-by-case basis in order to address individual needs.

Receipt of the Application

When the Board of Education receives an application, VDOE staff, on behalf of the Board, will send an acknowledgement to the applicant. VDOE will determine, on behalf of the Board, that an application is complete when all of the required application elements have been submitted in the required format.

If the application is deemed incomplete, the VDOE will notify the applicant within 15 business days of receipt of the application and request that the outstanding information be submitted within 30 business days of such notification to the applicant that additional information is needed.

If an applicant fails to respond to the initial request for additional information, the VDOE will contact the applicant and make a second request for any outstanding information. In this communication, VDOE will indicate that the application will not be considered for review by the Board's College Partnership Laboratory School Committee until all information is received. The applicant may withdraw his application at anytime during the initial process and resubmit it at a later time.

If the application is deemed complete by VDOE, it will be sent to the Board's College Partnership Laboratory School Committee members. The committee may appoint an advisory work group to review the application and provide the committee with technical expertise. The work group could include individuals with experience in the operation of similar schools located in other states.

The application will be posted on the VDOE Web site, and the committee will request public comment.

Review by the College Partnership Laboratory School Committee

The applicant and applicable representatives of the institution of higher education affiliated with the applicant must attend a meeting with the Board committee.

All meetings of the Board's College Partnership Laboratory School Committee are publicly noticed at: http://www.doe.virginia.gov/boe/committees_standing/index.shtml#lab and all meetings are open to the public.

At the meeting with the College Partnership Laboratory Committee, these representatives will be asked to discuss the contents of the application and address the committee members' questions. The committee shall request public comment or schedule public hearings on the application to provide appropriate opportunity for input from parents, teachers, and other interested parties and to obtain information to assist the Board in its evaluation of a college partnership laboratory school application.

Action by the Board of Education

Following the meeting of the applicant with the Board's College Partnership Laboratory Committee, VDOE will assist the committee in preparing a report to the full Board with the recommendation of the committee as to whether the application should be approved. A copy of the committee's report will be provided to the applicant within ten business days of the committee meeting. The report will be presented to the full Board at the next regularly scheduled Board meeting. The applicant will be requested to attend this meeting to answer questions or make comments on the application.

At this meeting, the Board will take one of the following actions:

1. The Board will render a decision that the application meets the Board's approval criteria.

   Following action by the Board, the applicant will be formally notified by the VDOE of the Board's action within five business days. Concurrent with its notification to the applicant, the applicable public institution of higher education will also receive a formal notification of the Board's action.

2. The Board will render a decision that the application does not meet the Board's approval criteria.

   The Board will provide the applicant with an opportunity to address any deficiencies in the application. The applicant may also withdraw his application at any time and resubmit it at a later date.

   Following action by the Board, the applicant will be formally notified by the VDOE of the Board's action within five business days. Concurrent with its notification to the applicant, the applicable public institution of higher education will also receive a formal notification of the Board's action.

Contract Execution

Section 23-299.4, *Code of Virginia,* states that "Within 90 days of approval of a college partnership laboratory school application, the Board of Education and the governing board of the approved school

shall execute a contract that clearly sets forth the academic and operational performance expectations and measures by which the college partnership laboratory school will be judged and the administrative relationship between the Board of Education and the college partnership laboratory school, including each party's rights and duties…."

As soon as the Board takes action to approve a college partnership laboratory school application, VDOE staff, on behalf of the Board, will begin working with the applicant on the terms of the contract so that it can be executed within the 90 day statutory timeline.

Renewals

Section 23-299.7, *Code of Virginia*, states that "A college partnership laboratory school may be approved or renewed for a period not to exceed five school years. The renewal application shall include the following:

1. A report on the progress made in achieving goals, objectives, programs, and performance standards for the students, and other conditions and terms specified by the Board upon granting initial approval.

2. A concise and clearly written financial statement which discloses the costs of administration, instruction, and other spending categories for the school. This information must be submitted on forms prescribed by the Board and must provide the Board with sufficient information that will enable the Board and the public to compare costs with those of other schools or comparable organizations."

Revocations

The Board may revoke a contract if the college partnership laboratory school does any of the following or otherwise fails to comply with the *Code* requirements:

1. Commits a material and substantial violation of any of the terms, conditions, standards, or procedures required by the *Code* or the contract;

2. Fails to meet or make sufficient progress toward the performance expectation set forth in the contract;

3. Fails to meet generally accepted standards of fiscal management; or

4. Substantially violates any material provision of law or regulation from which the college partnership laboratory school was not exempted.

If the Board revokes or does not renew a college partnership laboratory school contract, the Board will state the reasons for the action in a Board resolution. The Board's decision to approve or disapprove a college partnership laboratory application or to revoke or fail to renew an agreement is final and is not subject to appeal.

The applicant may, however, submit an application again at a later date.

Attachment C

Virginia Board of Education

Virginia College Partnership Laboratory Schools - Application Package

Applicant Fact Sheet

The applicant fact sheet provides basic information concerning the nature of the proposed college partnership laboratory school, contact information for the applicant, and the applicant's prior experience. The fact sheet contains the following information:

- Public institution of higher education partner with a teacher education program approved by the Board of Education ;
- Applicant's contact information, including name, title, affiliation, address, telephone number, and e-mail address;
- Name of the proposed school;
- If the institution of higher education has identified a facility suitable for a school, information about the location and ownership of the facility;
- Proposed opening date of the school;
- Grades to be served by the school;
- A description of any specialized focus (such as, but not limited to: science, technology, engineering, mathematics [STEM]; at-risk students; special education; career and technical education; and gifted education), if applicable;
- A description of any proposed partnerships between the school and a school division, if applicable;
- A description of any prior experience with establishing college partnership laboratory schools and/or similar schools, including the name of the applicable state, the name of the school, years of operation, contact information, and (if the school is no longer operating) the reasons for closure; and
- A description of the prior or relevant experience of the members of the governing board.

Narrative Information

I. **Executive Summary**: This summary must be included and must address the need for the college partnership laboratory school and its goals and objectives.

II. **Mission and Vision**: The mission and vision of the proposed college partnership laboratory school, including identification of the targeted student population, must be included. The following components must be addressed:

1. A description of the college partnership laboratory school's mission and how it is consistent with the Standards of Quality, the Standards of Learning, and the Board of Education's *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (Reference: § 23-299.2, *Code of Virginia*);

2. A description of any specific area of academic concentration; and

3. Information about the college partnership laboratory school's anticipated student population.

III. **Educational Program**: The goals and objectives to be achieved by the college partnership laboratory school must meet or exceed the Standards of Learning.

The following components must be addressed:

1. A description of the college partnership laboratory school's academic program and how it is aligned with state standards;

2. An overview of the curriculum, and teaching methods to be used at the college partnership laboratory school and a description of the learning environment and instructional strategies to be used at the college partnership laboratory school, including scientifically research-based instructional strategies to ensure that student engagement and achievement are occurring;

3. A plan for using internal and external assessments to measure and report student progress in accordance with the Standards of Learning;

4. A description of plans for identifying, evaluating, and serving students who are: students with disabilities; English Language Learners (ELL); academically at-risk; and gifted and talented. Such plans must comply with state and federal laws and regulations;

5. An explanation of the procedures for corrective actions needed in the event that pupil performance at the college partnership laboratory school falls below the standards outlined in the Board of Education's *Regulations Establishing Standards for Accrediting Public Schools in Virginia*, 8 VAC 20-131-310;

6. Information regarding the minimum and maximum enrollment per grade for the full term of the contract as well as class size and structure for each grade. (Reference: Standards of Quality in § 22.1-253.13:2, *Code of Virginia*);

7. The proposed calendar and sample daily schedule;

8. A description of the performance-based goals and related measurable educational objectives to be achieved by the school. (Reference: § 22.1-253.13:1, *Code of Virginia*);

9. For each grade or course in the college partnership laboratory school, a detailed description of how the Standards of Learning and the corresponding Standards of Learning Curriculum Framework will be used as the foundation for curricula to be implemented. Include how the goals and objectives of the curriculum will meet or exceed the Standards of Learning, address student performance standards, relate to state and federal assessment standards, and include measurable student outcomes;

10. A description of the school's assessment plan, which would include how student performance data will be used to monitor and improve achievement and how program effectiveness will be measured. The applicant must also provide benchmark data for how student achievement will be measured over a specified period of time. The applicant must address how these data will be established and documented in the first year of operation and how the data will be measured over the successive four-year period before the contract of such school is renewed by the Board of Education. The benchmark data should address targets for student improvement to be met in each year;

11. A description of any assessment other than the Standards of Learning that may be used to measure progress during the academic year;

The following components should be addressed if applicable to the college partnership laboratory school:

12. A detailed description of any alternative accreditation plan, in accordance with the Board of Education's *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8 VAC 20-131-280), that the college partnership laboratory school will request from the Board of Education for approval; and

13. A general description of any incentives/partnerships that the college partnership laboratory school intends to have with school divisions to enhance both the educational program of the college partnership laboratory school and the partnering school division(s).

14. If the college partnership laboratory school plans to utilize virtual learning in its educational program a description of how virtual learning will be used and estimates of how many students will participate;

IV. **Governance**: The following components must be addressed:

1. Background information on the proposed founding governing board members, and, if identified, the proposed school leadership and management team. (Reference § 23-299.2 B, *Code of Virginia*);

2. A chart that clearly presents the school's organizational structure, including lines of authority and reporting between the governing board, staff, any related bodies (such as advisory bodies

or parent and teacher councils), the Board of Education, and any external organizations that will play a role in managing the school;

3. A clear description of the roles and responsibilities for the governing board, the school's leadership and management team, and any other entities shown in the organization chart. This includes a description of the functions, roles, and duties of the governing board and its proposed composition and bylaws. The description must detail the specific role of the governing board in the operation and oversight of the college partnership laboratory school; and

4. A description of the governing board's relationship with the affiliated public institution of higher education and its Board of Visitors, any local school boards, parents, and community organizations.

V. **Management Structure**: The following components must be addressed:

1. Staffing chart for the school's first year and a staffing plan for the term of the contract;

2. Plans for recruiting and developing school leadership and staff;

3. A description of the academic/professional experience/qualifications of the college partnership laboratory school's leadership and proposed faculty who will teach at the school;

4. An assurance that the applicant will meet the conditions in § 23-299.8, *Code of Virginia*, which state that teachers "working in a college partnership laboratory school shall hold a license issued by the Board of Education or, in the case of an instructor in the higher education institution's Board-approved teacher education program, be eligible to hold a Virginia teaching license. Teachers working in a college partnership laboratory school shall be subject to the requirements of §§ 22.1-296.1 and 22.1-296.2 applicable to teachers employed by a local school board;"

5. The school's leadership and teacher employment policies, including performance evaluation plans. Such performance evaluation plans must be consistent with the policies of the institution of higher education;

6. A plan that addresses the qualifications of the teachers and administrators at the college partnership laboratory school, including compliance with state law and regulation regarding Board of Education licenses and endorsements. (Reference § 22.1-299.2 B, *Code of Virginia*, for information regarding the employment of professional, licensed personnel);

7. A plan to provide high quality professional development programs (Reference: § 22.1-253.13:5, *Code of Virginia*);

8. Provisions for the evaluation of staff at regular intervals;

9. Provisions for a human resource policy for the school that is consistent with state and federal law;

10. Notification to all school employees of the terms and conditions of employment;

11. An explanation of any partnerships or contractual relationships central to the college partnership laboratory school's operations or mission, including information regarding any partnerships with school divisions to provide educational or ancillary services. (Contractual relationships include procuring the services of an education management organization, food services, transportation, school health services, custodial services, and security services. Reference: § 23-299.2.C, *Code of Virginia.*);

12. Information and materials indicating how parents, the community, and other stakeholders were involved in developing the application for the college partnership laboratory school;

13. A description of how parental involvement will be used to support the educational needs of the students, the school's mission and philosophy, and its educational focus;

14. Plans and timelines for student recruitment and an open enrollment process for any child who is a resident of the Commonwealth, including lottery procedures if sufficient space is unavailable. (Please include a description of the lottery process to be used to determine school enrollment on a space-available basis and a time line for when the lottery process will begin for the first academic year of enrollment and when parents will be notified of the outcome of the lottery process. Reference: § 23-299.2, *Code of Virginia*);

15. Any enrollment-related policies and procedures that address special situations, such as the enrollment of siblings and children of faculty and founders and the enrollment of nonresident students, if applicable;

    Consistent with a college partnership laboratory school's mission and purpose that may address special populations of students, the applicant must indicate how to ensure that community outreach has been undertaken so that special populations are aware of the formation of the college partnership laboratory school and that enrollment is open to all students residing in the Commonwealth. Pursuant to § 23-299.2, *Code of Virginia*, enrollment in a college partnership laboratory school "shall be open to any child who is deemed to reside within the Commonwealth through a lottery process on a space-available basis. A waiting list shall be established if adequate space is not available to accommodate all students whose parents have requested to be entered in the lottery process. Such waiting list shall also be prioritized through a lottery process and parents shall be informed of their student's position on the list.

16. A model Student Code of Conduct policy that addresses student behavior, discipline and participation in school activities. The plan should identify the role of teachers and administrators in discipline and mentoring. The plan must also identify disciplinary policies related to students with disabilities;

17. A detailed school start-up plan, identifying tasks, timelines, and responsible individuals;

18. A description of co-curricular and extracurricular programs and how these programs will be funded and delivered; and

19. A general description of any operational incentives/partnerships that the college partnership laboratory school intends to have with school divisions to enhance both the educational program of the college partnership laboratory school and the partnering school division(s).

VI. **Financial and Operations Information**: The following components must be addressed:

1. A description of the college partnership laboratory school's financial plan, including financial controls and audit requirements in accordance with generally accepted accounting principles;

2. Start-up and five-year budgets with clearly stated assumptions and information regarding projected revenues and expenditures;

3. Start-up and five-year cash flow projections with clearly stated assumptions and indications of short- and long-term sources of revenue;

4. Description of anticipated fundraising contributions, if applicable;

5. The types of insurance and the levels of coverage sought. Types of insurance include, but are not limited to, general liability, health, and property;

6. A justification for each type of insurance coverage sought and evidence that the applicant has consulted with the affiliated public institution of higher education to ensure that the level of coverage is satisfactory;

7. A sound facilities plan, including backup or contingency plans. Facilities information includes, but is not limited to:

   - The provision of suitable instructional space;
   - Provisions for library services;
   - Provisions for the safe administration and storage of student records and medications;
   - Information regarding compliance with building and fire codes and compliance with the federal Americans with Disabilities Act (ADA);
   - General information on emergency evacuation plans;
   - Information regarding site location and preparation;
   - The structure of operation and maintenance services; and
   - Financial arrangements for facilities, including any lease arrangements with school divisions or other entities and whether debt will be incurred.

8. A description of whether transportation services will be provided. If transportation is to be provided, indicate whether the school will contract for transportation with the local education agency or another entity, and specify whether transportation will be provided to all students attending the school;

9. A description of transportation services for students with disabilities. (§ 22.1-221, *Code of Virginia*, states: that each "disabled child enrolled in and attending a special education program provided by the school division pursuant to any of the provisions of § 22.1-216 or § 22.1-218 shall be entitled to transportation to and from such school or class at no cost if such

transportation is necessary to enable such child to obtain the benefit of educational programs and opportunities"); and

10. A description of food service operations and all other operational or ancillary services to be provided.

VII. **Placement Plan**: The following components must be addressed:

1. Identification of a member of the school's leadership who will serve as a single point of contact for all activities that may need to take place in order for the school to close including, but not limited to, the transfer of students to another school, the management of student records, and the settlement of financial obligations;

2. A notification process for parents/guardians of students attending the school and teachers and administrators of the closure date;

3. A notification process to parents/guardians of students attending the college partnership laboratory school of alternative public school placements within a set time period from the date that the closure is announced;

4. Provisions for ensuring that student records are provided to the parent or guardian or another school identified by the parent or guardian within a set time period. If the student transfers to another school division, provisions must be made for the transfer of the student's record to the school division to which the student transfers upon the request of that school division. (Reference: § 22.1-289 of the *Code of Virginia*);

5. A placement plan for school employees that details the level of assistance to be provided within a set period of time from the date of closure; and

6. A close-out plan related to financial obligations and audits, the termination of contracts and leases, and the sale and disposition of assets within a set period of time from the date of closure. The plan shall include the disposition of the schools' records and financial accounts upon closure.

VIII. Other Requirements: The following components must be addressed:

1. A listing of all waivers to state regulations needed for the college partnership laboratory school at the time of its opening. This does not preclude a college partnership laboratory school from requesting additional waivers once the school is operational;

2. A description of any collaborative partnerships that may be made with public school divisions to enhance opportunities for all Virginia students, from preschool to postsecondary. (Reference: § 23-299.2 F, *Code of Virginia*); and

3. A description of all agreements that the applicant may need in the contract with the Board of Education related to the release of the college partnership laboratory school from state regulations, consistent with the requirements in § 23-299.2 and § 23-299.3, *Code of Virginia.*

IX. **Assurances**: By signing and submitting this application, the applicant expressly assures the Board that:

1. No tuition will be charged to students;

2. The college partnership laboratory school is nonreligious in its admission policies, employment practices, and all other operations;

3. The proposed college partnership laboratory school shall operate in accordance with all applicable federal and state laws and regulations and constitutional provisions prohibiting discrimination on the basis of disability, race, creed, color, gender, national origin, religion, ancestry, or need for special education services. (Reference: § 23-299.2, *Code of Virginia*);

4. The college partnership laboratory school's policies and procedures will be in compliance with the federal *Family Educational Rights and Privacy Act* (FERPA) and records retention schedules consistent with guidance issued by the Library of Virginia;

5. The college partnership laboratory school programs, services, and activities will operate in accordance with all applicable federal and state laws and regulations, including the Virginia Freedom of Information Act;

6. The applicant will take all actions necessary to ensure that its governing board will enter into a contract with the Board of Education no later than nine months prior to the opening date of the college partnership laboratory school;

7. If approved to open a college partnership laboratory school, the leadership of the school will be retained on contract no later than six months prior the opening date of the school;

8. The applicant will meet the condition in § 23-299.8, *Code of Virginia*, which states that teachers "working in a college partnership laboratory school shall hold a license issued by the Board of Education or, in the case of an instructor in the higher education institution's Board-approved teacher education program, be eligible to hold a Virginia teaching license. Teachers working in a college partnership laboratory school shall be subject to the requirements of §§ 22.1-296.1 and 22.1-296.2 applicable to teachers employed by a local school board."

9. The applicant and members of the governing board will disclose any conflicts of interest, which would include a personal interest in any transactions involving the college partnership laboratory school and information regarding the frequency by which such disclosures will be made. (Reference: § 2.2-3114, *Code of Virginia*). This includes any relationships that parties may have with vendors performing services at the school. As part of this assurance, the applicant must assure knowledge of the Virginia Conflict of Interest Act and the Virginia Public Procurement Act;

Certification

The applicant must certify that to the best of his/her knowledge, the information in this application is correct, that the applicant has completed all elements of the application, and that the applicant understands the assurances given in this application and will comply with them.

Board of Education Agenda Item

Item: I. **Date:** January 13, 2011

Topic: Final Review to Reaffirm the 2009 Recommendations to the Standards of Quality

Presenter: Ms. Anne D. Wescott, Assistant Superintendent for Policy and Communications

Telephone Number: (804) 225-2403 **E-Mail Address:** Anne.Wescott@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by
- __X__ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

__X__ Action requested at this meeting

___ Action requested at future meeting: _____

Previous Review/Action:

____ No previous board review/action

__X__ Previous review/action
- date November 18, 2010
- action First review

Background Information: Article VIII, § 2 of the *Constitution of Virginia* requires the Board of Education to determine and prescribe Standards of Quality for the public schools in Virginia. The *Constitution* says:

> **Article VIII, § 2. Standards of quality; State and local support of public schools.**
>
> Standards of quality for the several school divisions shall be determined and prescribed from time to time by the Board of Education, subject to revision only by the General Assembly. The General Assembly shall determine the manner in which funds are to be provided for the cost of maintaining an educational program meeting the prescribed standards of quality, and shall provide for the apportionment of the cost of such program between the Commonwealth and the local units of government comprising such school divisions. Each unit of local government shall provide its portion of such cost by local taxes or from other available funds.

The *Code of Virginia* requires the Board of Education to review the Standards of Quality every two years. Section 22.1-18.01 of the *Code* says, in part:

> **§ 22.1-18.01. Biennial review of the standards of quality required; budget estimates.**
>
> A. To ensure the integrity of the standards of quality, the Board of Education shall, in even-numbered years, exercise its constitutional authority to determine and prescribe the standards, subject to revision only by the General Assembly, by reviewing the standards and either (i) proposing amendments to the standards or (ii) making a determination that no changes are necessary.…

Summary of Major Elements: During 2009, the Board conducted a review of the Standards of Quality and proposed policy directions, options for revisions to the Standards of Quality, and issues for further study, as follows:

Policy Directions

- Enhance the Standards of Quality so that the Commonwealth's basic foundation program for K-12 public education reflects a comprehensive educational program of the highest quality.
- Provide clarity and greater transparency in SOQ funding with the goal of maintaining the Commonwealth's commitment to public education funding at the state and local levels and encouraging a continued emphasis on school-based instructional services.
- Provide greater flexibility to school divisions in using noninstructional personnel funding for instructional support services.
- Support the appropriateness of establishing ratio standards for individual categories of "support service" positions as is the current practice used for instructional personnel.
- Advocate against permanent structural changes to the Standards of Quality that result in decreased funding for K-12 public education.
- Begin building a more comprehensive basic foundation program by including in the SOQ gifted, special education, and career and technical staffing ratios and certain incentive programs that have become core components of K-12 educational programs statewide and currently funded in the Appropriation Act.
- Set priorities for the Board's unfunded SOQ recommendations from previous years so that these instructional staffing standards can be fully implemented in future years.
- Begin to address the Board's school leadership priorities of requiring a principal in every school and increasing the number of assistant principals in schools with the greatest need.
- Mitigate the perverse incentive of reducing a school division's special education funding when it mainstreams students with disabilities into general education classrooms or uses Response to Intervention (RtI) and/or other instructional supports to reduce the number of students identified as needing special education services.

- Provide additional policy guidance and direction to school divisions offering alternative or nontraditional educational programs, such as the Individual Student Alternative Education Plan (ISAEP).

SOQ Language Revisions to Address Policy Directions

- Codify the Board of Education's recommendations that were included in the 2009 Appropriation Act providing flexibility in the use of existing funds for hiring reading specialists, mathematics specialists, data coordinators, and instruction of English language learners.
- Codify the provisions of the Early Intervention Reading Initiative and the Algebra Readiness program by including them in the Standards of Quality and requiring all school divisions to provide these interventions with funding currently appropriated for these incentive programs.
- Codify the Appropriation Act provision that the Standards of Quality includes a minimum of 58 licensed, full-time instructional positions per 1,000 students, including instructional positions for special education, gifted education, and career and technical education.
- Codify the staffing standards for special education (currently in regulations), gifted education (currently in the Appropriation Act), and career and technical education (currently in regulations).
- Provide school divisions the flexibility to deploy assistant principals to the schools with the greatest needs, so long as they employ a sufficient number of assistant principals divisionwide to meet the total number required in the current SOQ staffing requirement.
- Define the categories of personnel who make up "support services," and specify how those positions are funded, and require transparency in the use of funds by mandating divisions publicly report the state and local amounts budgeted and expended for each category.
- Permit school divisions to use funds for support services to provide additional instructional services and include instructional services as a separate category to be reported publicly.

Issues for Further Study

As resources become available, conduct a comprehensive study of the following complex funding issues and report the findings to the Governor and General Assembly for consideration as part of the Standards of Quality:

- The feasibility of converting the prevailing costs for each major category of the "support services" positions into ratios (for example, based on positions per 1,000 students), and including ratios for some or all of the categories in the Appropriation Act.
- The feasibility of establishing alternative staffing approaches to provide school divisions with additional instructional resources to address identified needs. This could include ratios based on positions per 1,000 students for assistant principals, school counselors, and library-media specialists that would reduce funding "cliffs." It could also include assigning weights for students who may be at-risk and require additional support, including special education services, services to English language learners, and services to disadvantaged students.

- The feasibility of creating a special education incentive fund or other funding methodologies to mitigate the perverse incentive of reducing a school division's special education funding when it mainstreams students with disabilities into general education classrooms or uses Response to Intervention (RtI) and/or other instructional supports to reduce the number of students identified as needing special education services.
- The feasibility of updating technology staffing ratios, taking into consideration the increased role of technology in instruction, assessment, and operations since staffing standards were first established in the SOQ.
- The feasibility of updating career and technical education staffing ratios, taking into consideration the (i.) implementation of new curricular pathways that require high-tech equipment and specialized instruction and (ii.) anticipated increased enrollments in CTE courses given the newly created standard technical and advanced technical diplomas.

The Board of Education authorized a 30-day period of public comment. Twenty-five comments were received. Eighteen comments supported reduced caseloads for speech-language pathologists, and three commenters requested an extension of the public comment period to enable additional speech-language pathologists to send comments to the Board. Three comments addressed support positions. One comment was in support of including provisions to improve teacher quality in the SOQ. One comment was in support of reading specialists and the Early Intervention Reading Initiative. One comment was in support of the Virginia Preschool Initiative and the At-Risk Add-On initiative. One comment addressed the adequacy of the current SOQ funding and supported additional funding for school divisions.

It should be noted that the Board first recommended a reduction in speech-language pathologists' caseload to the 2004 General Assembly, and has continued to make that recommendation. The Board has also recommended requiring a full-time principal in every elementary school, increasing the number of full-time assistant principals, requiring reading specialists and mathematics specialists, requiring data coordinators, and increasing staffing for students with visual impairments. The total cost of these additional positions is estimated to be $214.6 million for FY 2012, based on calculations made in July 2009. The cost to reduce the speech-language pathologists' caseloads from 68 to 60 is estimated to be $5.2 million. However, funding has not been appropriated to support the cost of these additional positions.

As a first step toward implementing the 2009 recommendations, legislation is proposed in Attachment A which would do the following:

- Codify the Board of Education's recommendations that are included in the current Appropriation Act, which provides flexibility to school divisions to use existing funds for hiring reading specialists, mathematics specialists, data coordinators, and for the instruction of English language learners:

    1. Data Coordinators/Instructional Technology Resource Teachers – School divisions are permitted to use SOQ funds to employ: a) instructional technology resource teachers (required by the SOQ); or b) a data coordinator position; or c) a data coordinator/instructional resource teacher blended position;

2. Reading Specialists - School divisions may use the state Early Reading Intervention initiative funding provided from the Lottery Proceeds Fund to employ reading specialists (provided for in the SOQ) to provide the required reading intervention services;

3. Mathematics Specialists - School divisions may use the state Standards of Learning Algebra Readiness initiative funding provided from the Lottery Proceeds Fund to employ mathematics teacher specialists (provided for in the SOQ) to provide the required mathematics intervention services; and

4. Services to English Language Learners - School divisions may use funds from the SOQ Prevention, Intervention, and Remediation account to employ additional English Language Learner teachers to provide instruction to identified limited English proficiency students;

- Provide school divisions with flexibility to deploy assistant principals to the schools with the greatest need, so long as they employ a sufficient number of assistant principals divisionwide to meet the total number required in the current SOQ staffing requirement;

- Define the categories of personnel who make up "support service positions;" and

- Permit school divisions to use state and local funds for support services to provide additional instructional services.

Superintendent's Recommendation: The Superintendent of Public Instruction recommends that the Board of Education approve the reaffirmation of the 2009 SOQ recommendations and the proposed legislation.

Impact on Resources: The impact on resources is expected to be minimal.

Timetable for Further Review/Action: The Department of Education will prepare and submit a report to transmit the Board's recommendations and the proposed legislation to the Governor and to the 2011 General Assembly.

Proposed Amendments to the Standards of Quality

§ 22.1-253.13:2. Standard 2. Instructional, administrative, and support personnel.

A. The Board shall establish requirements for the licensing of teachers, principals, superintendents, and other professional personnel.

B. School boards shall employ licensed instructional personnel qualified in the relevant subject areas.

C. Each school board shall assign licensed instructional personnel in a manner that produces divisionwide ratios of students in average daily membership to full-time equivalent teaching positions, excluding special education teachers, principals, assistant principals, counselors, and librarians, that are not greater than the following ratios: (i) 24 to one in kindergarten with no class being larger than 29 students; if the average daily membership in any kindergarten class exceeds 24 pupils, a full-time teacher's aide shall be assigned to the class; (ii) 24 to one in grades one, two, and three with no class being larger than 30 students; (iii) 25 to one in grades four through six with no class being larger than 35 students; and (iv) 24 to one in English classes in grades six through 12.

Within its regulations governing special education programs, the Board shall seek to set pupil/teacher ratios for pupils with mental retardation that do not exceed the pupil/teacher ratios for self-contained classes for pupils with specific learning disabilities.

Further, school boards shall assign instructional personnel in a manner that produces schoolwide ratios of students in average daily memberships to full-time equivalent teaching positions of 21 to one in middle schools and high schools. School divisions shall provide all middle and high school teachers with one planning period per day or the equivalent, unencumbered of any teaching or supervisory duties.

D. Each local school board shall employ with state and local basic, special education, gifted, and career and technical education funds a minimum number of licensed, full-time equivalent instructional personnel for each 1,000 students in average daily membership (ADM) as set forth in the appropriation act. Calculations of kindergarten positions shall be based on full-day kindergarten programs. Beginning with the March 31 report of average daily membership, those school divisions offering half-day kindergarten with pupil/teacher ratios that exceed 30 to one shall adjust their average daily membership for kindergarten to reflect 85 percent of the total kindergarten average daily memberships, as provided in the appropriation act.

E. In addition to the positions supported by basic aid and in support of regular school year programs of prevention, intervention, and remediation, state funding, pursuant to the appropriation act, shall be provided to fund certain full-time equivalent instructional positions for each 1,000 students in grades K through 12 who are identified as needing prevention, intervention, and remediation services. State funding for prevention, intervention, and remediation programs provided pursuant to this subsection and the appropriation act may be used to support programs for educationally at-risk students as identified by the local school boards.

To provide flexibility in the provision of mathematics intervention services, school divisions may use the Standards of Learning Algebra Readiness initiative funding and the required local matching funds to employ mathematics teacher specialists to provide the required mathematics intervention services. School divisions using the Standards of Learning Algebra Readiness initiative funding in this manner shall employ only instructional personnel licensed by the Board of Education.

F. In addition to the positions supported by basic aid and those in support of regular school year programs of prevention, intervention, and remediation, state funding, pursuant to the appropriation act, shall be provided to support 17 full-time equivalent instructional positions for each 1,000 students identified as having limited English proficiency.

To provide flexibility in the instruction of English Language Learners who have limited English proficiency and who are at risk of not meeting state accountability standards, school divisions may use state and local funds from the Standards of Quality Prevention, Intervention, and Remediation account to employ additional English Language Learner teachers to provide instruction to identified limited English proficiency students. Using these funds in this manner is intended to supplement the instructional services provided in this section. School divisions using the Standards of Quality Prevention, Intervention, and Remediation funds in this manner shall employ only instructional personnel licensed by the Board of Education.

G. In addition to the full-time equivalent positions required elsewhere in this section, each local school board shall employ the following reading specialists in elementary schools, one full-time in each elementary school at the discretion of the local school board.

To provide flexibility in the provision of reading intervention services, school divisions may use the state Early Reading Intervention initiative funding and the required local matching funds to employ reading specialists to provide the required reading intervention services. School divisions using the Early Reading Intervention initiative funds in this manner shall employ only instructional personnel licensed by the Board of Education.

H. Each local school board shall employ, at a minimum, the following full-time equivalent positions for any school that reports fall membership, according to the type of school and student enrollment:

1. Principals in elementary schools, one half-time to 299 students, one full-time at 300 students; principals in middle schools, one full-time, to be employed on a 12-month basis; principals in high schools, one full-time, to be employed on a 12-month basis;

2. Assistant principals in elementary schools, one half-time at 600 students, one full-time at 900 students; assistant principals in middle schools, one full-time for each 600 students; assistant principals in high schools, one full-time for each 600 students;

School divisions that employ a sufficient number of assistant principals to meet this staffing requirement may assign assistant principals to schools within the division according to the area of greatest need, regardless of whether such schools are elementary, middle, or secondary;

3. Librarians in elementary schools, one part-time to 299 students, one full-time at 300 students; librarians in middle schools, one-half time to 299 students, one full-time at 300 students, two full-time at 1,000 students; librarians in high schools, one half-time to 299 students, one full-time at 300 students, two full-time at 1,000 students;

4. Guidance counselors in elementary schools, one hour per day per 100 students, one full-time at 500 students, one hour per day additional time per 100 students or major fraction thereof; guidance counselors in middle schools, one period per 80 students, one full-time at 400 students, one additional period per 80 students or major fraction thereof; guidance counselors in high schools, one period per 70 students, one full-time at 350 students, one additional period per 70 students or major fraction thereof; and

~~***5. Clerical personnel in elementary schools, part-time to 299 students, one full-time at 300 students; clerical personnel in middle schools, one full-time and one additional full-time for each 600 students beyond 200 students and one full-time for the library at 750 students; clerical personnel in high schools, one full-time and one additional full-time for each 600 students beyond 200 students and one full-time for the library at 750 students.***~~

I. Local school boards shall employ five full-time equivalent positions per 1,000 students in grades kindergarten through five to serve as elementary resource teachers in art, music, and physical education.

J. Local school boards shall employ two full-time equivalent positions per 1,000 students in grades kindergarten through 12, one to provide technology support and one to serve as an instructional technology resource teacher.

To provide flexibility, school divisions may use the state and local funds for instructional technology resource teachers to employ a data coordinator position, an instructional technology resource teacher position, or a data coordinator/instructional resource teacher blended position. The data coordinator position is intended to serve as a resource to principals and classroom teachers in the area of data analysis and interpretation for instructional and school improvement purposes, as well as for overall data management and administration of state assessments. School divisions using these funds in this manner shall employ only instructional personnel licensed by the Board of Education.

K. Local school boards may employ additional positions that exceed these minimal staffing requirements. These additional positions may include, but are not limited to, those funded through the state's incentive and categorical programs as set forth in the appropriation act.

L. A combined school, such as kindergarten through 12, shall meet at all grade levels the staffing requirements for the highest grade level in that school; this requirement shall apply to all staff, except for guidance counselors, and shall be based on the school's total enrollment; guidance counselor staff requirements shall, however, be based on the enrollment at the various school organization levels, i.e., elementary, middle, or high school. The Board of Education may grant waivers from these staffing levels upon request from local school boards seeking to implement experimental or innovative programs that are not consistent with these staffing levels.

M. School boards shall, however, annually, on or before January 1, report to the public the actual pupil/teacher ratios in elementary school classrooms by school for the current school year. Such actual ratios shall include only the teachers who teach the grade and class on a full-time basis and shall exclude resource personnel. School boards shall report pupil/teacher ratios that include resource teachers in the same annual report. Any classes funded through the voluntary kindergarten through third grade class size reduction program shall be identified as such classes. Any classes having waivers to exceed the requirements of this subsection shall also be identified. Schools shall be identified; however, the data shall be compiled in a manner to ensure the confidentiality of all teacher and pupil identities.

N. Students enrolled in a public school on a less than full-time basis shall be counted in ADM in the relevant school division. Students who are either (i) enrolled in a nonpublic school or (ii) receiving home instruction pursuant to § 22.1-254.1, and who are enrolled in public school on a less than full-time basis in any mathematics, science, English, history, social science, career and technical education, fine arts, foreign language, or health education or physical education course shall be counted in the ADM in the relevant school division on a pro rata basis as provided in the appropriation act. Each such course enrollment by such students shall be counted as 0.25 in the ADM; however, no such nonpublic or home

school student shall be counted as more than one-half a student for purposes of such pro rata calculation. Such calculation shall not include enrollments of such students in any other public school courses.

O. Each local school board shall provide those support services that are necessary for the efficient and cost-effective operation and maintenance of its public schools.

For the purposes of this title, unless the context otherwise requires, "support ~~service~~ ***services positions*** shall include ~~services provided by the school board members; the superintendent; assistant superintendents; student services (including guidance counselors, social workers, and homebound, improvement, principal's office, and library media positions); attendance and health positions; administrative, technical, and clerical positions; operation and maintenance positions; educational technology positions; school nurses; and pupil transportation positions~~ ***the following:***

1. Executive policy and leadership positions, including school board members, superintendents, and assistant superintendents;

2. Fiscal and human resource positions, including fiscal and audit operations, human resources, and procurement;

3. Student support positions, including (i) social workers and social work administrative positions; (ii) guidance administrative positions not included in subdivision H 4; (iii) homebound administrative positions supporting instruction; (iv) attendance support positions related to truancy and drop-out prevention; and (v) health and behavioral positions, including school nurses and school psychologists;

4. Instructional personnel support, including professional development positions and library and media positions not included in subdivision H 3;

5. Technology professional positions not included in subsection J;

6. Operation and maintenance positions, including facilities; pupil transportation positions; operation and maintenance professional and service positions; and security service, trade, and laborer positions;

7. Technical and clerical positions for fiscal and human resources, student support, instructional personnel support, operation and maintenance, administration, and technology; and

8. School-based clerical personnel in elementary schools, part-time to 299 students, one full-time at 300 students; clerical personnel in middle schools, one full-time and one additional full-time for each 600 students beyond 200 students and one full-time for the library at 750 students; clerical personnel in high schools, one full-time and one additional full-time for each 600 students beyond 200 students and one full-time for the library at 750 students.

~~***Pursuant to the appropriation act, support***~~ ***Support*** services shall be funded from basic school aid ~~***on the basis of prevailing statewide costs***~~ ***pursuant to the appropriation act***.

School divisions may use the state and local funds for support services to provide additional instructional services.

P. Notwithstanding the provisions of this section, when determining the assignment of instructional and other licensed personnel in subsections C through J, a local school board shall not be required to include full-time students of approved virtual school programs.

Public Comments on the Standards of Quality

From: Jim Regimbal
Sent: Tuesday, November 23, 2010 1:24 PM
To: Wescott, Anne (DOE)
Subject: teacher quality

Anne,

I thought a lot of good issues were covered in the "First Review to Reaffirm the 2009 Recommendations to the Standards of Quality" document attached for public comment. However, one critical item is missing – the issue of teacher quality. Many studies, including one I participated in 2004 with NCSL found that teacher quality is the single most important controllable factor in improving student outcomes. I believe there should at least be further study as to how we improve teacher quality in our classrooms. I know it is a complex issue, but one that we should constantly strive to improve – whether by increasing standards, improving working conditions, or pay.

James J. Regimbal Jr.
Fiscal Analytics, Ltd.
1108 E. Main St. Suite 1108
Richmond, VA 23219

From: jbm
Sent: Tuesday, November 30, 2010 2:57 PM
To: Wescott, Anne (DOE)
Cc: State NAACP; Rev. Vines
Subject: Public Comments on Quality of Standards

Ms. Wescott,
There are two areas of interest at this time:
* Will each school division be allowed to develop the ***"certain incentive"*** programs according to the needs of the school population ? If so,
will these programs be funded by state or local sources?
* Will new guidelines be developed (changed) as far as determining ratios.....especially when support personnel are included in establishing a balance ?

Virginia State Conference NAACP Education Committee
Mrs. Janette Boyd Martin, Chair

From: Dawnita Truitt-Calderone
Sent: Tuesday, November 30, 2010 3:22 PM
To: Wescott, Anne (DOE)
Subject: Speech/Language services in Public Schools.

Dear Ms. Wescott,

I understand that a request has been made for comments on the topic of Speech Pathologists' current caseloads in Virginia.

My comment:

Students who have Speech/Language Developmental Delays and/or Disorders are given the opportunity for interventions in schools because of the dramatic impact such impairments have on their lives. Academic impact and social-personal impact is sometimes so pervasive as to have secondary impact on a child's self-esteem. Behavioral issues arising out of inability to communicate and interact are not uncommon.

Currently, Speech/Language Impaired children are by necessity getting their "services" in groups of 4 or 5 (or more) at a time due to the high caseload cap set at 68 students per therapist. Intervention strategies and therapy utilized for children in large groups such as this are notably less effective. An analogy, if you can imagine - it is like receiving a regular non-therapeutic dosage of needed medication. Remediation of Speech & Language "Developmental Delays" are slowed, giving more time for deeper academic impact. Disordered language and speech skills are even more impacted because of the nature of their issues from the outset. Finally, children with Cerebral Palsy, Apraxia, Stuttering and other severe comprehensive disorders are the most needy and even these children are having diminished quality of service because they are seen in large groups and in the classroom. (In the past, our caseloads had a cap of no more than 58 to 60 students per therapist ~ children were on average in groups of 2 to 3 seen twice weekly/30 minutes per session. In cases of great severity, children are seen up to 5 times weekly for 30 minute sessions.)

Thank you for your consideration in this matter impacting our students with Speech-Language Impairment!

Sincerely,

D. Truitt-Calderone, MS CCC-SLP
Speech Language Pathologist
Mt. View Elementary School

From: Troilen Seward
Sent: Monday, December 06, 2010 10:14 AM
To: Wescott, Anne (DOE)
Subject: Response to SOQ Review

Dear Ms. Saslaw and Members fo the Virginia Board of Education:

The Virginia State Reading Association (VSRA) strongly supports the Board of Education's proposal to reaffirm its 2009 proposed policy directions. We are, of course, particularly supportive of including the EIRI proposal in the SOQ. We see this, however, as only an interim step in providing reading specialists in the schools of the Commonwealth. Our ultimate goal is to have reading specialists in a 1:1000 ratio included in the Standards of Quality.

We are indeed aware of the difficult economic times and understand the necessity of the interim measure. We do indeed express our sincere appreciation to you for your efforts and persistence in trying to improve reading support for the students in this Commonwealth. We can only hope for funding in the future!

Sincerely,
Troilen G. Seward
Legislative Liaison, VSRA

From: Patricia Shaffer-Gottschalk
Sent: Tuesday, December 14, 2010 11:55 AM
To: Wescott, Anne (DOE)
Subject: public comment on SOQ

I am writing with both questions and concerns regarding Board of Education Agenda Item G, dated November 18, 2010, inviting public comment. I refer specifically to "Issues for Further Study", bullet 2, where it states "... feasibility of establishing alternative staffing approaches to provide school divisions with additional instructional resources to address identified needs. This could include ratios based on positions per 1,000 students for assistant principals, school counselors, and library-media specialists that would reduce funding cliffs." The meaning and ramifications of this is very unclear. Would you please explain its meaning?

Furthermore, our school division superintendent commented at the last school board meeting that the DOE was considering reclassifying library media specialist positions to **administrative,** rather than **instructional.** While the media specialist certainly has many administrative functions in managing a school media center, the vast majority of my time is spent in instruction. I teach 35 classes weekly, each 45-minutes in length. The requirement of holding a valid teacher license with add-on endorsements in library media witness to the fact that the DOE has traditionally considered the library media as primarily an educator. This is correct and accurate. To consider the library media specialist as administrator is inaccurate.

I thank you for your time and consideration.

Patricia Shaffer-Gottschalk
Tussing Library Media Specialist
5501 Conduit Road
Colonial Heights, VA 23834

From: Mark Webster
Sent: Tuesday, December 14, 2010 12:02 PM
To: Wescott, Anne (DOE)
Subject: Seeking Public Comment: Standards of Quality

Anne Wescott,

I wanted to offer public comment pertaining to the SOQ. I am probably worried about nothing, but I noticed on the Board of Education agenda for November 18 it stated there was consideration of the "feasibility of establishing alternative staffing approaches to provide school divisions with additional instructional resources to address identified needs. This could include ratios based on positions per 1,000 students for assistant principals, school counselors, and library-media specialists. . ."

I wasn't sure if the intent was to increase staffing for larger schools, or rather have smaller schools (with student numbers less than 100) share these professionals? Hopefully it is the former. However, I wanted to offer public comment on the matter, because I was reading this in the context of the current discussion ("65% rule") surrounding the state reclassifying library media positions as "administrative" rather than "instructional." The library media positions are highly instructional, and should be recognized as instructional because of their integral role within the educational mission of each school, and the powerful role these positions play for information literacy, reading, instructional media and technology, and research skills. Also, practically speaking I would argue it is essential that each school have a dedicated media specialist, regardless of the size of the school or its population.

Thank you for allowing public comment on the matter, it is appreciated!

Sincerely yours,

Mark Webster, Director of Technology and Learning
Colonial Heights Public Schools

From: Torrijos
Sent: Wednesday, December 22, 2010 7:09 PM
To: Wescott, Anne (DOE)
Subject: Speech-Language Pathology caseloads

Ms. Wescott,
I am writing to convey the need for SLP's to have a caseload maximum in the state of VA. Many of us working in the schools have over 65 students, ranging from the most severe 2 year olds with multiple impairments to 21 year old students struggling to transition out of the public school system. Many of these students have very specific disorders, requiring specialized services in individual therapy. After being a Speech-Language Pathologist for over 13 years, I have come to realize that many students on the public school clinician's caseload make very slow progress. It is my sincerest belief that slow progress is largely due to ineffective therapy, conducted in groups of 3 students or more. I work in a relatively small district where one of our clinicians has a caseload of 83! The administration refuses to hire more staff, essentially telling each of us that there is nothing we can do. Unfortunately, I don't predict much progress for many of the students on our caseloads simply due to the large numbers served in groups.

I have often wondered if Speech-Language Pathologists actually belong in the school setting. I entered this profession to help individuals communicate effectively. When I am expected to serve high numbers of students, I feel that the quality of my therapy suffers, and my students make less progress. It is then my responsibility to explain the lack of progress to the parents, without expressing the true reason. No clinician would be allowed to actually say, "I'm sorry Mrs. Jones. Bobby didn't make a lot of progress this year in speech and will have to work on the same goals next year. You see, I have so many kids on my caseload that I had to see Bobby in a group with 4 other kids. Sometimes, we weren't able to actually address his speech goals because one of the other students had a lot of behavior issues, and another student stuttered, requiring me to do a lot of instruction with him. Hopefully, we'll be able to work a little more on his goals next year. What? He's being retained this year? That's a shame. I hope next year will be better for everyone."

There's a reason so many SLP's are leaving the school setting. We need support! We need it from our administration, our district, and our state Department of Education. We need caseload maximums that are reasonable (my suggestion would be 60), and we need the new SLP guidelines! SLP's are typically a forgotten group in the school setting. Although we are small, we are no less important. I fully expect my state DOE to support us as we try to help so many kids!

Thank you for your efforts,
Tanya Torrijos
Speech-Language Pathologist
Powhatan County Public Schools

From: Martha Ruelle
Sent: Wednesday, December 22, 2010 7:42 PM
To: Wescott, Anne (DOE)
Subject: SLP caseload

Dear Ms. Wescott
I hope the BOE understands that the 65:1 Speech Language Pathologist caseload in public schools negatively impacts the quality of services available. It means that students with communication disorders in public schools have to be seen in larger groups than if the caseloads were smaller. That means the students' problems are not resolved as quickly. It also means that it is difficult for school diviisions to attract and retain the best qualified SLPs when they have to cope with such a large caseload. The caseload numbers must be capped at a lower number.
Martha Ruelle, M.S. CCC-SLP
Speech Language Pathologist
Fairfax County Public Schools

From: Suealexandria
Sent: Thursday, December 23, 2010 12:29 AM
To: Wescott, Anne (DOE)
Subject: Caseload

I am a very lucky SLP. I work in a non-public facility for emotionally disturbed children. I have been there for 10 years. My case load is only 12. The first 8 years I was full-time and had a caseload of 25. Two years ago I became part-time. All of our therapy is one-on-one, never group. I am very happy with my job, and the low caseload is one of the reasons. I'm able to handle the therapy, meetings, and paperwork comfortably. I wish other SLP's could experience, at least once, a low and reasonable caseload, as it gives one a sense of completeness and thoroughness.

December 22, 2010

Dear Ms. Wescott and the Virginia Board of Education:

I am glad to hear that the Board of Education is reconsidering the maximum caseload size for speech-language pathologists working in the public schools in the state of Virginia. I have worked as an SLP for 5 and a half years in Virginia public schools, and I believe my students' progress is greatly dependent on my caseload size at any given time. As a caseload approaches 55-65, it becomes nearly impossible to give students' the individual and small group time where their progress is maximized. Instead, it is necessary to work with students in large groups and it becomes a challenge to tackle the goals of all the students in a group (which may range from a student who stutters, a student working on using correct speech sounds, to a student working on increasing vocabulary skills).

I can also say from personal experience that a higher caseload correlates with lower job satisfaction and higher stress level. During the two years that my caseload was between 60-65 students, I consistently worked 60-70 hours per week in order to ensure that IEPs and eligibility paperwork were completed and that my students continued to receive high quality therapy services. If the state of Virginia hopes to retain qualified speech-language pathologists, it is important to set a maximum caseload number that is reasonable. I believe a reasonable caseload number is between 40-50.

Thank you for considering this issue.

Sincerely,

Heather Lantz, MA, CCC-SLP

From: Amie Teague, MA/CCC-SLP
Sent: Thursday, December 23, 2010 6:49 AM
To: Wescott, Anne (DOE)
Subject: Caseload maximums for SLPs in Virginia

Dear Ms. Wescott:

I am writing on behalf of the men and women who serve our children as speech/language pathologists in the school systems. I am an administrator of a private practice speech therapy clinic that serves 3-5 counties and cities in the state of Virginia. I have also worked in the schools myself in the past. As an administrator, I see my employees struggle on a daily basis to provide top quality therapy while trying to juggle the demands of planning, documentation, IEP paperwork, referral paperwork, and with little time to be able to complete all of it as caseloads increase and paperwork demands increase as well.

I strongly believe that if caseloads were smaller, the speech therapist could provide higher quality therapy which would reduce the length of time a child would need to be in therapy and therefore actually increase academic success at a faster rate, improve SOL scores for language impaired children at a faster rate, and allow the time needed for the paperwork required to serve a child. The extra time for the paperwork would improve the quality of the paperwork and would be less costly to the school district correcting items while decreasing deficiencies on state audits.

Thank you in advance for any consideration in lowering the caseload maximujm for speech/language pathologists to 50 for those serving in the state of Virginia.

I will be happy to provide any additional information upon request.

Merry Christmas,

Amie Teague, MA/CCC-SLP
Executive Director, Speech/Language Pathologist
Piedmont Regional Feeding & Oral-Motor Clinic

From: Vann, C E.
Sent: Thursday, December 23, 2010 8:30 AM
To: Wescott, Anne (DOE)
Subject: School Speech Language Pathologist Caseloads

Dear Ms. Westcott,
I am writing to you on behalf of my Speech-Language Pathologist colleagues who work in the public school system, and from my own experience when I started in the profession more than 25 years ago. I am currently the Director of Rehabilitation Services at a children's hospital, where we employ 57 Speech-Language Pathologists, who all see their children on an individual basis for one-hour sessions. A large number of our speech therapy patients receive services in the public school system as well, but come to us because the parents think that their child isn't getting what they need from the school system therapist – not because of the therapists' skills, but due to the fact that their child may be in a group setting with 2 or more students of varying diagnoses/goals for therapy, and sessions that last only 20-30 minutes. Studies show that increased intensity of services makes a difference in the amount of progress that children make in the therapy setting, and aides in faster remediation of disorders/delays. I am encouraged that the number of Speech-Language Pathologists in the public school system has increased over the years, however, this increase has not kept up with the great demand for services. I encourage you to look at the caseloads of our Speech-Language Pathologists, and make changes that will benefit the children in our community.
Respectfully,
C. Edward Vann

C. Edward Vann, M.S., CCC-SLP
Director of Rehabilitation Services
Children's Hospital of The King's Daughters
601 Children's Lane
Norfolk, Virginia 23507

From: bcumberb
Sent: Thursday, December 23, 2010 4:53 PM
To: Wescott, Anne (DOE)
Subject: Caseload maximums

Greeting Ms. Wescott,

I am currently a student who is about to complete my last semester for my graduate program. I just completed an extenship in a Norfolk Public School and must admit that the prospect of being responsible for providing speech services to 65 clients in addition to aligning their lesson plans to the SOL, completing Medicare paperwork, being case managers for their IEP as well as all the duties that the school administrator has me looking at a position in the school as a last resort. Having been a teacher for 7 years the last thing I expected was that being a speech therapist in the school setting was just as if not more overwhelming than being a classroom treacher. I think that rather than simply looking at number of students on case loads the trend should be more like in the medical field where attention is paid to the number of minutes and type of client on the SLP's case load.

Thank you for your attention,
Baseemah M. Cumberbatch-Smith,
B.S. Elementary Education
Graduate Student, Communicative Sciences & Disorders, Hampton University

From: Reed, Vicki Anne
Sent: Thursday, December 23, 2010 8:32 PM
To: Wescott, Anne (DOE)
Subject:

Anne,

I have just been made aware through the Speech, Language, Hearing Association of Virginia (SHAV) that the VA Board of Education is accepting comments regarding caseload maximums for SLPs until December 28th. Most school-based SLPs are likely away for their schools for the school holiday break and would be unlikely to be able to comment. Since these are the most directly affected school professionals with regard to this matter, I'd like to request an extension of the date for receiving comments until the schools return from their break.

Thank you for considering an extension of comment time.

Vicki A. Reed, Ed.D.
Professor, Department of Communication Sciences and Disorders
Director, Child and Adolescent Language Laboratory (CALL)
James Madison University
701 Carrier Drive
MSC 4304
Room HHS 1139
Harrisonburg, VA 22807

From: Katie Pyne
Sent: Friday, December 24, 2010 2:23 PM
To: Wescott, Anne (DOE)
Subject: caseload comments extension please!

Hi Anne:

I just received wind of the need for comments on caseload size. You may not realize that most SLP's who work in schools are on break and may not have the opportunity to comment until the first of the year. Is there any way you could extend the feedback time to mid-January, so there would be more opportunity for school speech folks to give their input??

Thank-you so much. Happy holidays!

--
Katie Pyne, MA, CCC/SLP
Speech/Language Specialist
Read Mountain Middle School
Lord Botetourt High School

From: Darlene Sommer
Sent: Monday, December 27, 2010 1:29 PM
To: Wescott, Anne (DOE)
Subject: Caseloads and service delivery

So glad that Virginia DOE is open to suggestions. Chesapeake Public Schools' special ed. program underwent an audit by DOE last year. As a result, we were told that we will have to write our number of therapy sessions "per month" as opposed to number of sessions "per semester" as is our current departmental standard. It would be impossible to determine the number of sessions per month as each month in the school calendar varies greatly. Our SLPs have found that the flexibility of "sessions per semester" assists us in working with students' rigorous testing schedules while consistently providing speech-language therapy services.

With regard to caseload size, it is impossible to provide adequate speech-language therapy services to our students while managing a caseload of more than 55 students (particularly if the SLP serves more than one school.)

Thank you for the opportunity to weigh in on this subject.

Sincerely,

Darlene C. Sommer, MS, CCC-SLP
Speech-Language Pathologist
Chesapeake Public Schools

From: ntseward
Sent: Monday, December 27, 2010 10:11 PM
To: Wescott, Anne (DOE)
Subject: caseload size

I have been a speech pathologist in the public schools for 15 years and am having increasing difficulty doing my job effectively due to the caseload size and the accompanying mountains of paperwork. I am struggling to perform all my various job functions in a professional manner while trying to schedule and deliver therapy to a 65+ caseload of 2 to 22 year olds in multiple schools with disabilities ranging from autism to cognitive delays to fluency. While I am thankful to even have a job in this current economic climate, I had much better job satisfaction and was a more effective SLP when the caseload was a more manageable size of 55.
Thank you for your time. Nancy T Seward MS/CCC

12-28-2010

Board of Education:

It is sad that with advances in so many areas in our field, after 33 years as a public school speech/language pathologist, caseload numbers have only decreased from a maximum of 75 in 1978 to 65 in 2010.

Caseload numbers that are too high reduce the quality of services that can be provided. Although services are free, lip service is paid to the provision of "appropriate" services. Regardless of the severity of a students' impairment, he often receives the standard, one size fits all, twice weekly services in a group of 2 to 4 if speech impaired, or a group of up to 6 if language impaired. High caseload numbers make it difficult or impossible for individual daily planning, coordination of therapy efforts with parents, and preparation of student homework.

If caseload numbers were reasonable, time to see and provide truly appropriate services would not be as severely difficult as it is now and always has been. High caseload numbers with the insurmountable paperwork and number of procedures and more recently Medicaid billing have made the job of the public school speech/language pathologist a mockery of the profession, and an exercise in frustration and futility as we struggle to make progress in the limited time we have with our students.

Below is a letter in part that I submitted to our director of special education, 05-05-2010, in compliance to a request to respond to why I was not billing every child on my caseload who qualified for Medicaid.

The answer is "TIME".

As speech pathologists we have a long list of duties that we are to perform over the course of each day and year; however, the schedules we are pressured to maintain usually only allow the time needed to provide the (minimal) therapy required to remain in compliance with our students' IEPs. We understand that all but a fraction of the day (usually 30-40 minutes) must be used to provide therapy.

This would not be as problematic if it were not for the fact that we are also trained diagnosticians expected to conduct assessments and to perform the follow-up duties associated with testing.

We are **not** allowed to schedule regular blocks of assessment time during the school day to conduct assessments on referrals, reevaluations, or triennials. No time can be specifically scheduled for screening kindergarteners, incoming transfers throughout the year, or preschoolers at the administration building in the spring. Neither are we allowed scheduled time during the day to score assessments, time to write assessment reports, time to send invitations or communicate with parents, time to write IEPs, or hold eligibility meetings and IEP meetings. No time is allowed to do progress reports.

Because the regular classroom teacher has a 30-40 minute planning period, we have been allowed this same amount of time for our daily "planning". The catch is, being that we have no other time in our schedules to conduct the aforementioned duties it is understood that this "planning time" is when we should be conducting all the requirements that do not fall under the "therapy" heading. As for planning, any planning and preparation of materials for the individualized instruction of the 50-65 students we see must be done after the school day.

It must also be noted that there is no time allowed during the school day to perform Medicaid activities. Writing POCs, preparing treatment plans, and maintaining soap notes, must be done after school or during the students' therapy sessions.

Personally, I find it appropriate that our fellow coworkers, the psychologists and educational diagnosticians are allowed time during the regular school day to conduct their assessments, score their assessments, write their reports, and even hold eligibility meetings. I find it discriminatory that I am not allowed at least some time during my school day to conduct the exact same activities they conduct and are allowed ample time.

I get my children seen and I do a good job with them. If there are administrative, teacher, or parent complaints I am unaware of them. I already work many hours after school and at home to get accomplished what I am doing now. I have no more hours or weekends to give. More Medicaid means a reduction in the already strained quality of services that our children now receive. It might even demand noncompliance with our students' IEPs. I already have enough required responsibilities that threaten noncompliance.

In past years, as SLPs, we were never afforded enough time during the school day to get all our responsibilities such as test scoring, report writing, IEP writing, and other clerical duties completed, but we were minimally allowed half a day weekly to do screenings and assessments. In more recent years, we have been robbed of our limited, but precious assessment time and we have been saddled with additional clerical work with more forms to fill out and more procedures to perform, and Medicaid. We have, set before us, an impossible task for even the most conscientious professional.

Lynda C. Adkins, M.S. CCC
Speech/Language Pathologist

From: Wanda
Sent: Tuesday, December 28, 2010 11:58 AM
To: Wescott, Anne (DOE)
Subject: Caseloads

As a school based SLP with a large caseload I am not as effective or efficient as I could be with a smaller caseload. Having to see 70 students (and growing) plus IEPs, Medicaid notes, meetings, and travel between schools is overwhelming.

It would be helpful to have a smaller caseload and have SLPs included in the standards of quality.

Wanda Pascucci, MA, CCC-SLP
Franklin, VA

From: Cornelia Long
Sent: Tuesday, December 28, 2010 9:04 PM
To: Wescott, Anne (DOE)
Subject: Caseload Maximums

Hi,

Thanks for accepting comments on the issue of Standards o Quality and caseload maximums for speech-langugage pathologists in the public school system. First, the national caseload average is 50 according to the American Speech-Language Hearing Association.org (2010). The maximum speech caseload in VA is 68, a difference of 18. I am asking that the DOE please lower the maximum to 55. There are several speech pathologists who work with 68+ children and with that many children and the demands of paperwork, and triennial meetings plus IEP meetings can leave a speech pathologists feeling overworked and burned out. A more reasonable caseload of 55 would ensure that the speech pathologists offers qualitative therapy with less paperwork pressure thereby ensuring more students are dismissed from speech therapy earlier. Please keep in mind that the attrition rate for speech pathologists is relatively high for the state of VA and that is due, in part, to paperwork burdens and the size of expanding caseloads.

It is also my request to have speech pathologists back in the Standards of Quality. Speech pathologists are highly specialized professionals. Most practicing speech pathologists are certified by the American Speech-Language and Hearing Association and are licensed by the Board of Examiner's.

Thank you for perusing this request.

Cornelia H Long, M.S. CCC-SLP
VP Govt. Affairs

From: Cornelia Long
Sent: Tuesday, December 28, 2010 9:09 PM
To: Wescott, Anne (DOE)
Subject: Extension for Comments Caseload Maximums/Standards of Quality

Hi Mrs. Wescott,

On behalf of the speech pathologists in the state of VA, I respectfully request an extension to the open comments period to the VA DOE. Two consecutive holidays have occurred during this time and many SLPs may not be privy to this comment period due to holiday breaks.

Sincerely,

Cornelia H. Long, M.S. CCC-SLP
Speech Pathologist
VP Governmental Affairs
Speech-Language Hearing Association of VA

From: DeAnne Lindsey
Sent: Thursday, December 30, 2010 10:01 AM
To: Wescott, Anne (DOE)
Subject: Caseload Reduction

Good morning,
Thank you for the opportunity to express my continued concerns about school-based caseloads. Several years ago I was involved in SHAV's activities to reduce caseloads from 68 to 60. I was so pleased that we were finally able to influence this change and so disappointed that even this small change was never funded by our legislature.

I have been a practicing SLP for 35+ years, in both private and school settings. I have practiced as a speech pathologist, a special education administrator, and now again as an SLP and department chair. I began those many years ago just before the passage of PL 94-142 when the legal requirements were minimal. While I don't regret the degree of stringency that this law and those that followed required, they impose other constraints that have become overwhelming.

The problem is not just the pure numbers of students, although there is an abundance of research regarding that. The problem is not in the number of more severely involved and medically fragile students - and those are tremendously increased. The problem is not just that parents are becoming more savvy about the types of services they want and litigious to accomplish that.

The problems for school-based SLPs come from the additional engagements in school affairs that are for the benefit of students but take an enormous amount of time and therefore impact the amount of time available for seeing students. Participation in such activities include Medicaid billing (and the accompanying extra paper work), frequent revisions of IEPs, IEP meetings that can take literally hours, preparation in due process proceedings and the like. But most importantly, SLPs are an integral part of schools' child study and eligibility processes and RtI processing. Frequently SLPs are asked to chair these committees because of their involvement with the school populations and because of their understanding of the educational process. In order to accommodate participation in these committees, either caseloads are reduced (causing an overload on other therapists) or students must be grouped into overly large groups.

As a result of Response to Intervention and other child monitoring processes, the SLP's time is often spent not only in direct services to students with an IEP. An enormous amount of time is spent in observing students in classrooms, data collection, consultation with teachers and parents regarding recommendations for students, and suggestions for modifications in teacher presentations and classroom engineering. Additional time may be spent in programming and implementation of assistive technology devises into daily activities.

For all of these reasons and many more it is imperative that the DOE recommend to the legislature, and the legislature to respond with funding to allow school-based

caseloads to be reduced. Without this flexibility SLPs cannot properly serve their students by either providing the excellent therapies they were trained to do or by facilitating improvements with via their other school responsibilities.

Thank you for soliciting input once more. I hope that we will be successful in affecting a change.

Sincerely,
DeAnne Lindsey, CCC/SLP
Speech Language Pathologist
Chesapeake Public Schools

Ms. Wescott,

I understand that you are accepting letters regarding caseload sizes for Speech-Language Pathologists in the public schools. I am currently working in the public school sector as a Speech-Language Pathologist in Virginia. I am writing in support for regulations limiting caseload size and workload size. As an SLP with a strong work ethic, dedication to the service we provide, a strong belief that we make a difference in the lives of our students and concern for students, I feel this is an area of strong need. I also genuinely feel that it is a relevant topic as a person and family member.

I have worked in varied settings across the years, with approximately 17+ years in public schools from 1975 through 2010 served in three states [New York, Virginia and Kentucky], twelve districts and almost thirty schools. There have been many changes across the years in all settings per my experience; which gives me unique perspective. Many changes have been needed and have bettered the provision of speech-language therapy services. However, other changes have rendered us with less time to do that which most impacts our students--time spent in direct service. No matter how we dress up this need and justify that we are working better and working smarter, most of us who do the work every day know that there is no real substitute for direct service time. I believe that one of the reasons our caseload numbers persist now at middle school and high school ages reflects directly on declining direct service at the preschool and elementary ages. We are discharging fewer students; and continue to support more students through their public school years. Although there are other factors that impact discharge rates, time to instill the basics in the early years remains a critical need. We cannot spend the necessary time with high caseloads. Experience tells me that greater time spent in the early years will provide our students with the skills to go forward in their secondary years without continued speech-language support needed. Until we learn to manufacture time, there is no alternative to moderating caseload demands while covering today's expectations.

All caseloads are not equal; but are being treated as such in today's public school arena. In the 70's, we had higher caseloads; but fewer students with high level disabilities, the option to decide and provide what our students appeared to need, minimal overall paperwork and began writing annual IEP's that reflected the student's needs. In the 80's and early 90's, the SLP who had students with higher disabilities had lower caseloads. In the last dozen years, we are all impacted by declining budget factors, the ravages of litigation and the blitz of accountability paperwork. We all understand that, not only do many of our students have higher level communication need, they also have more demanding parents and frequently include greater daily paperwork. I have been required to report daily, weekly and monthly to some parents; and to provide routine work samples that are dramatically beyond the expectation outlined in our job descriptions and provided to students in general. Added expectations increase the time demand; which decreases the time available for other students and/or demands that the SLP work longer overtime hours. Students with greater disabilities also have a usual tendency to have higher demands in meeting times; with greater team and parent interaction to plan; and multiple meetings for annual IEP's that take two to sixteen hours to complete in lieu of the usual 45 to 60 minute meeting. Again, this diminishes time available for other students on our caseloads. We also face increasing time demands in completing Medicaid paperwork, which does and should require [per confidentiality] separate paperwork. With the current economic condition in our country, many of us have a steadily increasing number of students who qualify

for Medicaid reimbursement. Our primary responsibility is to provide the mandated IEP time to our students. Medicaid paperwork is being primarily completed after contract hours. We are not reimbursed for this; but time is the more critical issue. Caseload expectations need to accommodate time factors. Until we learn to manufacture time, there is no alternative to moderating caseload demands while covering today's expectations.

Speech-Language Pathologists as human beings and members of families is a highly pertinent reason to consider caseload management control. We are all professionals. We cannot exist in this profession unless we are dedicated, caring, flexible, smart, strong, creative and giving. No one talks about the human toll, because it sounds less professional. But this is a topic worthy of discussion and consideration. Throughout my career, I have been dedicated and given 125% or more. However, I see the change, and it should be highlighted. The time commitment has been altered across the years. I used to spend hours at home creating materials for my students. We all understand that the majority of materials used by Speech-Language Pathologists in the public schools are hand-made. Although we are smarter about sharing now, this is still true. In today's world, we still manufacture therapy materials routinely. However, our after-contract hours are also spent in writing draft IEP pages, scoring assessments; working after school when school protocol programs dictate; preparing varied report forms, making calls and completing accountability paperwork. The dictates for accountability, recording time, recording all contacts, keeping data and keeping notes is increasingly demanding—and requires additional time during the work day and after hours. I have always taken data; but ironically, the increase in time-demand responsibilities is actually counterproductive in being able to take relevant data. Early on in my career, I spent 8 to intermittently 9 hours per day at work with report-writing time allowed; and likely 5 to 10 hours at home creating materials. My usual day now begins at 7:00 a.m. and is more often 10 to 12 hours; and I usually work 4 to 8 hours on Sundays. End-of-month and grading period reporting require additional marathon hours. In a previous school assignment [2005 to 2007] that included elementary and preschool students, I often worked 20-30 hours per week beyond contract hours routinely. I can email numerous SLP coworkers at 6:00 or 7:00 p.m. who are still at their desks or working from home. Family time is impacted by the high time demand at work—with a direct relationship to high caseloads. When time during contract hours are spent with students and in meetings, all else must be completed after hours. My children are grown. I cannot imagine having young children at home now and being a public school SLP; with the need to pick up children on time or pay overtime for childcare. I do have high parent-care issues at this time; which is just as relevant. When I leave work on time now, it is to care for parents. If you do the math, I may get home at 7:30 and try to be in bed by 9:00. This does not work, so the impact is inadequate sleep hours. When we are at work for lengthy days, we are not at home caring for our own families. We are not protecting our own health with exercise, relaxation and rest. When we are assigned reasonable caseloads, we are better able to maintain healthy family, church and community involvement. Having a well-rounded life makes for a better professional. Until we learn to manufacture time for work at work and allow for a healthy personal life, there is no alternative to moderating caseload demands while covering today's expectations.

In summary, consideration for caseload control is a relevant, necessary and critical factor in maintaining a healthy profession. We are enduring and meeting an increasing demand for paperwork and accountability that impacts our working day. We are facing a crisis in meeting the needs of students in literacy skill that can be best met with direct student service at a time

when direct student service is declining. In addition, higher work demands are increasingly impacting our ability to maintain personal and family health. I have always loved this profession, and I still have such as enthusiasm for what we do! However, when I am asked now to support students considering the profession, I have to stop and think—"***should I tell them***?"

Sincerely,
Karen Jackson, CCC-SLP
12/23/10

Chesapeake Public Schools

Office of the Superintendent

Post Office Box 16496
Chesapeake, Virginia 23328

December 21, 2010

Mrs. Anne D. Wescott
Assistant Superintendent
Division of Policy and Communication
Virginia Department of Education
P. O. Box 2120
Richmond, Virginia 23218

Dear Mrs. Wescott:

In response to Superintendent's Memo # 295-10, I am providing the following comments regarding revisions to the Standards of Quality.

The Constitution of Virginia gives the General Assembly the responsibility of providing for a free system of public elementary and secondary schools and further states that they should "seek to ensure that an educational program of high quality is established and continually maintained." It is also the responsibility of the legislative body to determine the cost of the high quality program and the method of apportioning those costs between the Commonwealth and the local government units.

Prior to the Joint Legislative And Review Commission (a research arm of the General Assembly) study conducted in the mid-1980's, the General Assembly was criticized for not "fully funding" the Standards of Quality. They authorized the JLARC study to eliminate that criticism. The result did provide a method for calculating the cost of the Standards and a biennial recalculation of costs based on the complicated methodology, but most importantly, it gave legislators the opportunity to say that the Standards of Quality were fully funded. Still left unanswered were questions about the adequacy of the Standards.

Faced with that inadequacy, another JLARC study in 2000 addressed some key questions such as the ways in which localities were exceeding the SOQ mandated funding levels. That study not only pointed out how much more localities were spending above the required match, but it also showed a number of "errors and omissions" that had placed additional costs on localities since the implementation of the previous JLARC study. A list of proposed changes was provided and some of those recommendations were implemented, benefiting the local school divisions.

Recent adjustments to the state funding formula, however, have resulted in significant losses for local school divisions. The reductions were carefully made, similar to the work of a skilled surgeon who uses his knowledge of medicine to perform delicate operations. Because of the economic crisis and the need to match state revenue to state expenditures, someone took the opportunity to dismantle the previously adopted methodology for funding schools. In addition to changing the methodology, funds such as the Lottery and the Stimulus dollars were shifted to cover costs previously provided through state general fund revenues, thereby reducing dollars going to school divisions. Almost as disturbing as the loss of funds is the change of attitude in Richmond. Funding for K-12 education was once considered a priority and was not adversely affected in balancing the state budget. Now, just the opposite seems to be the case. In fact, it almost seems that education is the prime target.

Most recently, the proposed budget released by the Governor provides further cuts to the educational program ("high quality" no longer can be used as a modifier), and the one attraction that has kept dedicated employees in public service, the Virginia Retirement System, is being used to provide localities the "opportunity" to save money. This again proves that political leaders do not appear to recognize the value of a strong K-12 educational program.

The Policy Directive proposed by the State Board advocates "...against permanent structural changes to the Standards of Quality that result in decreased funding for K-12 public education." Chesapeake Public Schools certainly supports that policy. All other policy directives are also supported by our system, but it would seem that a reversal of the recent adjustments to the Standards of Quality would be a more appropriate direction for the State Board to propose.

Thank you for the opportunity to provide comments on this important matter.

Sincerely,

James T. Roberts

James T. Roberts, Ph.D.
Superintendent

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LEGAL AID JUSTICE CENTER

Angela A. Ciolfi
Legal Director
angela@justice4all.org

December 28, 2010

Ms. Anne Wescott
Assistant Superintendent for Policy and Communications
Virginia Department of Education
P. O. Box 2120
Richmond, VA 23218-2120
Anne.Wescott@doe.virginia.gov
Fax: 804/ 225-2524

RE: Public Comment on the Standards of Quality

Dear Anne:

Thank you for the opportunity to submit public comment on this year's proposed revisions to the Standards of Quality. We support the policy directions outlined at November's Board meeting.

In particular, we wholeheartedly support the Board's effort to look to existing programs funded outside of the Standards of Quality and recognize those practices that may be prevailing across the Commonwealth and should be incorporated into the Standards of Quality. In addition to the Early Intervention Reading Initiative and the Algebra Readiness program, we suggest that the At-Risk Add-On and the Virginia Preschool Initiative also be considered for inclusion within the Standards of Quality.

The General Assembly has found that poor children are more at risk of educational failure than children from more affluent homes, and that targeted at-risk programs result in improved academic performance.[1] Nevertheless, Virginia has a relative flat per pupil funding structure that provides proportionately little supplemental funding for the increased costs associated with adequately educating students with special needs – *i.e.*, special education students, economically disadvantaged students, and students with limited English proficiency. Authorities estimate that a 40-60% "add-on" is needed to fund research-based interventions such as high quality preschool, teacher quality, smaller class sizes, and intensive early reading and math programs for students at-risk of educational failure.

Most programs for at-risk students are funded outside of the Standards of Quality and are particularly vulnerable to budget cuts. To the extent that these programs are recognized by most school divisions as necessary for students to meet state standards, they should receive constitutional protection.

[1] Va. Code Ann. § 22.1-199.1.

In addition to the Early Intervention Reading Initiative and the Algebra Readiness program, least two of the incentive programs for at-risk students meet the prerequisite that the Standards of Quality "must be realistic in relation to current educational practice:"[2]

- The ***Virginia Preschool Initiative*** provides funding for a high quality preschool program for at-risk four-year-olds. The current VPI program serves over 15,000 children statewide. A 2007 report by the Joint Legislative and Audit Review Commission found that children who participate in VPI are significantly better prepared for kindergarten. By reaching more at-risk children, it will mean fewer state dollars down the road for remedial and special education, social services, public benefits – allowing these students to have the tools they need to lead a self-sustaining life. Over time, these benefits translate to a rate of return of $7-$16 for every dollar invested in the Virginia Preschool Initiative. We recognize this is an extremely difficult budget year, but VPI is a lean program with a direct impact on at-risk 4-year-olds. VPI is currently funded through lottery funds, not general fund dollars, and competes with other lottery funded programs. Including VPI in the SOQ would recognize that, like early reading and algebra intervention programs, VPI builds a critical foundation for later success on SOL tests. For that reason, it is best described as an essential component of our existing K-12 program and should be included in the Standards of Quality. (FY 2011 state funding = $60 million)

- The ***At-risk Add-on Program*** provides incentive funds to school divisions above the SOQ to support programs that address the needs of students educationally at-risk. It recognizes that it costs more to ensure that economically disadvantaged students receive an education that enables them to meet rigorous standards and provides school divisions flexibility to use the funds to meet the needs of those students.[3] Accountability is provided by requiring schools to meet SOL pass rate and (soon) graduation benchmarks in order to achieve full accreditation. Schools report using these funds for SOL remediation, dropout prevention, tutoring services, ESL, computerized remediation programs, class size reduction, truancy officers, and reading and math resources teachers. All local school divisions participate in this program. (FY 2011 state funding = $63 million)

In summary, recognizing these programs in the Standards of Quality would go a long way toward accomplishing one of the Board's stated goals: to provide school divisions with additional instructional resources to address identified needs.

Thank you for your leadership and commitment to our students. Please let me know if you have any questions or concerns.

Sincerely,

Angela A. Ciolfi

[2] Task Force on Financing the Standards of Quality for Virginia's Public Schools, December 1972 and July 1973.
[3] See Dickey, Kent C., supra note 3.

Public Comments on the Standards of Quality

From: Jim Regimbal
Sent: Tuesday, November 23, 2010 1:24 PM
To: Wescott, Anne (DOE)
Subject: teacher quality

Anne,

I thought a lot of good issues were covered in the "First Review to Reaffirm the 2009 Recommendations to the Standards of Quality" document attached for public comment. However, one critical item is missing – the issue of teacher quality. Many studies, including one I participated in 2004 with NCSL found that teacher quality is the single most important controllable factor in improving student outcomes. I believe there should at least be further study as to how we improve teacher quality in our classrooms. I know it is a complex issue, but one that we should constantly strive to improve – whether by increasing standards, improving working conditions, or pay.

James J. Regimbal Jr.
Fiscal Analytics, Ltd.
1108 E. Main St. Suite 1108
Richmond, VA 23219

From: jbm
Sent: Tuesday, November 30, 2010 2:57 PM
To: Wescott, Anne (DOE)
Cc: State NAACP; Rev. Vines
Subject: Public Comments on Quality of Standards

Ms. Wescott,
There are two areas of interest at this time:
* Will each school division be allowed to develop the ***"certain incentive"*** programs according to the needs of the school population ? If so,
will these programs be funded by state or local sources?
* Will new guidelines be developed (changed) as far as determining ratios.....especially when support personnel are included in establishing a balance ?

Virginia State Conference NAACP Education Committee
Mrs. Janette Boyd Martin, Chair

From: Dawnita Truitt-Calderone
Sent: Tuesday, November 30, 2010 3:22 PM
To: Wescott, Anne (DOE)
Subject: Speech/Language services in Public Schools.

Dear Ms. Wescott,

I understand that a request has been made for comments on the topic of Speech Pathologists' current caseloads in Virginia.

My comment:

Students who have Speech/Language Developmental Delays and/or Disorders are given the opportunity for interventions in schools because of the dramatic impact such impairments have on their lives. Academic impact and social-personal impact is sometimes so pervasive as to have secondary impact on a child's self-esteem. Behavioral issues arising out of inability to communicate and interact are not uncommon.

Currently, Speech/Language Impaired children are by necessity getting their "services" in groups of 4 or 5 (or more) at a time due to the high caseload cap set at 68 students per therapist. Intervention strategies and therapy utilized for children in large groups such as this are notably less effective. An analogy, if you can imagine - it is like receiving a regular non-therapeutic dosage of needed medication. Remediation of Speech & Language "Developmental Delays" are slowed, giving more time for deeper academic impact. Disordered language and speech skills are even more impacted because of the nature of their issues from the outset. Finally, children with Cerebral Palsy, Apraxia, Stuttering and other severe comprehensive disorders are the most needy and even these children are having diminished quality of service because they are seen in large groups and in the classroom. (In the past, our caseloads had a cap of no more than 58 to 60 students per therapist ~ children were on average in groups of 2 to 3 seen twice weekly/30 minutes per session. In cases of great severity, children are seen up to 5 times weekly for 30 minute sessions.)

Thank you for your consideration in this matter impacting our students with Speech-Language Impairment!

Sincerely,

D. Truitt-Calderone, MS CCC-SLP
Speech Language Pathologist
Mt. View Elementary School

From: Troilen Seward
Sent: Monday, December 06, 2010 10:14 AM
To: Wescott, Anne (DOE)
Subject: Response to SOQ Review

Dear Ms. Saslaw and Members fo the Virginia Board of Education:

The Virginia State Reading Association (VSRA) strongly supports the Board of Education's proposal to reaffirm its 2009 proposed policy directions. We are, of course, particularly supportive of including the EIRI proposal in the SOQ. We see this, however, as only an interim step in providing reading specialists in the schools of the Commonwealth. Our ultimate goal is to have reading specialists in a 1:1000 ratio included in the Standards of Quality.

We are indeed aware of the difficult economic times and understand the necessity of the interim measure. We do indeed express our sincere appreciation to you for your efforts and persistence in trying to improve reading support for the students in this Commonwealth. We can only hope for funding in the future!

Sincerely,
Troilen G. Seward
Legislative Liaison, VSRA

From: Patricia Shaffer-Gottschalk
Sent: Tuesday, December 14, 2010 11:55 AM
To: Wescott, Anne (DOE)
Subject: public comment on SOQ

I am writing with both questions and concerns regarding Board of Education Agenda Item G, dated November 18, 2010, inviting public comment. I refer specifically to "Issues for Further Study", bullet 2, where it states "... feasibility of establishing alternative staffing approaches to provide school divisions with additional instructional resources to address identified needs. This could include ratios based on positions per 1,000 students for assistant principals, school counselors, and library-media specialists that would reduce funding cliffs." The meaning and ramifications of this is very unclear. Would you please explain its meaning?

Furthermore, our school division superintendent commented at the last school board meeting that the DOE was considering reclassifying library media specialist positions to **administrative,** rather than **instructional.** While the media specialist certainly has many administrative functions in managing a school media center, the vast majority of my time is spent in instruction. I teach 35 classes weekly, each 45-minutes in length. The requirement of holding a valid teacher license with add-on endorsements in library media witness to the fact that the DOE has traditionally considered the library media as primarily an educator. This is correct and accurate. To consider the library media specialist as administrator is inaccurate.

I thank you for your time and consideration.

Patricia Shaffer-Gottschalk
Tussing Library Media Specialist
5501 Conduit Road
Colonial Heights, VA 23834

From: Mark Webster
Sent: Tuesday, December 14, 2010 12:02 PM
To: Wescott, Anne (DOE)
Subject: Seeking Public Comment: Standards of Quality

Anne Wescott,

I wanted to offer public comment pertaining to the SOQ. I am probably worried about nothing, but I noticed on the Board of Education agenda for November 18 it stated there was consideration of the "feasibility of establishing alternative staffing approaches to provide school divisions with additional instructional resources to address identified needs. This could include ratios based on positions per 1,000 students for assistant principals, school counselors, and library-media specialists. . ."

I wasn't sure if the intent was to increase staffing for larger schools, or rather have smaller schools (with student numbers less than 100) share these professionals? Hopefully it is the former. However, I wanted to offer public comment on the matter, because I was reading this in the context of the current discussion ("65% rule") surrounding the state reclassifying library media positions as "administrative" rather than "instructional." The library media positions are highly instructional, and should be recognized as instructional because of their integral role within the educational mission of each school, and the powerful role these positions play for information literacy, reading, instructional media and technology, and research skills. Also, practically speaking I would argue it is essential that each school have a dedicated media specialist, regardless of the size of the school or its population.

Thank you for allowing public comment on the matter, it is appreciated!

Sincerely yours,

Mark Webster, Director of Technology and Learning
Colonial Heights Public Schools

From: Torrijos
Sent: Wednesday, December 22, 2010 7:09 PM
To: Wescott, Anne (DOE)
Subject: Speech-Language Pathology caseloads

Ms. Wescott,
I am writing to convey the need for SLP's to have a caseload maximum in the state of VA. Many of us working in the schools have over 65 students, ranging from the most severe 2 year olds with multiple impairments to 21 year old students struggling to transition out of the public school system. Many of these students have very specific disorders, requiring specialized services in individual therapy. After being a Speech-Language Pathologist for over 13 years, I have come to realize that many students on the public school clinician's caseload make very slow progress. It is my sincerest belief that slow progress is largely due to ineffective therapy, conducted in groups of 3 students or more. I work in a relatively small district where one of our clinicians has a caseload of 83! The administration refuses to hire more staff, essentially telling each of us that there is nothing we can do. Unfortunately, I don't predict much progress for many of the students on our caseloads simply due to the large numbers served in groups.

I have often wondered if Speech-Language Pathologists actually belong in the school setting. I entered this profession to help individuals communicate effectively. When I am expected to serve high numbers of students, I feel that the quality of my therapy suffers, and my students make less progress. It is then my responsibility to explain the lack of progress to the parents, without expressing the true reason. No clinician would be allowed to actually say, "I'm sorry Mrs. Jones. Bobby didn't make a lot of progress this year in speech and will have to work on the same goals next year. You see, I have so many kids on my caseload that I had to see Bobby in a group with 4 other kids. Sometimes, we weren't able to actually address his speech goals because one of the other students had a lot of behavior issues, and another student stuttered, requiring me to do a lot of instruction with him. Hopefully, we'll be able to work a little more on his goals next year. What? He's being retained this year? That's a shame. I hope next year will be better for everyone."

There's a reason so many SLP's are leaving the school setting. We need support! We need it from our administration, our district, and our state Department of Education. We need caseload maximums that are reasonable (my suggestion would be 60), and we need the new SLP guidelines! SLP's are typically a forgotten group in the school setting. Although we are small, we are no less important. I fully expect my state DOE to support us as we try to help so many kids!

Thank you for your efforts,
Tanya Torrijos
Speech-Language Pathologist
Powhatan County Public Schools

From: Martha Ruelle
Sent: Wednesday, December 22, 2010 7:42 PM
To: Wescott, Anne (DOE)
Subject: SLP caseload

Dear Ms. Wescott
I hope the BOE understands that the 65:1 Speech Language Pathologist caseload in public schools negatively impacts the quality of services available. It means that students with communication disorders in public schools have to be seen in larger groups than if the caseloads were smaller. That means the students' problems are not resolved as quickly. It also means that it is difficult for school diviisions to attract and retain the best qualified SLPs when they have to cope with such a large caseload. The caseload numbers must be capped at a lower number.
Martha Ruelle, M.S. CCC-SLP
Speech Language Pathologist
Fairfax County Public Schools

From: Suealexandria
Sent: Thursday, December 23, 2010 12:29 AM
To: Wescott, Anne (DOE)
Subject: Caseload

I am a very lucky SLP. I work in a non-public facility for emotionally disturbed children. I have been there for 10 years. My case load is only 12. The first 8 years I was full-time and had a caseload of 25. Two years ago I became part-time. All of our therapy is one-on-one, never group. I am very happy with my job, and the low caseload is one of the reasons. I'm able to handle the therapy, meetings, and paperwork comfortably. I wish other SLP's could experience, at least once, a low and reasonable caseload, as it gives one a sense of completeness and thoroughness.

December 22, 2010

Dear Ms. Wescott and the Virginia Board of Education:

I am glad to hear that the Board of Education is reconsidering the maximum caseload size for speech-language pathologists working in the public schools in the state of Virginia. I have worked as an SLP for 5 and a half years in Virginia public schools, and I believe my students' progress is greatly dependent on my caseload size at any given time. As a caseload approaches 55-65, it becomes nearly impossible to give students' the individual and small group time where their progress is maximized. Instead, it is necessary to work with students in large groups and it becomes a challenge to tackle the goals of all the students in a group (which may range from a student who stutters, a student working on using correct speech sounds, to a student working on increasing vocabulary skills).

I can also say from personal experience that a higher caseload correlates with lower job satisfaction and higher stress level. During the two years that my caseload was between 60-65 students, I consistently worked 60-70 hours per week in order to ensure that IEPs and eligibility paperwork were completed and that my students continued to receive high quality therapy services. If the state of Virginia hopes to retain qualified speech-language pathologists, it is important to set a maximum caseload number that is reasonable. I believe a reasonable caseload number is between 40-50.

Thank you for considering this issue.

Sincerely,

Heather Lantz, MA, CCC-SLP

From: Amie Teague, MA/CCC-SLP
Sent: Thursday, December 23, 2010 6:49 AM
To: Wescott, Anne (DOE)
Subject: Caseload maximums for SLPs in Virginia

Dear Ms. Wescott:

I am writing on behalf of the men and women who serve our children as speech/language pathologists in the school systems. I am an administrator of a private practice speech therapy clinic that serves 3-5 counties and cities in the state of Virginia. I have also worked in the schools myself in the past. As an administrator, I see my employees struggle on a daily basis to provide top quality therapy while trying to juggle the demands of planning, documentation, IEP paperwork, referral paperwork, and with little time to be able to complete all of it as caseloads increase and paperwork demands increase as well.

I strongly believe that if caseloads were smaller, the speech therapist could provide higher quality therapy which would reduce the length of time a child would need to be in therapy and therefore actually increase academic success at a faster rate, improve SOL scores for language impaired children at a faster rate, and allow the time needed for the paperwork required to serve a child. The extra time for the paperwork would improve the quality of the paperwork and would be less costly to the school district correcting items while decreasing deficiencies on state audits.

Thank you in advance for any consideration in lowering the caseload maximujm for speech/language pathologists to 50 for those serving in the state of Virginia.

I will be happy to provide any additional information upon request.

Merry Christmas,

Amie Teague, MA/CCC-SLP
Executive Director, Speech/Language Pathologist
Piedmont Regional Feeding & Oral-Motor Clinic

From: Vann, C E.
Sent: Thursday, December 23, 2010 8:30 AM
To: Wescott, Anne (DOE)
Subject: School Speech Language Pathologist Caseloads

Dear Ms. Westcott,
I am writing to you on behalf of my Speech-Language Pathologist colleagues who work in the public school system, and from my own experience when I started in the profession more than 25 years ago. I am currently the Director of Rehabilitation Services at a children's hospital, where we employ 57 Speech-Language Pathologists, who all see their children on an individual basis for one-hour sessions. A large number of our speech therapy patients receive services in the public school system as well, but come to us because the parents think that their child isn't getting what they need from the school system therapist – not because of the therapists' skills, but due to the fact that their child may be in a group setting with 2 or more students of varying diagnoses/goals for therapy, and sessions that last only 20-30 minutes. Studies show that increased intensity of services makes a difference in the amount of progress that children make in the therapy setting, and aides in faster remediation of disorders/delays. I am encouraged that the number of Speech-Language Pathologists in the public school system has increased over the years, however, this increase has not kept up with the great demand for services. I encourage you to look at the caseloads of our Speech-Language Pathologists, and make changes that will benefit the children in our community.
Respectfully,
C. Edward Vann

C. Edward Vann, M.S., CCC-SLP
Director of Rehabilitation Services
Children's Hospital of The King's Daughters
601 Children's Lane
Norfolk, Virginia 23507

From: bcumberb
Sent: Thursday, December 23, 2010 4:53 PM
To: Wescott, Anne (DOE)
Subject: Caseload maximums

Greeting Ms. Wescott,

I am currently a student who is about to complete my last semester for my graduate program. I just completed an extenship in a Norfolk Public School and must admit that the prospect of being responsible for providing speech services to 65 clients in addition to aligning their lesson plans to the SOL, completing Medicare paperwork, being case managers for their IEP as well as all the duties that the school administrator has me looking at a position in the school as a last resort. Having been a teacher for 7 years the last thing I expected was that being a speech therapist in the school setting was just as if not more overwhelming than being a classroom treacher. I think that rather than simply looking at number of students on case loads the trend should be more like in the medical field where attention is paid to the number of minutes and type of client on the SLP's case load.

Thank you for your attention,
Baseemah M. Cumberbatch-Smith,
B.S. Elementary Education
Graduate Student, Communicative Sciences & Disorders, Hampton University

From: Reed, Vicki Anne
Sent: Thursday, December 23, 2010 8:32 PM
To: Wescott, Anne (DOE)
Subject:

Anne,

I have just been made aware through the Speech, Language, Hearing Association of Virginia (SHAV) that the VA Board of Education is accepting comments regarding caseload maximums for SLPs until December 28th. Most school-based SLPs are likely away for their schools for the school holiday break and would be unlikely to be able to comment. Since these are the most directly affected school professionals with regard to this matter, I'd like to request an extension of the date for receiving comments until the schools return from their break.

Thank you for considering an extension of comment time.

Vicki A. Reed, Ed.D.
Professor, Department of Communication Sciences and Disorders
Director, Child and Adolescent Language Laboratory (CALL)
James Madison University
701 Carrier Drive
MSC 4304
Room HHS 1139
Harrisonburg, VA 22807

From: Katie Pyne
Sent: Friday, December 24, 2010 2:23 PM
To: Wescott, Anne (DOE)
Subject: caseload comments extension please!

Hi Anne:

I just received wind of the need for comments on caseload size. You may not realize that most SLP's who work in schools are on break and may not have the opportunity to comment until the first of the year. Is there any way you could extend the feedback time to mid-January, so there would be more opportunity for school speech folks to give their input??

Thank-you so much. Happy holidays!

--
Katie Pyne, MA, CCC/SLP
Speech/Language Specialist
Read Mountain Middle School
Lord Botetourt High School

From: Darlene Sommer
Sent: Monday, December 27, 2010 1:29 PM
To: Wescott, Anne (DOE)
Subject: Caseloads and service delivery

So glad that Virginia DOE is open to suggestions. Chesapeake Public Schools' special ed. program underwent an audit by DOE last year. As a result, we were told that we will have to write our number of therapy sessions "per month" as opposed to number of sessions "per semester" as is our current departmental standard. It would be impossible to determine the number of sessions per month as each month in the school calendar varies greatly. Our SLPs have found that the flexibility of "sessions per semester" assists us in working with students' rigorous testing schedules while consistently providing speech-language therapy services.

With regard to caseload size, it is impossible to provide adequate speech-language therapy services to our students while managing a caseload of more than 55 students (particularly if the SLP serves more than one school.)

Thank you for the opportunity to weigh in on this subject.

Sincerely,

Darlene C. Sommer, MS, CCC-SLP
Speech-Language Pathologist
Chesapeake Public Schools

From: ntseward
Sent: Monday, December 27, 2010 10:11 PM
To: Wescott, Anne (DOE)
Subject: caseload size

I have been a speech pathologist in the public schools for 15 years and am having increasing difficulty doing my job effectively due to the caseload size and the accompanying mountains of paperwork. I am struggling to perform all my various job functions in a professional manner while trying to schedule and deliver therapy to a 65+ caseload of 2 to 22 year olds in multiple schools with disabilities ranging from autism to cognitive delays to fluency. While I am thankful to even have a job in this current economic climate, I had much better job satisfaction and was a more effective SLP when the caseload was a more manageable size of 55.
Thank you for your time. Nancy T Seward MS/CCC

12-28-2010

Board of Education:

It is sad that with advances in so many areas in our field, after 33 years as a public school speech/language pathologist, caseload numbers have only decreased from a maximum of 75 in 1978 to 65 in 2010.

Caseload numbers that are too high reduce the quality of services that can be provided. Although services are free, lip service is paid to the provision of "appropriate" services. Regardless of the severity of a students' impairment, he often receives the standard, one size fits all, twice weekly services in a group of 2 to 4 if speech impaired, or a group of up to 6 if language impaired. High caseload numbers make it difficult or impossible for individual daily planning, coordination of therapy efforts with parents, and preparation of student homework.

If caseload numbers were reasonable, time to see and provide truly appropriate services would not be as severely difficult as it is now and always has been. High caseload numbers with the insurmountable paperwork and number of procedures and more recently Medicaid billing have made the job of the public school speech/language pathologist a mockery of the profession, and an exercise in frustration and futility as we struggle to make progress in the limited time we have with our students.

Below is a letter in part that I submitted to our director of special education, 05-05-2010, in compliance to a request to respond to why I was not billing every child on my caseload who qualified for Medicaid.

The answer is "TIME".

As speech pathologists we have a long list of duties that we are to perform over the course of each day and year; however, the schedules we are pressured to maintain usually only allow the time needed to provide the (minimal) therapy required to remain in compliance with our students' IEPs. We understand that all but a fraction of the day (usually 30-40 minutes) must be used to provide therapy.

This would not be as problematic if it were not for the fact that we are also trained diagnosticians expected to conduct assessments and to perform the follow-up duties associated with testing.

We are **not** allowed to schedule regular blocks of assessment time during the school day to conduct assessments on referrals, reevaluations, or triennials. No time can be specifically scheduled for screening kindergarteners, incoming transfers throughout the year, or preschoolers at the administration building in the spring. Neither are we allowed scheduled time during the day to score assessments, time to write assessment reports, time to send invitations or communicate with parents, time to write IEPs, or hold eligibility meetings and IEP meetings. No time is allowed to do progress reports.

Because the regular classroom teacher has a 30-40 minute planning period, we have been allowed this same amount of time for our daily "planning". The catch is, being that we have no other time in our schedules to conduct the aforementioned duties it is understood that this "planning time" is when we should be conducting all the requirements that do not fall under the "therapy" heading. As for planning, any planning and preparation of materials for the individualized instruction of the 50-65 students we see must be done after the school day.

It must also be noted that there is no time allowed during the school day to perform Medicaid activities. Writing POCs, preparing treatment plans, and maintaining soap notes, must be done after school or during the students' therapy sessions.

Personally, I find it appropriate that our fellow coworkers, the psychologists and educational diagnosticians are allowed time during the regular school day to conduct their assessments, score their assessments, write their reports, and even hold eligibility meetings. I find it discriminatory that I am not allowed at least some time during my school day to conduct the exact same activities they conduct and are allowed ample time.

I get my children seen and I do a good job with them. If there are administrative, teacher, or parent complaints I am unaware of them. I already work many hours after school and at home to get accomplished what I am doing now. I have no more hours or weekends to give. More Medicaid means a reduction in the already strained quality of services that our children now receive. It might even demand noncompliance with our students' IEPs. I already have enough required responsibilities that threaten noncompliance.

In past years, as SLPs, we were never afforded enough time during the school day to get all our responsibilities such as test scoring, report writing, IEP writing, and other clerical duties completed, but we were minimally allowed half a day weekly to do screenings and assessments. In more recent years, we have been robbed of our limited, but precious assessment time and we have been saddled with additional clerical work with more forms to fill out and more procedures to perform, and Medicaid. We have, set before us, an impossible task for even the most conscientious professional.

Lynda C. Adkins, M.S. CCC
Speech/Language Pathologist

From: Wanda
Sent: Tuesday, December 28, 2010 11:58 AM
To: Wescott, Anne (DOE)
Subject: Caseloads

As a school based SLP with a large caseload I am not as effective or efficient as I could be with a smaller caseload. Having to see 70 students (and growing) plus IEPs, Medicaid notes, meetings, and travel between schools is overwhelming.

It would be helpful to have a smaller caseload and have SLPs included in the standards of quality.

Wanda Pascucci, MA, CCC-SLP
Franklin, VA

From: Cornelia Long
Sent: Tuesday, December 28, 2010 9:04 PM
To: Wescott, Anne (DOE)
Subject: Caseload Maximums

Hi,

Thanks for accepting comments on the issue of Standards o Quality and caseload maximums for speech-langugage pathologists in the public school system. First, the national caseload average is 50 according to the American Speech-Language Hearing Association.org (2010). The maximum speech caseload in VA is 68, a difference of 18. I am asking that the DOE please lower the maximum to 55. There are several speech pathologists who work with 68+ children and with that many children and the demands of paperwork, and triennial meetings plus IEP meetings can leave a speech pathologists feeling overworked and burned out. A more reasonable caseload of 55 would ensure that the speech pathologists offers qualitative therapy with less paperwork pressure thereby ensuring more students are dismissed from speech therapy earlier. Please keep in mind that the attrition rate for speech pathologists is relatively high for the state of VA and that is due, in part, to paperwork burdens and the size of expanding caseloads.

It is also my request to have speech pathologists back in the Standards of Quality. Speech pathologists are highly specialized professionals. Most practicing speech pathologists are certified by the American Speech-Language and Hearing Association and are licensed by the Board of Examiner's.

Thank you for perusing this request.

Cornelia H Long, M.S. CCC-SLP
VP Govt. Affairs

From: Cornelia Long
Sent: Tuesday, December 28, 2010 9:09 PM
To: Wescott, Anne (DOE)
Subject: Extension for Comments Caseload Maximums/Standards of Quality

Hi Mrs. Wescott,

On behalf of the speech pathologists in the state of VA, I respectfully request an extension to the open comments period to the VA DOE. Two consecutive holidays have occurred during this time and many SLPs may not be privy to this comment period due to holiday breaks.

Sincerely,

Cornelia H. Long, M.S. CCC-SLP
Speech Pathologist
VP Governmental Affairs
Speech-Language Hearing Association of VA

From: DeAnne Lindsey
Sent: Thursday, December 30, 2010 10:01 AM
To: Wescott, Anne (DOE)
Subject: Caseload Reduction

Good morning,
Thank you for the opportunity to express my continued concerns about school-based caseloads. Several years ago I was involved in SHAV's activities to reduce caseloads from 68 to 60. I was so pleased that we were finally able to influence this change and so disappointed that even this small change was never funded by our legislature.

I have been a practicing SLP for 35+ years, in both private and school settings. I have practiced as a speech pathologist, a special education administrator, and now again as an SLP and department chair. I began those many years ago just before the passage of PL 94-142 when the legal requirements were minimal. While I don't regret the degree of stringency that this law and those that followed required, they impose other constraints that have become overwhelming.

The problem is not just the pure numbers of students, although there is an abundance of research regarding that. The problem is not in the number of more severely involved and medically fragile students - and those are tremendously increased. The problem is not just that parents are becoming more savvy about the types of services they want and litigious to accomplish that.

The problems for school-based SLPs come from the additional engagements in school affairs that are for the benefit of students but take an enormous amount of time and therefore impact the amount of time available for seeing students. Participation in such activities include Medicaid billing (and the accompanying extra paper work), frequent revisions of IEPs, IEP meetings that can take literally hours, preparation in due process proceedings and the like. But most importantly, SLPs are an integral part of schools' child study and eligibility processes and RtI processing. Frequently SLPs are asked to chair these committees because of their involvement with the school populations and because of their understanding of the educational process. In order to accommodate participation in these committees, either caseloads are reduced (causing an overload on other therapists) or students must be grouped into overly large groups.

As a result of Response to Intervention and other child monitoring processes, the SLP's time is often spent not only in direct services to students with an IEP. An enormous amount of time is spent in observing students in classrooms, data collection, consultation with teachers and parents regarding recommendations for students, and suggestions for modifications in teacher presentations and classroom engineering. Additional time may be spent in programming and implementation of assistive technology devises into daily activities.

For all of these reasons and many more it is imperative that the DOE recommend to the legislature, and the legislature to respond with funding to allow school-based

caseloads to be reduced. Without this flexibility SLPs cannot properly serve their students by either providing the excellent therapies they were trained to do or by facilitating improvements with via their other school responsibilities.

Thank you for soliciting input once more. I hope that we will be successful in affecting a change.

Sincerely,
DeAnne Lindsey, CCC/SLP
Speech Language Pathologist
Chesapeake Public Schools

Ms. Wescott,

I understand that you are accepting letters regarding caseload sizes for Speech-Language Pathologists in the public schools. I am currently working in the public school sector as a Speech-Language Pathologist in Virginia. I am writing in support for regulations limiting caseload size and workload size. As an SLP with a strong work ethic, dedication to the service we provide, a strong belief that we make a difference in the lives of our students and concern for students, I feel this is an area of strong need. I also genuinely feel that it is a relevant topic as a person and family member.

I have worked in varied settings across the years, with approximately 17+ years in public schools from 1975 through 2010 served in three states [New York, Virginia and Kentucky], twelve districts and almost thirty schools. There have been many changes across the years in all settings per my experience; which gives me unique perspective. Many changes have been needed and have bettered the provision of speech-language therapy services. However, other changes have rendered us with less time to do that which most impacts our students--time spent in direct service. No matter how we dress up this need and justify that we are working better and working smarter, most of us who do the work every day know that there is no real substitute for direct service time. I believe that one of the reasons our caseload numbers persist now at middle school and high school ages reflects directly on declining direct service at the preschool and elementary ages. We are discharging fewer students; and continue to support more students through their public school years. Although there are other factors that impact discharge rates, time to instill the basics in the early years remains a critical need. We cannot spend the necessary time with high caseloads. Experience tells me that greater time spent in the early years will provide our students with the skills to go forward in their secondary years without continued speech-language support needed. Until we learn to manufacture time, there is no alternative to moderating caseload demands while covering today's expectations.

All caseloads are not equal; but are being treated as such in today's public school arena. In the 70's, we had higher caseloads; but fewer students with high level disabilities, the option to decide and provide what our students appeared to need, minimal overall paperwork and began writing annual IEP's that reflected the student's needs. In the 80's and early 90's, the SLP who had students with higher disabilities had lower caseloads. In the last dozen years, we are all impacted by declining budget factors, the ravages of litigation and the blitz of accountability paperwork. We all understand that, not only do many of our students have higher level communication need, they also have more demanding parents and frequently include greater daily paperwork. I have been required to report daily, weekly and monthly to some parents; and to provide routine work samples that are dramatically beyond the expectation outlined in our job descriptions and provided to students in general. Added expectations increase the time demand; which decreases the time available for other students and/or demands that the SLP work longer overtime hours. Students with greater disabilities also have a usual tendency to have higher demands in meeting times; with greater team and parent interaction to plan; and multiple meetings for annual IEP's that take two to sixteen hours to complete in lieu of the usual 45 to 60 minute meeting. Again, this diminishes time available for other students on our caseloads. We also face increasing time demands in completing Medicaid paperwork, which does and should require [per confidentiality] separate paperwork. With the current economic condition in our country, many of us have a steadily increasing number of students who qualify

for Medicaid reimbursement. Our primary responsibility is to provide the mandated IEP time to our students. Medicaid paperwork is being primarily completed after contract hours. We are not reimbursed for this; but time is the more critical issue. Caseload expectations need to accommodate time factors. Until we learn to manufacture time, there is no alternative to moderating caseload demands while covering today's expectations.

Speech-Language Pathologists as human beings and members of families is a highly pertinent reason to consider caseload management control. We are all professionals. We cannot exist in this profession unless we are dedicated, caring, flexible, smart, strong, creative and giving. No one talks about the human toll, because it sounds less professional. But this is a topic worthy of discussion and consideration. Throughout my career, I have been dedicated and given 125% or more. However, I see the change, and it should be highlighted. The time commitment has been altered across the years. I used to spend hours at home creating materials for my students. We all understand that the majority of materials used by Speech-Language Pathologists in the public schools are hand-made. Although we are smarter about sharing now, this is still true. In today's world, we still manufacture therapy materials routinely. However, our after-contract hours are also spent in writing draft IEP pages, scoring assessments; working after school when school protocol programs dictate; preparing varied report forms, making calls and completing accountability paperwork. The dictates for accountability, recording time, recording all contacts, keeping data and keeping notes is increasingly demanding—and requires additional time during the work day and after hours. I have always taken data; but ironically, the increase in time-demand responsibilities is actually counterproductive in being able to take relevant data. Early on in my career, I spent 8 to intermittently 9 hours per day at work with report-writing time allowed; and likely 5 to 10 hours at home creating materials. My usual day now begins at 7:00 a.m. and is more often 10 to 12 hours; and I usually work 4 to 8 hours on Sundays. End-of-month and grading period reporting require additional marathon hours. In a previous school assignment [2005 to 2007] that included elementary and preschool students, I often worked 20-30 hours per week beyond contract hours routinely. I can email numerous SLP coworkers at 6:00 or 7:00 p.m. who are still at their desks or working from home. Family time is impacted by the high time demand at work—with a direct relationship to high caseloads. When time during contract hours are spent with students and in meetings, all else must be completed after hours. My children are grown. I cannot imagine having young children at home now and being a public school SLP; with the need to pick up children on time or pay overtime for childcare. I do have high parent-care issues at this time; which is just as relevant. When I leave work on time now, it is to care for parents. If you do the math, I may get home at 7:30 and try to be in bed by 9:00. This does not work, so the impact is inadequate sleep hours. When we are at work for lengthy days, we are not at home caring for our own families. We are not protecting our own health with exercise, relaxation and rest. When we are assigned reasonable caseloads, we are better able to maintain healthy family, church and community involvement. Having a well-rounded life makes for a better professional. Until we learn to manufacture time for work at work and allow for a healthy personal life, there is no alternative to moderating caseload demands while covering today's expectations.

In summary, consideration for caseload control is a relevant, necessary and critical factor in maintaining a healthy profession. We are enduring and meeting an increasing demand for paperwork and accountability that impacts our working day. We are facing a crisis in meeting the needs of students in literacy skill that can be best met with direct student service at a time

when direct student service is declining. In addition, higher work demands are increasingly impacting our ability to maintain personal and family health. I have always loved this profession, and I still have such as enthusiasm for what we do! However, when I am asked now to support students considering the profession, I have to stop and think—"***should I tell them***?"

Sincerely,
Karen Jackson, CCC-SLP
12/23/10

Chesapeake Public Schools

Office of the Superintendent

Post Office Box 16496
Chesapeake, Virginia 23328

December 21, 2010

Mrs. Anne D. Wescott
Assistant Superintendent
Division of Policy and Communication
Virginia Department of Education
P. O. Box 2120
Richmond, Virginia 23218

Dear Mrs. Wescott:

In response to Superintendent's Memo # 295-10, I am providing the following comments regarding revisions to the Standards of Quality.

The Constitution of Virginia gives the General Assembly the responsibility of providing for a free system of public elementary and secondary schools and further states that they should "seek to ensure that an educational program of high quality is established and continually maintained." It is also the responsibility of the legislative body to determine the cost of the high quality program and the method of apportioning those costs between the Commonwealth and the local government units.

Prior to the Joint Legislative And Review Commission (a research arm of the General Assembly) study conducted in the mid-1980's, the General Assembly was criticized for not "fully funding" the Standards of Quality. They authorized the JLARC study to eliminate that criticism. The result did provide a method for calculating the cost of the Standards and a biennial recalculation of costs based on the complicated methodology, but most importantly, it gave legislators the opportunity to say that the Standards of Quality were fully funded. Still left unanswered were questions about the adequacy of the Standards.

Faced with that inadequacy, another JLARC study in 2000 addressed some key questions such as the ways in which localities were exceeding the SOQ mandated funding levels. That study not only pointed out how much more localities were spending above the required match, but it also showed a number of "errors and omissions" that had placed additional costs on localities since the implementation of the previous JLARC study. A list of proposed changes was provided and some of those recommendations were implemented, benefiting the local school divisions.

Recent adjustments to the state funding formula, however, have resulted in significant losses for local school divisions. The reductions were carefully made, similar to the work of a skilled surgeon who uses his knowledge of medicine to perform delicate operations. Because of the economic crisis and the need to match state revenue to state expenditures, someone took the opportunity to dismantle the previously adopted methodology for funding schools. In addition to changing the methodology, funds such as the Lottery and the Stimulus dollars were shifted to cover costs previously provided through state general fund revenues, thereby reducing dollars going to school divisions. Almost as disturbing as the loss of funds is the change of attitude in Richmond. Funding for K-12 education was once considered a priority and was not adversely affected in balancing the state budget. Now, just the opposite seems to be the case. In fact, it almost seems that education is the prime target.

Most recently, the proposed budget released by the Governor provides further cuts to the educational program ("high quality" no longer can be used as a modifier), and the one attraction that has kept dedicated employees in public service, the Virginia Retirement System, is being used to provide localities the "opportunity" to save money. This again proves that political leaders do not appear to recognize the value of a strong K-12 educational program.

The Policy Directive proposed by the State Board advocates "...against permanent structural changes to the Standards of Quality that result in decreased funding for K-12 public education." Chesapeake Public Schools certainly supports that policy. All other policy directives are also supported by our system, but it would seem that a reversal of the recent adjustments to the Standards of Quality would be a more appropriate direction for the State Board to propose.

Thank you for the opportunity to provide comments on this important matter.

Sincerely,

James T. Roberts

James T. Roberts, Ph.D.
Superintendent

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LEGAL AID JUSTICE CENTER

Angela A. Ciolfi
Legal Director
angela@justice4all.org

December 28, 2010

Ms. Anne Wescott
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Richmond, VA 23218-2120
Anne.Wescott@doe.virginia.gov
Fax: 804/ 225-2524

RE: Public Comment on the Standards of Quality

Dear Anne:

Thank you for the opportunity to submit public comment on this year's proposed revisions to the Standards of Quality. We support the policy directions outlined at November's Board meeting.

In particular, we wholeheartedly support the Board's effort to look to existing programs funded outside of the Standards of Quality and recognize those practices that may be prevailing across the Commonwealth and should be incorporated into the Standards of Quality. In addition to the Early Intervention Reading Initiative and the Algebra Readiness program, we suggest that the At-Risk Add-On and the Virginia Preschool Initiative also be considered for inclusion within the Standards of Quality.

The General Assembly has found that poor children are more at risk of educational failure than children from more affluent homes, and that targeted at-risk programs result in improved academic performance.[1] Nevertheless, Virginia has a relative flat per pupil funding structure that provides proportionately little supplemental funding for the increased costs associated with adequately educating students with special needs – *i.e.*, special education students, economically disadvantaged students, and students with limited English proficiency. Authorities estimate that a 40-60% "add-on" is needed to fund research-based interventions such as high quality preschool, teacher quality, smaller class sizes, and intensive early reading and math programs for students at-risk of educational failure.

Most programs for at-risk students are funded outside of the Standards of Quality and are particularly vulnerable to budget cuts. To the extent that these programs are recognized by most school divisions as necessary for students to meet state standards, they should receive constitutional protection.

[1] Va. Code Ann. § 22.1-199.1.

In addition to the Early Intervention Reading Initiative and the Algebra Readiness program, least two of the incentive programs for at-risk students meet the prerequisite that the Standards of Quality "must be realistic in relation to current educational practice:"[2]

- The ***Virginia Preschool Initiative*** provides funding for a high quality preschool program for at-risk four-year-olds. The current VPI program serves over 15,000 children statewide. A 2007 report by the Joint Legislative and Audit Review Commission found that children who participate in VPI are significantly better prepared for kindergarten. By reaching more at-risk children, it will mean fewer state dollars down the road for remedial and special education, social services, public benefits – allowing these students to have the tools they need to lead a self-sustaining life. Over time, these benefits translate to a rate of return of $7-$16 for every dollar invested in the Virginia Preschool Initiative. We recognize this is an extremely difficult budget year, but VPI is a lean program with a direct impact on at-risk 4-year-olds. VPI is currently funded through lottery funds, not general fund dollars, and competes with other lottery funded programs. Including VPI in the SOQ would recognize that, like early reading and algebra intervention programs, VPI builds a critical foundation for later success on SOL tests. For that reason, it is best described as an essential component of our existing K-12 program and should be included in the Standards of Quality. (FY 2011 state funding = $60 million)

- The ***At-risk Add-on Program*** provides incentive funds to school divisions above the SOQ to support programs that address the needs of students educationally at-risk. It recognizes that it costs more to ensure that economically disadvantaged students receive an education that enables them to meet rigorous standards and provides school divisions flexibility to use the funds to meet the needs of those students.[3] Accountability is provided by requiring schools to meet SOL pass rate and (soon) graduation benchmarks in order to achieve full accreditation. Schools report using these funds for SOL remediation, dropout prevention, tutoring services, ESL, computerized remediation programs, class size reduction, truancy officers, and reading and math resources teachers. All local school divisions participate in this program. (FY 2011 state funding = $63 million)

In summary, recognizing these programs in the Standards of Quality would go a long way toward accomplishing one of the Board's stated goals: to provide school divisions with additional instructional resources to address identified needs.

Thank you for your leadership and commitment to our students. Please let me know if you have any questions or concerns.

Sincerely,

Angela A. Ciolfi

[2] Task Force on Financing the Standards of Quality for Virginia's Public Schools, December 1972 and July 1973.
[3] See Dickey, Kent C., supra note 3.

Board of Education Agenda Item

Item: J. **Date:** January 13, 2011

Topic: Final Review of Proposed *Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools*

Presenter: Mr. Charles B. Pyle, Director of Communications

Telephone Number: (804) 371-2420 **E-Mail Address:** **Charles.Pyle@doe.virginia.gov**

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by

___ State or federal law or regulation

____ Board of Education regulation

__X__ Other: Guidance to local school boards related to § 22.1-253.13:7, *Code of Virginia*

__X__ Action requested at this meeting

___ Action requested at future meeting:

Previous Review/Action:

___ No previous board review/action

_X_ Previous review/action

date November 18, 2010

action Accepted for first review and public comment

Background Information:

Virginia was among the first states to require criminal background checks for all public school teachers and other school board employees. Since 1989, all initial or first-time applicants offered or accepting employment have had to submit to fingerprinting and provide personal descriptive information to be forwarded along with the applicant's fingerprints through the Central Criminal Records Exchange to the Federal Bureau of Investigation for a criminal background check. This requirement was extended in 1998 to include applicants for positions with accredited private and parochial schools.

Since 1997, applicants offered or accepting employment requiring direct contact with students have been required to provide written consent and the necessary personal information for the hiring school board to obtain a search of the registry maintained by the Virginia Department of

Social Services of founded complaints of child abuse and neglect.

In 2006, the General Assembly expanded background check certifications to include employees of contractors employed by public schools who have direct contact with students.

Section 5414 of the Elementary and Secondary Education Act of 1965, as amended by the No Child Left Behind Act of 2001, required a national study of sexual abuse in schools. The study, *Educator Misconduct: A Synthesis of Existing Literature*, was conducted by Charol Shakeshaft of Hofstra University (now the chairman of the Department of Educational Leadership at Virginia Commonwealth University) and published in 2004 by the U.S Department of Education (USED).

Foremost among Shakeshaft's recommendations for the prevention of sexual misconduct is the development of specific district-level policies prohibiting sexual misconduct and inappropriate relationships between educators and students — including consensual relationships. Shakeshaft stated that local policies should describe prohibited behaviors to eliminate ambiguity about what types of actions are unacceptable.

The 2004 USED report also recommended mandatory training for educators and administrators about the prevention and detection of misconduct. Shakeshaft noted that sexual abuse prevention training for educators and other school employees — whether pre-professional or in-service — rarely includes training on the prevention and recognition of educator sexual misconduct. Rather, programs focus on recognizing and responding to abuse and neglect occurring outside the school.

Of the 169 actions taken by the Board of Education against licenses since 2000, 120 were in response to sexual misconduct involving minors. In many of these cases, school divisions filed petitions only after receiving an inquiry from VDOE about a case in which a license holder had been convicted but no licensure action had been initiated by the division.

The 2008 General Assembly — with the support of the Board of Education — approved HB 1439 and SB 241, which amended Standard 7 of the Standards of Quality by adding language requiring school boards to develop policies and procedures to address complaints of sexual abuse of students by school board employees.

HB 1439 and SB 241 require local school boards to notify the Board of Education within 10 days if a licensed employee is dismissed or resigns due to a criminal conviction or founded child abuse or neglect charge. In addition, HB 1439 and SB 241 require:

- Court clerks to notify the Superintendent of Public Instruction when a person licensed by the Board of Education is convicted of a felony drug crime or a felony sex crime involving a child victim; and
- Local social services departments to notify the state superintendent of license holders who have exhausted appeals after being identified as the subject of a founded case of abuse.

The 2008 General Assembly also erected additional barriers to employment and access to school buildings by offenders:

- HB 1242 prohibits the employment of anyone whose job would require direct contact with students if the applicant is the subject of a founded case of physical or sexual abuse of a child. Additionally, the bill requires the dismissal of a teacher who, while employed by a local school board, becomes the subject of a founded case of physical or sexual abuse of a child and has exhausted all available appeals.
- HB 567 prohibits any adult convicted of a sexually violent offense from entering and being present upon any property he knows or has reason to know is a public or private elementary or secondary school or child day care property during school hours and during school-related and school-sponsored activities. Previously, the prohibition only applied during school hours.

Summary of Major Elements

Under the state constitution and state law, local school boards are responsible for the development of policies governing the conduct of their employees. The model policies and best practices described in *Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools* are designed to assist school boards in crafting effective local policies to prevent abuse and meet their responsibilities under HB 1439 and SB 241 to develop policies and procedures to address complaints of sexual abuse of a student by a teacher or other school board employee.

The guidance and best practices contained in *Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools* address factors contributing to actual cases of misconduct in the commonwealth's public schools and include elements and practices common to successful youth protection programs. These elements are:

- A statement of purpose and philosophy addressing the shared responsibility of school divisions, school employees, volunteers, students, parents and others for the prevention and reporting of sexual misconduct and abuse;
- Clear and reasonable policies governing communication between students and school board employees — including electronic communication — that promote transparency, accessibility and professionalism;
- Clear and reasonable policies governing physical contact between students and school board employees and volunteers in settings and circumstances common to public schools;
- Clear and reasonable policies governing permissible and unacceptable social interactions and relationships between students and school board employees and volunteers;
- Training of school personnel and volunteers and the dissemination of sexual misconduct and abuse prevention policies to school board employees, volunteers, students, and parents;
- Clear procedures for the reporting of suspected sexual misconduct and abuse; and
- Consequences for school personnel and volunteers who violate sexual misconduct and abuse prevention policies.

School boards that adopt and implement local policies aligned with the guidance document will meet their obligation under HB 1439 and SB 241 and create learning environments with clear rules that emphasize awareness, transparency, and prevention.

In developing *Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public*

Schools, the Division of Policy and Communications studied policies adopted by school boards and legislatures in several states, youth protection policies adopted by private and parochial school systems, policies adopted by national youth-service organizations, and reports and studies on the issue of sexual misconduct in school settings.

Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools was accepted by the Board of Education for first review and public comment on November 18, 2010. Comments were received during the 30-day public comment period from the following five persons (see Attachment A):

- A citizen in Petersburg expressing general support for the proposed guidance document;
- The chairwoman of the education committee of the Virginia State Conference of the NAACP on potential local policies based on the guidelines and a related state statute;
- The legislative liaison of the Virginia Academy of School Psychologists on the potential impact of the proposed guidelines on school psychologists and other clinicians;
- A parent and former Henrico County Public Schools employee expressing general support for the proposed guidelines and suggesting further steps; and
- The president of the Virginia Education Association on the potential impact of local policies based on the proposed guidance on communications, physical contact, social interaction, and consequences for violations of local policies.

The following revisions were made to the proposed guidance in response to public comment and comments from members of the Board of Education:

- Guidance related to one-on-one meetings between students and clinical professionals (nurses, psychologists, counselors, therapists, etc.) was added.
- Guidance related to electronic communications and online social networking was clarified.
- Guidance related to physical contact between students and school board employees or adult volunteers was clarified.
- Guidance related to private social gatherings was clarified.

Superintendent's Recommendation:
The Superintendent of Public Instruction recommends that the Board of Education approve the proposed *Guidelines for the Prevention of Sexual Misconduct and Abuse in the Public Schools* as a resource for school divisions.

Impact on Resources: The impact on resources is expected to be minimal.

Timetable for Further Review/Action: The document will be posted on the VDOE website in an appropriate location upon the approval of the board.

Proposed Guidelines for the Prevention of Sexual Misconduct & Abuse in Virginia Public Schools

Virginia Board of Education
January 13, 2011

Introduction

The 2008 General Assembly adopted legislation (HB 1439 and SB 241) amending Standard 7 of the Standards of Quality to require school boards to adopt policies addressing sexual abuse of students by teachers and other school board employees:

> § **22.1-253.13:7**. Standard 7. School board policies.
>
> A. Each local school board shall develop policies and procedures to address complaints of sexual abuse of a student by a teacher or other school board employee.

The Virginia Board of Education developed *Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools* to help school divisions meet their obligation under the law and create and implement policies and procedures that establish clear and reasonable boundaries for interactions between students and teachers, other school board employees, and adult volunteers.

The model policies and best practices in the document draw from policies and legislation approved by school boards and legislatures in other states and policies and best practices implemented by private and parochial schools and national youth-service organizations.

Elements of Sexual-Abuse Prevention Policy

School board policies on the prevention of sexual abuse of students by division employees and volunteers should contain these basic elements:

1. Statement of purpose and philosophy addressing the shared responsibility of the school board, school divisions employees, volunteers, students, parents and others for the prevention and reporting of sexual misconduct and abuse;
2. Clear and reasonable rules governing communication — including electronic communication — between students and school board employees;
3. Clear and reasonable rules governing physical contact between students and school board employees and volunteers;
4. Clear and reasonable rules governing social interactions and relationships between students and school board employees and volunteers;
5. Requirement for training of school personnel and volunteers and the dissemination of sexual misconduct and abuse prevention policies to school board employees, volunteers, students, and parents;
6. Procedures for the reporting of suspected sexual misconduct and abuse;
7. Consequences for school personnel and volunteers who violate sexual misconduct and abuse prevention policies; ~~and~~
8. Applicability to teachers and other employees of virtual school programs and other vendors providing instructional services to students~~.~~ ; and
9. Procedures for one-on-one and confidential interactions between students and clinicians (nurses, psychologists, social workers, therapists, etc.).

Statement of purpose and philosophy

Responsibility for protecting students from sexual misconduct and abuse is shared by the division superintendent, the school board, teachers and other school board employees, school volunteers, state agencies, law enforcement, and parents. By following school board policy on the prevention of sexual misconduct and abuse, teachers, principals, and other educators and employees provide a safe and healthy environment for teaching and learning.

Statements describing the purpose and philosophy of a school board policy on the prevention of sexual misconduct and abuse should define the protection of students as a division priority and express the obligation of all employees to observe boundaries governing interaction and communication with students. The school board demonstrates its commitment to protecting students from sexual misconduct and abuse through:

1. Strict compliance with all state laws and regulations related to the screening of prospective employees for the conviction of barrier crimes and founded cases of child abuse and neglect;
2. The development, effective implementation — including training — and enforcement of clear and reasonable policies governing the interaction of students and school board employees and volunteers;
3. The establishment of channels for reporting by students and parents of suspected misconduct and abuse, and the prompt notification of law enforcement when criminal activity is alleged or suspected;
4. Disclosure of formal reprimands and dismissals for violating school board policies on sexual misconduct and abuse prevention to school divisions seeking references; and
5. Strict compliance with all state laws and regulations related to reporting to the Virginia Department of Education of resignations and dismissals of licensed employees related to convictions of barrier crimes and founded cases of abuse.

In its statement of purpose and philosophy, the school board should also express how adherence to division policies governing student-employee interactions can protect employees from false accusations and accusations based on misunderstandings.

Communication between school division employees and students

School board policies should recognize the importance of communication in learning and instruction while placing reasonable restrictions on content and settings. Teachers and other employees can protect themselves from misunderstandings and false accusations by adhering to the division's rules on communicating with students.

Model policy for in-person communications with students

- Conversations with students should focus on matters related to instruction and school activities. School board employees and volunteers should not initiate discussions about their private lives or the intimate details of the private lives of unrelated students.
- Conversation by school board employees and volunteers with students that could be interpreted as flirtatious, romantic or sexual is prohibited.
- The sharing of sexually explicit or obscene jokes and verbal "kidding" of a sexual nature between school board employees, volunteers and students is prohibited.
- Private, one-on-one conversations with students should take place within the potential view, but out of the earshot of other adults — such as in a classroom with the hallway door open. This policy also applies to conversations between volunteers and unrelated students.
- School board employees may not conduct an ongoing series of one-on-one meetings with a student without the knowledge of the principal and without written permission of a parent or guardian.
- The school board's policy on in-person communications with students also applies to teachers and other employees of virtual school programs and other vendors providing instructional services to students.

Digital technology provides multiple means for teachers and other school division employees to communicate with students. The division policy should establish acceptable channels for electronic communications with students while prohibiting interactions unrelated to instruction or not specifically authorized by school board policy. In short, electronic communications with students should be transparent, accessible to supervisors, and professional in content and tone.

Model policy for electronic communications with students

- Under most circumstances, ~~T~~teachers and other school board employees must restrict one-on-one electronic communications with individual students to accounts, systems and platforms provided by or accessible to the school division.
- Teachers and other employees may not use personal ~~wireless~~ communications devices to "text" students and are prohibited from interacting one-on-one with students through personal online social-networking sites. Teachers and other school board employees must decline or disregard invitations from students to interact privately through texting and personal social-networking sites.
- If, because of an urgent or emergency circumstance, a teacher or other school board employee uses a personal communications device or account to contact an individual student, the date, time, and nature of the contact must be reported in writing to his or her supervisor on the next school day.
- Teachers and other school board employees may not knowingly engage in online gaming unrelated to instruction with students.
- School board policy on electronic communications with students also applies to teachers and other employees of virtual school programs and other vendors providing instructional services to students.

Best Practices:
Division technology and instructional staff collaborate to develop local policies that allow for appropriate electronic communications between school board employees and students while deterring misconduct and providing accountability.

Developments in personal digital communications and social networking are reviewed annually by division technology staff and school board policies are revised as needed.

~~Best Practice:~~ Information about school board policies on in-person and electronic communication between employees and students is included in student and parent handbooks and posted on the school division Web site.

Physical contact

Physical contact between school board employees and students should be public, nonsexual, and appropriate to the circumstances. ~~School employees and volunteers should avoid physical contact when alone with an unrelated student.~~ Physical contact between school board employees and adult volunteers and unrelated students when other adults are not present is prohibited unless necessary to protect the health and well being of the student.

Model policy for physical contact with students

- Physical contact between an adult and student that is expected and appropriate in preschool and in the early elementary grades — such as a spontaneous hug between a teacher and a child at the end of the day — is not appropriate with older children.
- Physical contact meant to encourage or reassure students, such as a hand on the shoulder or a pat on the back, should be brief and unambiguous in meaning.
- School board policy on physical contact with students also applies to teachers and other employees of virtual school programs and other vendors providing instructional services to students.

Best Practice: Information about the school board's policy on physical contact between employees and students is included in student and parent handbooks and posted on the school division Web site.

Social Interaction with Students

It is natural for friendships to develop between students and teachers and other school employees. Rules governing social interactions with students allow for healthy relationships between students and educators while eliminating opportunities for misunderstandings and misconduct.

Model policy for on-site and off-site social interaction with students

- School employees and volunteers should avoid situations in which they are alone with an unrelated student and not observable by other adults or students.
- All off-site, school-related activities involving school board employees and students must be approved by an authorized administrator and be supervised by a least two unrelated adults.
- Adult chaperones for off-site, school-related activities must be at least 21 years of age.
- Written parental permission must be secured for all off-site, school-related activities.
- The giving of expensive gifts or gifts of a personal nature, such as jewelry and clothing, to unrelated students by teachers, volunteers and other school board employees is prohibited. School board employees and volunteers may not accept such gifts from individual students.
- School board employees shall not grant special privileges, rewards, or opportunities to a specific child beyond those customarily provided as incentives to promote and recognize achievement.
- School board employees are prohibited from hosting ~~or participating in~~ private social gatherings and parties with students during which alcohol and/or other drugs are consumed.
- School board employees and adult volunteers shall not share pornographic or sexually explicit materials with students.
- Romantic or sexual relationships between school employees or volunteers and students are prohibited, regardless of the age of the student or the proximity in age of the employee or volunteer and student.
- School board policy on social interaction with students also applies to teachers and other employees of virtual school programs and other vendors providing instructional services to students.

Best Practice: Information about the school board's policy on social interaction between employees and students is included in student and parent handbooks and posted on the school division Web site.

Procedures for one-on-one and confidential interactions between students and clinicians

Clinical professionals (nurses, psychologists, counselors, therapists, etc.) are guided by professional codes of ethics and school board policies when one-on-one and confidential interactions with students are required to provide necessary services and protect patient privacy.

- Clinicians meeting one-on-one with students must notify his or her supervisor in advance of the time and place of each meeting.
- Each school and center must maintain a log of all one-on-one meetings between clinicians and students to record the names of the participants and document the place, purpose and duration of each meeting.
- Services requiring one-on-one meetings with clinicians should be described in a student's individualized education program or health care plan.

Best Practice: Principals and administrators of schools and centers should review logs of one-on-one and confidential meetings monthly.

Training and dissemination of school board policy

It is the responsibility of the school board to provide training on the prevention of sexual misconduct and abuse to all employees and volunteers. Training may be provided by a qualified vendor or other organization, provided that the content is substantially aligned with school board policy. Training may be provided as a workshop or online with a means of confirming participation and completion.

All school board employees and school volunteers should be provided with a copy of the school board's policy for the prevention of sexual misconduct and abuse at the beginning of the school year. A link to the policy also should be posted on the homepage of the school division Web site.

Contracts with virtual school programs and other vendors providing instructional services to students should include a requirement that employees follow school board policy on the prevention of sexual misconduct and abuse.

Best Practice: Principals appoint — in consultation with faculty and parents — school committees with responsibility for increasing awareness of state laws and school board polices. Divisions provide training to school committees in order for committees to oversee training of building-level employees and volunteers.

Reporting suspected misconduct and/or abuse

The school board's policy on the prevention of sexual misconduct should include clear channels for reporting suspect misconduct for employees and volunteers and for students and parents.

The *Code of Virginia* (§ **63.2-1509**) requires school board employees to report all cases of suspected abuse to local or state social services agencies or the principal or his or her designee. The *Code* (§ **22.1-291.3**) also requires school boards (and administrators of private and parochial schools) to post a notice reminding teachers and other employees of their responsibility to report suspected abuse. This notice must include the Virginia Department of Social Services' toll-free child-abuse-and-neglect hotline.

All school board employees and volunteers should be aware of location of the notice required by § **22.1-291.3** and understand their legal obligation to report abuse or neglect.

The school board policies on the prevention of sexual misconduct should include these statutory reporting requirements and obligate employees and volunteers who observe, or are told of, misconduct — as defined by the local policy — to notify the principal or his or her designee promptly.

School board policies also should reference the statutory requirement (§ **22.1-313**) that school divisions to notify the superintendent of public instruction within 10 business days when employees are dismissed or resign because of a conviction of a barrier offense or a founded case of child abuse.

Model policy for reporting suspected abuse and misconduct

- The principal of each school shall ensure that all building-level employees and adult volunteers are aware of their legal obligation to report suspected abuse to local or state social service agencies or the principal or his or her designee and that the notice required by § **22.1-291.3** is posted in a manner that complies with the law.
- The principal of each school shall ensure that all building-level employees and adult volunteers are aware of their obligation under the school board's policy on the prevention of sexual misconduct to report misconduct to the principal or his or her designee.
- School board employees and adult volunteers who observe or otherwise become aware of sexual misconduct by another employee or adult volunteer must notify the principal or his or her designee promptly.
- The superintendent shall also designate an administrator within the division central office to receive reports of sexual misconduct.
- When a licensed employee is dismissed or resigns because of a conviction of a barrier offense or founded case of child abuse, the superintendent shall notify the superintendent of public instruction within 10 business days and provide the school board with documentation of the notification.

Best Practice: Instructions for reporting misconduct are included in student and parent handbooks and posted on the school division Web site.

Consequences for violations of school board policy

In determining consequences for violations of school board sexual abuse prevention policies, administrators must evaluate the willfulness of the conduct and nature of the conduct or communication. School board employees and volunteers have an obligation to report violations of the division's policies for preventing sexual misconduct to the principal or his or her designee.

Model policy for violations of school board policy on sexual misconduct and abuse

- Violations involving sexual relations with a student, regardless of the age of the student or the proximity in age of the student and employee or volunteer; sexual abuse of a student; or communication with a student of a sexual or romantic nature; shall result in dismissal, prompt notification of law enforcement and social services if required by state law, and in the case of an employee or volunteer licensed by the Board of Education, the initiation of a complaint against the license.

- The response to violations involving willful conduct, or conduct or communication of a sexual or romantic nature not involving actual sexual relations or abuse, may include a formal reprimand, suspension, dismissal or other personnel action deemed necessary to prevent sexual abuse and protect the health, welfare, discipline or morale of students, and if warranted in the case of an employee or volunteer licensed by the Board of Education, the initiation of a complaint against the license.
- The response to violations determined to have been inadvertent, and/or not involving conduct or communication of an abusive, sexual or romantic nature, may include counseling and training, and in cases involving multiple violations, a formal reprimand or other action deemed warranted to prevent future violations of school board policy.

References

In developing *Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools*, the Division of Policy and Communications studied policies adopted by school boards and legislatures in several states, youth protection policies adopted by private and parochial school systems, policies adopted by national youth-service organizations, and reports and studies on the issue of sexual misconduct in school settings.

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Attachment A

Public Comment on Proposed Guidelines for the Prevention of Sexual Misconduct & Abuse in Virginia Public Schools

From: Linwood Christian [redacted]
Sent: Wednesday, December 01, 2010 12:42 AM
To: Roberts, Margaret (DOE); Morris, Marian (DOE)
Subject: Support for a regulation discouraging Teachers from having facebook pages with students.

Dr. Roberts or Mrs. Morris,
Could you please forward this email to members of the board of Education as well as send me the proposal to keep teachers from friending students on facebook (that may not be the correct wording but I hope I'm close.)
Thank you
Linwood Christian

Dear Virginia Board of Education members,
In the recent month and weeks I have been hearing that this board is considering some type of regulation/rule that would forbid teachers here in the Commonwealth "friending their students on facebook or other social medias such as twitter, etc.

First let me say that if this is something that this board in not going to just consider, but take action, I support you and it. As a parent I do not want my child and his teacher having that kind of relationship. The only relationship that they should be having is teacher student and nothing else. There are quite few arguments out there against this, but in my research I have found that there are just as many arguments for it. States such as Florida have put this type of ban into action and some teachers have lost their jobs. I don't believe that a teacher should have that much time on their hands that they should be having a facebook relationship with a student. To be quite honest as parents we shouldn't have that kind of relationship with our childrens' teacher unless we've known each other prior.

By putting this into action, it will be a small step in preventing lines from being blurred. I have my son's teacher's phone number, but it's only if I have questions or concerns about his progress. Also my son's teachers have my contact information (home and cell phone, and email address) and this is for educational purposes and to assist in my child's improvement.

There is too much going on whereby teachers are taking very inappropriate liberties with students. What is even worse is that it seems parents are making it possible, by 1) not monitoring their child's internet usage, 2) not monitoring their child's cell phone usage (my feeling is unless they are working a child shouldn't have a cell phone anyway). 3) Being concerned with whether or not they will still be liked by their child.

I guess, because the era is different now than when I was brought up, what was just is not any longer. I'm the type of parent that until my child is paying his own rent, he doesn't do anything in private that he can't do before the family. I question when strange things happen or come into my house. Enough about me.

I do so hope that you all will require the local school divisions to look into taking the same action.

Thank you for taking the time to listen/read my email. Should you have further questions I can be reached by phone at [redacted]

Sincerely
Linwood K. Christian, Jr. -Parent
Petersburg

From: [redacted]
Sent: Tuesday, November 30, 2010 10:25 AM
To: Pyle, Charles (DOE)
Cc: State NAACP; Rev. Vines
Subject: Prevention of Sexual Misconduct and Abuse in Virginia's Publiuc Schools

Mr. Pyle :
Please consider the following inquiries below when the committee meets to discuss policy regarding the above subject.

* Are provisions or an appeal process in place for ex- school board or other employees convicted of sexual misconduct to attend school functions for their personal children .... i.e. picking up or driving children to school, artistic, academic, athletic competitions or graduations.?

* Will school personnel and / or staff who work with students be provided with *training* to handle referenced issues ? (ex. on-line ***Abuse*** training such as offered by VCU)
* Will individual schools be responsible for handling incidents or complaints referencing the above issue or will school divisions be **encouraged** to develop a a panel of specific representatives from the school division staff to deal with issues ...ex. guidance counselors, administrators, School Nurse, etc?.

* Sexual misconduct can be a form of bullying..... will special emphasis be placed on identifying and / or giving support to those students who might be victims of the "**Abusers**," and are reluctant to seek help ?

Virginia State Conference NAACP Education Committee
Mrs. Janette Boyd Martin, Chair
[redacted]

From: Troilen Seward [redacted]
To: **Charles.pyle@doe.gov**
Sent: Mon, Nov 29, 2010 10:48 am
Subject: Comment on Proposed Guidelines for the Prevention of Sexual Misconduct and Abuse in Virginia Public Schools

Dear President Saslaw and Members of the Board of Education:

The Virginia Academy of School Psychologists (VASP) strongly supports the guidelines for implementing policies and procedures that establish clear and reasonable boundaries for interactions between students and teachers, other school board employees and adult volunteers. We, however, find the policy for in-person communications with students troublesome in several places, given the scope of our duties and responsibilities.

The bullet that references "employees and volunteers should not initiate discussions about their private lives or the intimate details of the private lives of unrelated students"
could be problematic. If the "their" is referring to only the employee and volunteer, then there is not a problem. If, however, it is referring to the student, the potential for not following the policy exists for school psychologists, who in their testing, for example, may have to question responses or drawings made by students. Those questions could elicit information about students' private lives. Is it possible to re-word that bullet so that it does not apply to school psychologists engaging in the performance of their duties?

The other bullet that presents a problem is the one that states "private one-on-one conversations with students should take place within the potential view, but out of the earshot of other adults-such as in a classroom with the hallway door open." School psychologists are not always in a room wiith glass in the door so they are visible to others, yet their working environment must be private so as to ensure test security and testing validiity. Testing with the door open is not a possibility.

We in no way want to exempt school psychologists from the intent of these guidelines, but without a statement that addresses their concern in these two referenced bullets, performance of their duties could become problelmatic. Every school psychologist who has read the guidelines and who has contacted me has asked the same questions or expressed the same concerns. Any clarification in the above would be appreciated.

Sincerely,
Troilen Seward
Legislative Liaison for VASP

From: Lucas [redacted]
Sent: Sunday, December 26, 2010 6:03 PM
To: Roberts, Margaret (DOE)
Subject: Public Comments Regarding Educator Misconduct, Abuse, and Neglect

Introduction:

My name is Kandise Lucas, and I am a parent, child/family advocate, and educator whose God-given life assignment is to speak out for and improve the educational conditions of students and families that have no voice, and are commonly abused, neglected, and/or discriminated against. I stand by the fact that education is a civil right that every child in every family is entitled to regardless of race, creed, ethnicity, economic status, or social standing.

Below are the recommendations that I have shared in response to the Virginia Department of Education's request for public comment regarding establishing policies and procedures as it relates to educator misconduct and abuse/neglect of our children by educators.

These recommendations are being proposed in response to an increasing level of abuse, neglect, and misconduct by educators within the Commonwealth toward our most innocent and vulnerable children; our children with disabilities, children of color, and children that are economically disadvantaged.

These recommendations are also in response to the increasing hostile, anti-child, illegal, and unethical atmosphere that exists within our schools that not only discourages the reporting of abuse, neglect, and misconduct by our peers, but also subjects those educators, parents, and students that operate in integrity and according to the law by reporting abuse, to retaliation, discrimination, intimidation, or even worse.

[redacted]

Whether it is Kevin Ricks, (**http://www.washingtonpost.com/wp-srv/special/metro/kevin-ricks-timeline/**), or [redacted], the real and horrific ***threat*** to our children and their futures is the same. The ***responsibility*** of the educational, legal, social services, and overall community at large is still the same. The ***accountability*** that is nonexistent must be reclaimed at every level.

Most importantly, we must begin to be "the village" again for our children so that our schools reclaim their rightful places as one of the safest places on earth for our children. For some of them, whose faces and names I personally know, school may be the ONLY safe place for them in their world.

I. The Crisis That Is Subjecting Our Children To Predators Within The Classroom

Fact One: Students within the Commonwealth are being abused and neglected within our public and private schools by licensed educators.

Fact Two: Educators that engage in abuse, neglect, and misconduct are often ***not*** held accountable by administrators, superintendents, or school boards, social services, law enforcement, elected officials, or the media instead they are often protected and defended.

Fact Three: Many superintendents, whether out of ignorance or intentionally, within the Commonwealth fail to report, and even, at times, cover up for and defend educators that have been found to be guilty of abuse, neglect, and/or misconduct to the proper authorities in an effort to avoid bad publicity and/or possible legal liabilities. Virginia Code requires them to report these individuals to child protective services within 72 hours if they receive or discover abuse and/or neglect. Superintendents are also required, by law, to report these individuals to the Virginia Department of Education within ten days of the knowledge of or suspicion of abuse and/or neglect of students.

Fact: A significant number of school districts promote and maintain environments that discourage, and at times, even punish those educators that report their peers for misconduct.

Fact: Many of those students that are victimis of abuse, neglecte, and educator misconduct are students with special needs, students of color, and students that are economically disadvantaged.

Fact: Many human resources departments within school districts fail to properly investigate the criminal backgrounds of the educators they hire. In addiiton, districts fail to conduct annual criminal background checks on current employees, some of which may have had their last check over thirty years ago.

Fact: **Sch**ool officials, law enforcement, and social services agencies have often received complaints and warnings from parents,students, and others regarding educators that abuse and neglect students, but these complaints often go unaddressed and/or inadequately addressed, allowing classroom predators to not only have full access to abuse and/or neglect students for decades, but to migrate from school district to school district, state to state, as they do so. As a result, classrooms have become a "safe haven" for child molesters, abusers, and those that neglect children.

Fact: In the Commonwealth of Virginia, an individual will be fined more for speeding than for failing to report the suspected and/or actual abuse of a child as required by the Mandated Reporter Law. A proposal should be set forth that is similar to the PREA Federal law, which requires that individuals that knowingly fail to report sexual, physical, and/or emotional abuse and/or neglect, will be sentenced to the same criminal sanctions as the individual that committed the act, in addition to being required to register as a sex offender if warranted. They will be considered to be ***"accessories after the fact."***

II. HOW CAN THOSE THAT ARE CHARGED WITH PROTECTING OUR CHILDREN IMPROVE THEIR EFFORTS TO DO SO?

1) VADOE purchase a criminal background check program that allows for annual reviews of those seeking licensure and those that are licensed. The fee for completing the checks can be charged to educators.

2) VADOE require each eduator to submit a current criminal background check from the State Police with each licensure renewal request.

3) VADOE forward a monthly request, via email, to all area superintendents requiring that they report any and all educational professionals that have been been found to have committed educator misconduct, abuse, and or neglect, whether they were terminated or permitted to resign. Require that if there are no reported instance for a specific district, that it be documented as well.

4) VCU and VADOE incorporate a mandatory pre-questionnnaire component to the "Child Abuse Recognition" online assessment, and require that the assesment be completed annually during each district's staff development week:

"**Criminal Disclosure Statement"**

Ex) ***"To my knowledge, I have not committed, been charged, or convicted of a criminal act within the past twelve months." (Educator provides intials to confirm) A listing of criminal acts***

with a box to be check "yes" or "no" may also be utilized to ensure clarity.

"Mandatory Reporter Acknowledgement Statement"

Ex) " ***I understand that I am a Mandated Reporter within the Commonwealth of Virginia, and that I am required to report any***

instances of suspected pr actual abuse and/or neglect to the Department of Social Services with 72 hours of having knowledge of the

incident. (Educator provides intials to confirm)

.

"Mandatory Reporter Compliance Statement"

Ex) ***"I affirm that I have fully complied with the Commonwealth of Virginia's Mandatory Reporter Law by reporting any and all suspected***

and actual incidents of child abuse and/or neglect to the Department of Social Services witin 72 hours of having knowledge of the

incident. (Educator provides intials to confirm)

5) VADOE forward a monthly request, via email, to all area court clerks, state police, media sources,and social service agencies requiring that they report any and all educational professionals that have been been found to have committed educator misconduct, abuse, and or neglect, whether they were terminated or permitted to resign.

6) Require that each district incorporate mandated reporter compliance, educator misconduct, and child abuse/neglect prevention and reporting training within their professional development calendar. In addition, require that every superintendent and school board member within the Commonwealth receive training regarding this issue as it relates to their legal and moral responsibilities to protect children by thoroughly completing criminal background checks, quickly reporting suspected and confirmed instances of abuse,neglect, and misconduct. Districts must also be required to include an "Educator Code of Conduct" component with their "Student Code of Conduct" policy document that parents are provided within, and that outlines the policies for reporting abuse, neglect, and misconduct of educators.

7) VADOE establish a toll free number and anonymous email box that allows for reporting educator complaints related to abuse, neglect, and misconduct. Each school district should be required to notify parents, students, guardians, and others of this service that is available through the VADOE on their website

8) VADOE collaborate with the Virginia Attorney General's Office in order to establish a volunteer task force, (educators, VEA, parents, law enforcement, social services, elected officials, Superintendent's Assoc., School Board Ass., faith-based, child advocacy, and civil rights groups), that provides training and support for school districts that request it and for districts that are found to have failed to comply with the mandated reporter laws. In addition to providing training and proposing more severe penalties for those mandated reporters that fail to report.

9) VADOE provide unpaid internships to college and university students within the fields of law and law enforcement in order to provide for the human resources that are required to initiate and maintain criminal background/misconduct data base that is listed on the same data base as the teacher licensure query system. The VADOE may also

solicit several teams of educational professionals to carry out these duties and offer licensure renewal credit under "Educational Projects." These methods would prove to place mimimal financial burden on the agency, but would still work to ensure that educator data is accurate and current.

10) VADOE sponsor rotating quarterly townhall meetings, which are open to the general public, which allow for public comments regarding educators misconduct, abuse, neglect, and criminal histories. zhese events should be aired via internet on the VADOE's website, in addition to being posted for later viewing.

11) Initiate legislation that requires that teachers be drug tested when they are initially hired, randomly, and when there is a report and/or suspicion of drug abuse/use manifested on school grounds.

K. N. Lucas

Parent, Educator, Advocate
http://www.blogtalkradio.com/speaktruthpower/2010/11/08/the-advocates

"The righteous care about justice for the poor, but the wicked have no such concern."

Prov. 29:7

"The only thing necessary for the triumph of evil is for good men to do nothing"
Edmund Burke

VIRGINIA EDUCATION ASSOCIATION

Teaching. Learning. Leading.

December 3, 2010

Mr. Charles Pyle
Director of Communications
Virginia Department of Education
P.O. Box 2120
Richmond, VA 23218

Dear Mr. Pyle:

Thank you for the opportunity to provide comments on the "Proposed Guidelines for the Prevention of Sexual Misconduct & Abuse in Virginia's Public Schools."

Members of the Virginia Education Association (VEA) are bound by high ethical standards and are committed to a safe learning environment for all students. For example, a VEA resolution passed in 2007 reads as follows: "The VEA believes that school employees should maintain a professional relationship with students free from sexual coercion, innuendo, and/or action." (Resolution E-10). Further, every member of the VEA and the National Education Association subscribes to the "Code of Ethics of the Education Profession," which commits them to adhering to "the highest ethical standards."

In recent years, VEA has reaffirmed these principles while providing additional guidance to our members. For example, we always caution educators to exercise the utmost discretion when using social networking sites or digital technologies. We offer in-service programs to our members regarding the importance of maintaining a professional relationship with students at all times. Especially for our younger educators, who are not that far in age from their high school students, we routinely offer guidance and advice on how to maintain a professional demeanor at all times.

We welcome the opportunity to engage in dialogue about this difficult and sensitive issue. A policy on abuse and misconduct provides important clarification and guidance to employees surrounding an issue that may otherwise get swept under the rug.

At the same time, however, we believe the applications of some of these guidelines – without amendment or further explanation—might have unforeseen and unintended consequences that could actually be harmful to either educators or to students. We share your goal of the guidelines being as clear and unambiguous as possible.

116 South Third Street, Richmond, Virginia 23219-3704 1-800-552-9554 • 804-648-5801 • FAX 804-775-8379
www.veanea.org

Communication Between School Division Employees and Students
In Person Communication

Bullet #1 limits conversations with students to "matters related to instruction and school activities."

> **Concern:** If adhered to strictly, this policy would work against teachers' efforts to connect what students are learning in class to prior experience, to hobbies, and to interests that might serve as "hooks" for engagement with the curriculum. One VEA member related a story of trying to engage a group of disinterested boys in the curriculu of 12th grade English. In conversation about their interests, she discovered that several of them participated in dirt-track racing – not a school activity. She took the time to attend one of the races, potentially violating both this restriction and the restrictions abo out of school trips and activities. The students saw her there, realized she was willing to learn about their interests, and they in turn engaged in her class. It isn't always about school activities. Sometimes, the students who need the best our teachers have to offer are least likely to be part of any school-related activity.

Bullet #5 states "School board employees may not conduct an ongoing series of one-on-one *meetings* with a student without the knowledge of the principal and without written permission a parent or guardian."

> **Concern:** Such an absolute policy could work against teacher strategies to alter disruptive behaviors and engage students in learning. For example, the highly effective "two-minute intervention" requires the teacher to –
>
> - Spend 2-5 minutes with a student for 10 consecutive days;
> - Talk to that student about something that interests him/her;
> - Keep the conversation on an informal basis;
> - Move from teacher talk to student talk and keep the focus on that subject alone.

We also worry that these restrictions on communication may limit students' access to trusted adults in a time of crisis. For many children, school is one of the few safe and positive environments they experience. These attempts to protect children from abuse and misconduct from school employees may prevent them from having the opportunity to disclose the abuse they are receiving outside of school. Disclosure of abuse rarely happens in front of a group of students. Rather, children get to know an adult, carefully determining who might be safe and trustworthy, and wait until they are alone with the adult to disclose. Preventing the child from

having that opportunity to speak one-on-one about details of their private lives with an adult may actually put more children in harm's way outside of school.

School personnel play a vital role in protecting children from abuse and neglect at home, in the family, or in the community. Guidance regarding reporting suspected misconduct and or abuse should mirror state law Virginia Code section 63.2-1509 mandating school personnel report "reason to suspect that a child is an abused or neglected child." Notice to the school principal or his designee can take the place of report to social services if information is received by a teacher or school staff member in the course of professional services in a school. The principal or his designee shall make the report to social services forthwith. School personnel risk fine for failure to file a required report within 72 hours of first suspicion of child abuse or neglect.

Electronic communications with students

Throughout this section, we encourage you to define terminology clearly; for example, "online social-networking sites." What exactly does that include? Would "wikis" be prohibited? Would a fundraising page on Facebook set up by the choral boosters be prohibited?

Bullet #1 "Teachers and other employees may not use personal wireless communications devices to 'text' students and are prohibited from interacting with students through online social networking sites."

> **Concern:** Some teachers have only cellular phones (no landlines) and make that phone number available to students and their parents. Text messaging is a legitimate means of exchanging information—one of the most rapidly-growing communications channels—and we question whether policy guidance that allows for no legitimate use of a text message between an educator and a pupil will be outdated before it is published.

Physical contact

Guidance regarding physical contact with students should reflect state law prohibiting corporal punishment and authorizing physical contact for purposes such as defense of self or others, maintaining order and control, and enforcing school rules prohibiting weapons and other items. The proposed guidelines do not acknowledge that school employees are responsible to maintain discipline and order in schools. Guidelines should not risk giving students and parents a false impression that school personnel are prohibited from touching students. State statutes Virginia Code sections 22.1-279.1, 18.2-57 and 63.2-1511 prohibit corporal punishment, defined as the infliction of, or causing the infliction of, physical pain on a student as a means of discipline. The prohibition on corporal punishment does not prevent (i) the use of incidental,

minor or reasonable physical contact or other actions designed to maintain order and control; (ii) the use of reasonable and necessary force to quell a disturbance or remove a student from the scene of a disturbance which threatens physical injury to persons or damage to property; (iii) the use of reasonable and necessary force to prevent a student from inflicting physical harm on himself; (iv) the use of reasonable and necessary force for self-defense or the defense of others; or (v) the use of reasonable and necessary force to obtain possession of weapons or other dangerous objects.

Concern: The three bulleted items do not address a variety of legitimate and appropriate reasons school employees may have for making physical contact with a student. A partial list would include:

- A teacher attempting to break up a fight or appropriately restrain an out-of-control student
- A coach "spotting" a gymnast during a routine
- A band instructor helping a novice student properly position his or her hands on a clarinet

Social Interactions with Students

We question whether some of these restrictions are feasible in small communities where teachers attend church with their students, coach youth soccer teams, attend neighborhood Christmas parties, and live their lives and raise their own children alongside the families of their students.

Consequences for violations of school board policy.

Guidance regarding consequences for violations of school board child abuse policies should reflect state law regarding the standard for determining whether actions taken during the course of school employment constitute child abuse. Virginia Code section 63.2-1511 D provides if actions or omissions of a teacher, principal, or other person employed by a local school board or employed in a school operated by the Commonwealth were within such employee's scope of employment and were taken in good faith in the course of supervision, care, or discipline of students, then the standard in determining if a report of abuse or neglect is founded is whether such acts or omissions constituted gross negligence or willful misconduct.

Thank you again for the opportunity to comment on the proposed guidelines. On behalf of the 60,000 members of the VEA, we stand ready to work with you to continue to provide the most up-to-date and accurate guidance to educators on this important topic.

Sincerely,

Kitty Boitnott

Kitty Boitnott, Ph.D., NBCT
President

Board of Education Agenda Item

Item: _____K._____ **Date:** January 13, 2011

Topic: Final Review of Recommended Cut Scores for End-of-Course History Standards of Learning Tests Based on the 2008 History Standards

Presenter: Mrs. Shelley Loving-Ryder, Assistant Superintendent, Division of Student Assessment and School Improvement

Telephone Number: (804) 225-2102 **E-Mail Address:** Shelley.Loving-Ryder@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by
- ____ State or federal law or regulation
- __X__ Board of Education regulation
- ____ Other: _____

____ Action requested at this meeting ____ Action requested at future meeting: _____ (date)

Previous Review/Action:

____ No previous board review/action

__X__ Previous review/action
Date: November 2010
Action: First Review of Recommended Cut Scores for End-of-Course History Standards of Learning Tests Based on the 2008 History Standards

Background Information:

In 2010-2011 new Standards of Learning (SOL) tests measuring the 2008 history content standards will be administered. Because of the changes in the content measured by these tests, new passing scores must be adopted by the Virginia Board of Education. Consistent with the process used in 1998 and in 2003, committees of educators were convened to recommend to the Board of Education (BOE) minimum "cut" scores for the achievement levels of pass/ proficient and pass/advanced for the new tests. Committees for the four end-of-course history tests: World History I, World History II, Virginia and U.S. History, and World Geography met in early November. Standard setting committees for the remaining history tests will be convened in February.

Summary of Major Elements:

Information about the range of cut scores recommended by the committees for the achievement levels of pass/proficient and pass/advanced for the SOL tests in World History I, World History II, Virginia and U.S. History, and World Geography will be presented to the Board. The Board is asked to review this information and to adopt "cut" scores for the World History I, World History II, Virginia and U.S. History, and World Geography SOL tests that represent the achievement levels of pass/proficient and

pass/advanced.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education adopt cut scores representing the achievement levels of pass/proficient and pass/advanced for the end-of-course World History I, World History II, Virginia and U.S. History, and World Geography SOL tests as follows.

- Virginia and U.S. History: 30 for proficient and 53 for advanced as recommended by the Articulation Committee
- World History I: 31 for proficient and 53 for advanced based on the Round 1 results of the standard setting committee
- World History II: 31 for proficient and 52 for advanced based on the Round 1 results of the standard setting committee
- World Geography: 33 for proficient based on Round 1 results of the standard setting committee + 2 standard errors of the median and 54 for advanced based on the Round 1 results of the standard setting committee

Impact on Resources:

N/A

Timetable for Further Review/Action:

Following the January 2011 Board of Education meeting, cut scores representing the achievement levels of pass/proficient and pass/advanced for the end-of-course World History I, World History II, Virginia and U.S. History, and World Geography SOL tests will be communicated to school divisions via superintendent’s memorandum and to Pearson, Virginia’s testing contractor so that scores resulting from the administration of these tests can be reported.

Board of Education Agenda Item

Item: L. **Date:** January 13, 2011

Topic: Final Review of Proposed Guidelines for Policies on Concussions in Student-Athletes, Senate Bill 652 Passed by the 2010 General Assembly

Presenter: Dr. Mark Allan, Director, Office of Standards, Curriculum, and Instruction

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Origin:

____ Topic presented for information only (no board action required)

_X_ Board review required by
- _X_ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

_X_ Action requested at this meeting ___ Action requested at future meeting: _____

Previous Review/Action:

____ No previous board review/action

_X_ Previous review/action
date November 18, 2010
action First Review of Proposed Guidelines for Policies on Concussions in Student-Athletes, Senate Bill 652 Passed by the 2010 General Assembly

Background Information:

Pursuant to Senate Bill 652, the 2010 General Assembly amended the *Code of Virginia* to include §22.1-271.5 directing the Board of Education to develop and distribute to local school divisions by July 1, 2011, guidelines for policies dealing with concussions in student-athletes, and requiring each local school division to develop policies and procedures regarding the identification and handling of suspected concussions in student-athletes. Senate Bill 652 also requires the Board of Education to define appropriate licensed health care providers authorized to evaluate and provide written clearance for return to play.

The goals of the Student-Athlete Protection Act (SB 652) are to ensure that student-athletes who sustain concussions are properly diagnosed, given adequate time to heal, and are comprehensively supported until they are symptom free. According to the 2008 Consensus Statement on Concussion in Sport (3rd International Conference on Concussion in Sport, Zurich, November 2008), "the cornerstone of concussion management is physical and cognitive rest until symptoms resolve and then a graded

program of exertion prior to medical clearance and return to play."

At the November 18, 2010, meeting, the Board of Education accepted for first review the proposed guidelines for policies on concussions in student-athletes, and authorized Department of Education staff to proceed with a 30-day public comment period.

Summary of Major Elements:

As specified in enactment clause three of SB 652, the Board of Education worked with the Virginia High School League, the Department of Health, the Virginia Athletic Trainers Association, representatives of the Children's Hospital of The King's Daughters and the Children's National Medical Center, the Brain Injury Association of Virginia, the American Academy of Pediatrics, the Virginia College of Emergency Physicians and other interested stakeholders in conducting the research necessary for the development of guidelines for concussions in student-athletes. The attachment contains the proposed guidelines and definitions related to policies on concussions in student-athletes that reflects the changes made as a result of public comment.

A 30-day public comment period began on November 18, 2010, following the Board of Education's acceptance of the Proposed Guidelines for Policies on Concussions in Student-Athletes for first review. One comment was received during the public comment period at the November 18, 2010, Board of Education meeting. The speaker and additional public comment addressed the need to raise the awareness of how brain injuries can affect the student's cognitive abilities in an educational setting. Eight other online comments were received:

- suggestion that physical education teachers receive the annual training on concussion management;
- suggestions that additional personnel such as the school nurse and sports officials serve on the school division's concussion policy team;
- suggestions that the definition of "licensed health care providers" be revised; and
- concern that the law requires each student-athlete and the student-athlete's parent or guardian sign a statement acknowledging receipt of the division's concussion information.

As a result of public comment, proposed additional language in the guidelines addresses the academic needs and gradual reintroduction of cognitive demands for students who have sustained concussions.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education adopt the attached proposed guidelines for policies on concussions in student-athletes.

Impact on Resources:

The impact on the Department of Education to develop and implement these guidelines is not expected to be significant and can be absorbed with existing staff. It is anticipated, however, that the adopted regulation will impact school divisions administratively as they will be required to develop policies and procedures regarding the identification and handling of suspected concussions in student-athletes; ensure each student-athlete and the student athlete's parent review, on an annual basis, information on concussions; and provide annual training for staff and volunteers.

Timetable for Further Review/Action:

Following the Board of Education's adoption of the Proposed Guidelines for Policies on Concussions in Student-Athletes, the Department of Education will publish the guidelines on the Board of Education's Web site.

Virginia Board of Education
Proposed Guidelines For Policies on Concussions in Student-Athletes

Senate Bill 652, the 2010 General Assembly
Code of Virginia § 22.1-271.5

Final Review
January 13, 2011

Virginia Board of Education Proposed Guidelines
For Policies on Concussions in Student-Athletes

Introduction

Pursuant to Senate Bill 652, the 2010 General Assembly amended the *Code of Virginia* to include § 22.1-271.5 directing the Board of Education to develop and distribute to school divisions by July 1, 2011, guidelines for policies dealing with concussions in student-athletes, and requiring each school division to develop policies and procedures regarding the identification and handling of suspected concussions in student-athletes. The full text of the legislation is available at the end of this document.

The goals of the Student-Athlete Protection Act (SB 652) are to ensure that student-athletes who sustain concussions are properly diagnosed, given adequate time to heal, and are comprehensively supported until they are symptom free. According to the Consensus Statement on Concussion in Sport (3rd International Conference on Concussion in Sport, Zurich, November 2008), "the cornerstone of concussion management is physical and cognitive rest until symptoms resolve and then a graded program of exertion prior to medical clearance and return to play."

The Brain Injury Association of Virginia notes that it is important for all education professionals to be aware of the issues surrounding brain injuries and how they can affect the student's abilities in the educational setting. Resulting impairments can be multifaceted and can include cognitive, behavioral, and/or physical deficits. Impairments can be mild or severe, temporary or permanent, resulting in partial or total loss of function. Because these deficits are so varied and unpredictable, it is difficult to forecast the recovery for a student with a brain injury.

Definitions(s)

A **concussion** is a brain injury that is characterized by an onset of impairment of cognitive and/or physical functioning, and is caused by a blow to the head, face or neck, or a blow to the body that causes a sudden jarring of the head (i.e., a helmet to the head, being knocked to the ground). A concussion can occur with or without a loss of consciousness, and proper management is essential to the immediate safety and long-term future of the injured individual. A concussion can be difficult to diagnose, and failing to recognize the signs and symptoms in a timely fashion can have dire consequences.

Most athletes who experience a concussion can recover completely as long as they do not return to play prematurely. The effects of repeated concussions can be cumulative, and after a concussion, there is a period in which the brain is particularly vulnerable to further injury. If an athlete sustains a second concussion during this period, the risk of permanent brain injury increases significantly and the consequences of a seemingly mild second concussion can be very severe, and even result in death (i.e., "second impact syndrome").

Appropriate licensed health care provider means a physician, physician assistant, osteopath or athletic trainer licensed by the Virginia Board of Medicine; a neuropsychologist licensed by the Board of Psychology; or a nurse practitioner licensed by the Virginia State Board of Nursing.

Return to play means participate in a nonmedically supervised practice or athletic competition.

Virginia Board of Education Guidelines

A. Policies and Procedures

1. Each school division shall develop policies and procedures regarding the identification and handling of suspected concussions in student-athletes. Consideration should also be given to addressing the academic needs and gradual reintroduction of cognitive demands for students who have been determined to have a concussion. The Brain Injury Association of Virginia offers resources on strategies for educators to consider when working with a student with a brain injury.
2. In order to participate in any extracurricular athletic activity, each student-athlete and the student-athlete's parent or guardian shall review, on an annual basis (every 12 months), information on concussions provided by the school division. After having reviewed materials describing the short- and long-term health effects of concussions, each student-athlete and the student-athlete's parent or guardian shall sign a statement acknowledging receipt, review, and understanding of such information. The local school division will determine procedures for ensuring, annually, that statements are distributed to, and collected from each student-athlete and his or her parent or guardian with appropriate signatures.
3. A student-athlete suspected by that student-athlete's coach, athletic trainer, or team physician of sustaining a concussion or brain injury in a practice or game shall be removed from the activity at that time. A student-athlete who has been removed from play, evaluated, and suspected to have a concussion or brain injury shall not return to play that same day nor until (i) evaluated by an appropriate licensed health care provider as determined by the Board of Education and (ii) in receipt of written clearance to return to play from such licensed health care provider. The licensed health care provider evaluating student-athletes suspected of having a concussion or brain injury may be a volunteer.
4. Appropriate licensed health care providers or properly trained individuals evaluating student-athletes at the time of injury will utilize a standardized concussion sideline assessment instrument (e.g., SCAT II, SAC and BESS). Sideline Concussion Assessment Tool (SCAT-II), the Standardized Assessment of Concussion (SAC) and the Balance Error Scoring System (BESS) are examples of sideline concussion assessment tools that test cognitive function and postural stability. A list of assessment tools is located in the Resources section of these guidelines.
5. A concussion policy team that includes, at a minimum, a school administrator, athletic administrator, appropriate licensed health care provider, coach, parent, and student shall refine and review local concussion management policies on an annual basis.

B. Protocol for return to play

1. No member of a school athletic team shall participate in any athletic event or practice the same day he or she is injured and:
   a. exhibits signs, symptoms or behaviors attributable to a concussion; or
   b. has been diagnosed with a concussion.
2. No member of a school athletic team shall return to participate in an athletic event or training on the days after he/she experiences a concussion unless all of the following conditions have been met:
   a. the student no longer exhibits signs, symptoms or behaviors consistent with a concussion, at rest or with exertion;
   b. the student is asymptomatic during, or following periods of supervised exercise that is gradually intensifying; and
   c. the student receives a written medical release from a licensed health care provider.

The Zurich Consensus Statement (November 2008) return to play guidelines and the American Academy of Pediatrics (AAP) Concussion Guidelines (August 2010), are available online to assist healthcare providers, student athletes and their families, and school divisions, as needed.

C. Helmet replacement and reconditions policies and procedures

1. Helmets must be National Operating Committee on Standards for Athletic Equipment (NOCSAE) certified by the manufacturer at the time of purchase.
2. Reconditioned helmets must be NOCSAE recertified by the reconditioner.

D. Training required for personnel and volunteers

1. Each school division shall develop policies and procedures to ensure school staff, coaches, athletic trainers, team physicians, and volunteers receive current training annually on:
   a. how to recognize the signs and symptoms of a concussion;
   b. strategies to reduce the risk of concussions;
   c. how to seek proper medical treatment for a person suspected of having a concussion; and
   d. when the athlete may safely return to the event or training.
2. The concussion policy management team shall ensure training is current and consistent with best practice protocols.
3. School divisions shall maintain a tracking system to document compliance with the annual training requirement.
4. Annual training on concussion management shall use a reputable program such as, but not limited to, the following:
   a. The Centers for Disease Control's (CDC) tools for youth and high school sports coaches, parents, athletes, and health care professionals provide important information on preventing, recognizing, and responding to a concussion, and are available at http://www.cdc.gov/concussion/HeadsUp/online_training.html. These include *Heads Up to Schools: Know Your Concussion ABCs*; *Heads Up: Concussion in Youth Sports;* and *Heads Up: Concussion in High School Sports*.
   b. The National Federation of State High School Associations' (NFHS) online coach education course – *Concussion in Sports – What You Need to Know*. This CDC-endorsed program provides a guide to understanding, recognizing and properly managing concussions in high school sports. It is available at www.nfhslearn.com.
   c. The Oregon Center for Applied Science (ORCAS) ACTive® course, an online training and certification program that gives sports coaches the tools and information to protect players from sports concussions. Available at http://activecoach.orcasinc.com/, ACTive® is funded by the National Institutes of Health, developed by leading researchers, and validated in a clinical trial.

Community Involvement

Schools should make every effort to provide materials and training opportunities related to concussion management to organizations sponsoring athletic activity for student-athletes on school property. School divisions are not required to enforce compliance with such policies.

Code of Virginia

§ 22.1-271.5. Policies on concussions in student-athletes.

A. The Board of Education shall develop and distribute to each local school division guidelines on policies to inform and educate coaches, student-athletes, and their parents or guardians of the nature and risk of concussions, criteria for removal from and return to play, and risks of not reporting the injury and continuing to play.

B. Each local school division shall develop policies and procedures regarding the identification and handling of suspected concussions in student-athletes. Such policies shall require:

1. In order to participate in any extracurricular physical activity, each student-athlete and the student-athlete's parent or guardian shall review, on an annual basis, information on concussions provided by the local school division. After having reviewed materials describing the short- and long-term health effects of concussions, each student-athlete and the student-athlete's parent or guardian shall sign a statement acknowledging receipt of such information, in a manner approved by the Board of Education; and

2. A student-athlete suspected by that student-athlete's coach, athletic trainer, or team physician of sustaining a concussion or brain injury in a practice or game shall be removed from the activity at that time. A student-athlete who has been removed from play, evaluated, and suspected to have a concussion or brain injury shall not return to play that same day nor until (i) evaluated by an appropriate licensed health care provider as determined by the Board of Education and (ii) in receipt of written clearance to return to play from such licensed health care provider.

The licensed health care provider evaluating student-athletes suspected of having a concussion or brain injury may be a volunteer.

C. In addition, local school divisions may provide the guidelines to organizations sponsoring athletic activity for student-athletes on school property. Local school divisions shall not be required to enforce compliance with such policies.

3. That the Board of Education, in developing the policies pursuant to subsection A of § 22.1-271.5, shall work with the Virginia High School League, the Department of Health, the Virginia Athletic Trainers Association, representatives of the Children's Hospital of the King's Daughters and the Children's National Medical Center, the Brain Injury Association of Virginia, the American Academy of Pediatrics, the Virginia College of Emergency Physicians and other interested stakeholders.

4. That the policies of the Board of Education developed pursuant to subsection A of § 22.1-271.5 shall become effective on July 1, 2011.

Resources

A. Organizations and agencies that provide resources related to concussions

1. American Academy of Pediatrics, http://www.aap.org
2. American Medical Society for Sports Medicine, http://www.amssm.org/
3. Brain Injury Association of Virginia, http://www.biav.net
4. Children's Hospital of the King's Daughters, http://www.chkd.org
5. Children's National Medical Center, http://www.childrensnational.org
6. Consensus Statement on Concussion in Sport (3rd International Conference on Concussion in Sport, Zurich, November 2008), http://www.sportconcussions.com/html/Zurich%20Statement.pdf
7. National Academy of Neuropsychology, http://www.nanonline.org
8. Virginia Athletic Trainers' Association**,** http://www.vata.us
9. Virginia College of Emergency Physicians, https://www.acep.org
10. Virginia Department of Health, http://www.vdh.state.va.us
11. Virginia High School League, http://www.vhsl.org

B. Concussion assessment tools

1. Sports Concussion Assessment Tool (SCAT), Concussion in Sport Group, http://www.amssm.org/MemberFiles/SCAT_v13-_Side_2.doc
2. The Sideline Assessment for Concussions, Brain Injury Association of America, http://www.knowconcussion.org/pdfs/sideline_assessment.pdf and http://www.knowconcussion.org/pdfs/bess.pdf
3. Sports-Related Concussions in Children and Adolescents, Pediatrics, http://pediatrics.aappublications.org/cgi/content/abstract/peds.2010-2005v1?rss=1

C. Educational strategies for working with students who have concussions

1. Brain Injury and the Schools: A Guide for Educators, Brain Injury Association of Virginia, http://www.biav.net

Board of Education Agenda Item

Item: M. **Date:** January 13, 2011

Topic: Final Review of the Proposed Supplement to the Curriculum Framework for the 2009 *Mathematics Standards of Learning*

Presenter: Mr. Michael Bolling, Mathematics Coordinator, Office of Standards, Curriculum, and Instruction

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Origin:

____ Topic presented for information only (no board action required)

____ Board review required by
- ____ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

_X__ Action requested at this meeting ____ Action requested at future meeting: _____

Previous Review/Action:

____ No previous board review/action

_X__ Previous review/action
- Date: September 23, 2010
- Action: Report on the Preliminary Analysis of Virginia's 2009 *Mathematics Standards of Learning* Compared to the Common Core State Standards in Mathematics
- Date: November 18, 2010
- Action: First Review of the Proposed Supplement to the Curriculum Framework for the 2009 *Mathematics Standards of Learning*

Background:

In February 2009, the Virginia Board of Education adopted revised *Mathematics Standards of Learning*, followed by adoption of the Mathematics Curriculum Framework on October 22, 2009. As part of the development of the standards, the work of the committee members was informed by reports from Achieve, the College Board, ACT, and other national and international reports. Furthermore, as a member of Achieve's American Diploma Project (ADP) Network, Virginia participated in a rigorous external review process of the 2009 *Mathematics Standards of Learning*, with both ACT and the College Board analyzing Virginia's mathematics standards against their own college- and career-ready benchmarks or standards. Both analyses showed strong alignment between the Virginia Standards of Learning and their respective standards for postsecondary readiness.

In June 2010, the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO) released the Mathematics Common Core State Standards. Since Achieve, the College Board, and ACT were partners with NGA and CCSSO, their earlier work with states in the ADP Network provided a foundation upon which the Common Core Standards were developed. As such, Virginia's 2009 *Mathematics Standards of Learning* and Mathematics Curriculum Framework have a strong alignment to the Mathematics Common Core State Standards.

To ensure alignment of the 2009 *Mathematics Standards of Learning* and Curriculum Framework with the Mathematics Common Core State Standards, Department of Education staff conducted a preliminary analysis of the content from the two sets of standards, and presented a report to the Board of Education on September 23, 2010. In October 2010, the Department convened a committee of mathematics educators to further review and refine the analysis. The review committee identified several concepts in Virginia's Curriculum Framework for the 2009 *Mathematics Standards of Learning* that need to be added or strengthened to ensure that Virginia's standards are equal to or more rigorous in content and scope than the Mathematics Common Core State Standards.

Summary of Major Elements:
Attachment A contains a crosswalk of the mathematics content for a proposed supplement to the Curriculum Framework for the 2009 *Mathematics Standards of Learning* for final review. The committee that reviewed the preliminary analysis indicated that addition of this material would complete and strengthen the content of the Curriculum Framework such that the 2009 *Mathematics Standards of Learning* and Curriculum Framework would equal or exceed the content and rigor of the Mathematics Common Core State Standards. Six public comments were received during the public comment period. The comments included statements of approval as well as suggestions to clarify content or change correlations. Slight edits were made to the language of the supplement and one change was made to the SOL 7.3 correlation. Additions to the supplement are noted with double underlines, and deletions are noted with double strikethroughs.

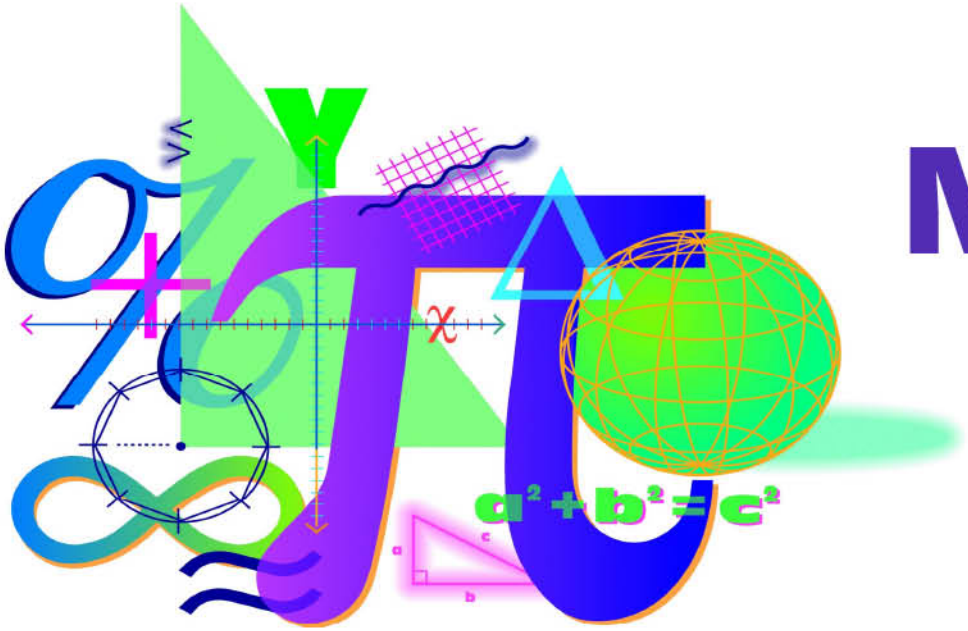
Attachment B contains the Report on the Analysis of Virginia's 2009 *Mathematics Standards of Learning* compared to the Common Core State Standards in Mathematics. Additions and changes included in the supplement to the Curriculum Framework were added to the report. These additions will ensure that Virginia's standards are equal to and in certain incidences are more rigorous in content and scope than the Mathematics Common Core State Standards.

Superintendent's Recommendation:
The Superintendent of Public Instruction recommends that the Board of Education adopt the proposed supplement to the Curriculum Framework for the 2009 *Mathematics Standards of Learning,* accept the final Report of the Analysis of Virginia's 2009 *Mathematics Standards of Learning* compared to the Common Core State Standards in Mathematics, and permit the Department of Education to make technical edits as needed.

Impact on Resources:
This responsibility can be absorbed by the agency's existing resources at this time.

Timetable for Further Review/Action:
Following the Board of Education's acceptance of the proposed supplement to the 2009 *Mathematics Standards of Learning* Curriculum Framework for final review, the Department will post to its Web site the supplement to the Curriculum Framework and the Report of the Analysis of Virginia's 2009 *Mathematics Standards of Learning* compared to the Common Core State Standards in Mathematics.

Attachment A



Mathematics Standards of Learning

Curriculum Framework 2009

Proposed Supplement to the Curriculum Framework for the 2009 *Mathematics Standards of Learning*

Final Review – January 13, 2011

Board of Education
Commonwealth of Virginia

Introduction

To ensure alignment of the 2009 *Mathematics Standards of Learning* and Curriculum Framework with the Common Core State Standards for Mathematics, Department of Education staff conducted a preliminary analysis of the content from the two sets of standards, and presented a comparison report to the Board of Education on September 23, 2010. In October 2010, the Department convened a committee of mathematics educators to further review and refine the analysis. The review committee identified several concepts in Virginia's Curriculum Framework for the 2009 *Mathematics Standards of Learning* that need to be added or strengthened to ensure that Virginia's standards are equal to or more rigorous in content and scope than the Common Core State Standards for Mathematics.

There are no changes proposed to the 2009 *Mathematics Standards of Learning*. Supplemental content is proposed only to the Curriculum Framework. The proposed changes to the Curriculum Framework for the 2009 *Mathematics Standards of Learning* have been noted with underlines (additions) and strikethroughs (deletions).

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
Measurement and Data 4.MD	
Geometric measurement: understand concepts of angle and measure angles.	
7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	**5.11 The student will measure right, acute, obtuse, and straight angles.** **5.11 CF** • **Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts.** • **Solve addition and subtraction problems to find unknown angle~~s~~ measures on a diagram in practical and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.**
Measurement and Data 5.MD	
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	
5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	
a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.	**6.10 The student will** **a) define pi (π) as the ratio of the circumference of a circle to its diameter;** **b) solve practical problems involving circumference and area of a circle, given the diameter or radius;** **c) solve practical problems involving area and perimeter; and** **d) describe and determine the volume and surface area of a rectangular prism.** **6.10 CF** • **Experiences in deriving the formulas for area~~, and~~ perimeter, and volume using manipulatives such as tiles, one inch cubes, adding machine tape, graph paper, geoboards, or tracing paper, promote an understanding of the**

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
	formulas and facility in their use.
The Number System 6.NS	
Apply and extend previous understandings of numbers to the system of rational numbers.	
8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	**6.11 The student will** **a) identify the coordinates of a point in a coordinate plane; and** **b) graph ordered pairs in a coordinate plane.** **6.11 CF** • **Relate the ~~values of the~~ coordinate~~s~~ of a point to the distance from each axis and ~~then~~ relate the coordinates of a single point to another point on the same horizontal or vertical line.**
Geometry 6.G	
Solve real-world and mathematical problems involving area, surface area, and volume.	
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	**6.12 The student will determine congruence of segments, angles, and polygons.** **6.12 CF** • **Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving practical and mathematical problems.**
Statistics and Probability 6.SP	
Develop understanding of statistical variability.	
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.**

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
	5.16 CF • **Describe the impact on measures of center when a single value of a data set is added, removed, or changed.**
The Number System 7.NS	
Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	
1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	
c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	~~**7.3 The student will**~~ ~~**a) model addition, subtraction, multiplication, and division of integers; and**~~ ~~**b) add, subtract, multiply, and divide integers.**~~ ~~**7.3 CF**~~ **7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents and numbers written in scientific notation; d) determine square roots; and **e) identify and describe absolute value for rational numbers.** **7.1 CF** • **Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle to solve practical problems.**
Geometry 7.G	
Draw, construct, and describe geometrical	

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
figures and describe the relationships between them.	
3. Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	**8.7 The student will** **a) investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and** **b) describe how changing one measured attribute of a figure affects the volume and surface area.** **8.7 CF** • **Describe the two-dimensional figures that result from slicing three-dimensional figures parallel to the base (e.g., as in plane sections of right rectangular prisms and right rectangular pyramids).**
Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	
5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	**8.6 The student will** **a) verify by measuring and describe the relationships among vertical angles, adjacent angles, supplementary angles, and complementary angles; and** **b) measure angles of less than 360°.** **8.6 CF** • **Use the relationships among supplementary, complementary, vertical, and adjacent angles to solve practical problems.**
Expressions and Equations 8.EE	
Understand the connections between proportional relationships, lines, and linear equations.	
5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example,*	**8.16 The student will graph a linear equation in two variables.** **8.16 CF** • **Interpret the unit rate of the proportional relationship graphed as the slope of the graph, and compare two different proportional relationships**

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	**represented in different ways.**
Expressions and Equations 8.EE	
Analyze and solve linear equations and pairs of simultaneous linear equations.	
7. Solve linear equations in one variable.	
a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** **a) solving literal equations (formulas) for a given variable;** **b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets;** **c) solving quadratic equations algebraically and graphically;** **d) solving multistep linear equations algebraically and graphically;** **e) solving systems of two linear equations in two variables algebraically and graphically; and** **f) solving real-world problems involving equations and systems of equations.** **Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.** **A.4 CF** • **Determine if a linear equation in one variable has one, an infinite number, or no solutions.**
The Real Number System N-RN	
Use properties of rational and irrational numbers.	
3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational	**8.2 The student will describe orally and in writing the relationships between the subsets of the real number system.**

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	**8.2 CF** • **~~Explain why~~ Recognize that the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.**
Arithmetic with Polynomials and Rational Expressions A-APR	
Use polynomial identities to solve problems	
4. Prove polynomial identities and use them to describe numerical relationships. *For example, the polynomial identity* $(x^2 + y^2)^2 = (x^2 – y^2)^2 + (2xy)^2$ *can be used to generate Pythagorean triples.*	**AII.1 The student, given rational, radical, or polynomial expressions, will** **a) add, subtract, multiply, divide, and simplify rational algebraic expressions;** **b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents;** **c) write radical expressions as expressions containing rational exponents and vice versa; and** **d) factor polynomials completely.** **AII.1 CF** • **Verify polynomial identities including the difference of squares, sum and difference of cubes, and perfect square trinomials.**
Reasoning with Equations and Inequalities A-REI	
Solve equations and inequalities in one variable	
4. Solve quadratic equations in one variable.	
a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x – p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.	**AII.4 The student will solve, algebraically and graphically,** **a) absolute value equations and inequalities;** **b) quadratic equations over the set of complex numbers;** **c) equations containing rational algebraic expressions; and** **d) equations containing radical expressions.** **Graphing calculators will be used for solving and for confirming the algebraic solutions.**

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
	AII.4 CF • **Recognize that the quadratic formula can be derived by applying the completion of squares to any quadratic equation in standard form.**
Trigonometric Functions F-TF	
Prove and apply trigonometric identities	
9. (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.	**T.9 The student will identify, create, and solve real-world problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.** **T.9 CF** • **Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.**
Congruence G-CO	
Make geometric constructions	
13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.	**G.4 The student will construct and justify the constructions of** **a) a line segment congruent to a given line segment;** **b) the perpendicular bisector of a line segment;** **c) a perpendicular to a given line from a point not on the line;** **d) a perpendicular to a given line at a given point on the line;** **e) the bisector of a given angle;** **f) an angle congruent to a given angle; and** **g) a line parallel to a given line through a point not on the given line.** **G.4 CF** • **Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.**
Similarity, Right Triangles, and Trigonometry G-SRT	
Define trigonometric ratios and solve problems involving right triangles	
7. Explain and use the relationship between the	**G.8 The student will solve real-world problems involving right triangles by**

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
sine and cosine of complementary angles.	**using the Pythagorean Theorem and its converse, properties of special right triangles, and right triangle trigonometry.** **G.8 CF** • **Explain and use the relationship between the sine and cosine of complementary angles.**
Circles G-C	
Understand and apply theorems about circles	
3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	**G.4 The student will construct and justify the constructions of** **a) a line segment congruent to a given line segment;** **b) the perpendicular bisector of a line segment;** **c) a perpendicular to a given line from a point not on the line;** **d) a perpendicular to a given line at a given point on the line;** **e) the bisector of a given angle;** **f) an angle congruent to a given angle; and** **g) a line parallel to a given line through a point not on the given line.** **G.4 CF** • **Construct the inscribed and circumscribed circles of a triangle.** **G.9 The student will verify characteristics of quadrilaterals and use properties of quadrilaterals to solve real-world problems.** **G.9 CF** • **Prove properties of angles for a quadrilateral inscribed in a circle.**
4. (+) Construct a tangent line from a point outside a given circle to the circle.	**G.4 The student will construct and justify the constructions of** **a) a line segment congruent to a given line segment;** **b) the perpendicular bisector of a line segment;** **c) a perpendicular to a given line from a point not on the line;** **d) a perpendicular to a given line at a given point on the line;** **e) the bisector of a given angle;** **f) an angle congruent to a given angle; and** **g) a line parallel to a given line through a point not on the given line.**

CCSS for Mathematics	Supplemental Information to Virginia's Mathematics SOL Curriculum Framework to Align with the Mathematics Common Core State Standards
	G.4 CF • **Construct a tangent line from a point outside a given circle to the circle.**
Expressing Geometric Properties with Equations G-GPE	
Translate between the geometric description and the equation for a conic section	
1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.	**G.12 The student, given the coordinates of the center of a circle and a point on the circle, will write the equation of the circle.** **G.12 CF** • **Recognize that the equation of a circle of given center and radius is derived using the Pythagorean Theorem.**

Virginia Department of Education

Comparison of Virginia's 2009 Mathematics Standards of Learning with the Common Core State Standards for Mathematics

January 13, 2011

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Introduction

This first draft of the *Comparison of Virginia's 2009 Mathematics Standards of Learning (SOL) with the Common Core State Standards (CCSS) for Mathematics* provides a side-by-side overview demonstrating how the 2009 Mathematics SOL are aligned to the CCSS. The comparison was made using Virginia's complete standards program for supporting teaching and learning in the Commonwealth's public schools and school divisions, including both the 2009 *Mathematics Standards of Learning* and the *Curriculum Framework for 2009 Mathematics Standards of Learning*. The Curriculum Framework is essential to any comparison conducted between the CCSS and the Mathematics SOL since it "unpacks" the SOL, providing detail that complements the standards.

Organization of the *Comparison of Virginia's 2009 Mathematics SOL with the CCSS*

The CCSS are presented in the left column of the table and are organized using the CCSS format. Headings and subheadings are those used in the CCSS. Using the format provided in the CCSS, the comparison is completed by individual grade levels in kindergarten through grade 8 and by conceptual categories in grades 9-12. As the SOL and Curriculum Framework components were reviewed and aligned to the CCSS, they were placed in the right column of the table adjacent to the similar standard in the CCSS. SOL bullets correlated to the CCSS are indicated with bold print. SOL listed as correlated to CCSS content may include correlations from the *Curriculum Framework for 2009 Mathematics Standards of Learning* and are denoted with "CF" following the SOL number (e.g., 7.4 CF). The CCSS conceptual categories for high school specify content that all students should learn in order to be college and career ready. In addition, the CCSS include content, indicated with "(+)", that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics. A subset of the CCSS considered modeling standards are marked with a star symbol "★".

Summary of Similarities and Differences Between the CCSS and the 2009 Mathematics SOL

Both the CCSS for Mathematics and Virginia's Mathematics SOL are rigorous and provide a detailed account of mathematics expectations for student learning and understanding. The content topics covered in both documents are clearly defined and sequential. By the time students have progressed into high school mathematics content through the CCSS or SOL, they have received at least the same mathematical content delivered through different learning progressions. Virginia's SOL are equal to or in some instances more rigorous in content and scope than the CCSS. While learning progressions may not completely mirror one another, the content from both is aligned.

Virginia's teachers value content standards that do not dictate methodology, as reflected in the public comment provided during the 2009 Mathematics SOL revision process. The CCSS include "content" standards that dictate methodology and/or applications and extensions of content that teacher professionals should determine based on the learning needs of their students.

Kindergarten – Grade 8 Mathematics

- The SOL strands (Number and Number Sense, Computation and Estimation, Measurement, Geometry, Probability and Statistics, and Patterns, Functions, and Algebra) remain constant throughout kindergarten – grade 8. In the CCSS document, the strand (domain) titles vary based on the content focus of that particular grade level. This flexibility in the strand content facilitates connections across the mathematics topics. The *Mathematics Curriculum Framework*, as the companion document of the SOL, rather than the SOL document itself, also makes mathematics connections, across mathematics topics.
- In an effort to minimize the number of topics included within a given grade level, the CCSS introduce some topics later and accelerate their progression faster than the SOL. For instance, fraction content is not introduced in the CCSS until grade 3, while the SOL begin development of fractional concepts in kindergarten. The learning progressions of the SOL provide ample time for concept development and application of content skills.
- The SOL and CCSS utilize different organizational strands. Although the SOL strand titles are different, all concepts included mirror those of the CCSS.
- The timeline for the introduction of specific content in the CCSS when compared to the SOL is not an exact match. Examples are listed below.
    - Fractions are not introduced to students in the CCSS until grade 3. The SOL introduce the concept of fractions in kindergarten.
    - Data collection does not begin in the CCSS until grade 3. The topic of data collection begins at the kindergarten level in the SOL.
    - Patterning is a fundamental topic that develops across the K-3 grade span in the SOL but does not begin in the CCSS until grade 3. The CCSS view the importance of connecting algebraic thinking with operations such as working with equal groups of objects to gain foundations for multiplication. The SOL also connect algebraic thinking with operations, but emphasize the use of patterning to build the basic foundations for multiplication as noted in both the *Curriculum Framework* and the *Sample Enhanced Scope and Sequence*.

- Probability is a topic that is introduced in grade 6 in the CCSS but begins at grade 3 in the SOL.

- While the CCSS K-4 content and learning progressions closely mirror the SOL, the learning progressions between grade 5 and Algebra I in the CCSS differ from the SOL progressions.
- Overall, the SOL for mathematics in kindergarten through grade 8 mirror the mathematics topics, content, and understandings identified in the CCSS document. The levels of rigor and cross-content connectedness in the *Standards of Learning*, *Curriculum Framework*, and the *Sample Enhanced Scope and Sequence* documents also mirror that of the CCSS document.

High School Mathematics

- By the time students complete high school mathematics SOL, they will have received the at least the same mathematical content found in the CCSS, but delivered through different learning progressions.
- The Common Core State Standards in high school mathematics are not presented in a format for each course, such as Algebra I, Geometry, Algebra II, etc. Rather, they are organized in the conceptual categories of:
  - Number and Quantity;
  - Algebra;
  - Functions;
  - Modeling (embedded within content and indicated with ★);
  - Geometry; and
  - Statistics and Probability.
- Model course sequences in a "traditional" sequence (Algebra I, Geometry, and Algebra II) and in a "integrated" sequence (Integrated 1, Integrated 2, Integrated 3) have been made available as an addendum to the CCSS.
- The CCSS specify mathematics standards that all students should study in order to be college and career ready. In addition, the CCSS include additional standards, indicated with "(+)", that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics. These CCSS standards are intended for students pursuing a career in science, technology, engineering, and mathematics (STEM) fields of study. Virginia embeds similar mathematics standards, those above the common core expectations for all students, within the *2009 Mathematics Standards of Learning* approved by the Virginia Board of Education.

- The *Mathematics Standards of Learning* have been externally validated by Achieve's American Diploma Project (ADP), The College Board, and ACT. A letter to the Virginia Department of Education from Laura Slover, vice president for content and policy research for Achieve, contained the following analysis: "The Virginia proposed revised *Mathematics Standards of Learning (SOL)* present student learning expectations that are intellectually demanding and generally well aligned with the ADP Benchmarks. If Virginia's students master the state standards, they will likely be well prepared for both workplace and college success." In the *Report on the Rigor and Alignment to College Readiness of the Virginia Mathematics Standards of Learning* (2007), the College Board says that "Virginia students who successfully complete a program of study aligned to the Virginia Standards will be prepared for the intellectual rigors they will encounter in college and in the workplace."

Kindergarten

CCSS for Mathematics – Kindergarten	Mathematics SOL
Counting and Cardinality K.CC	
Know number names and the count sequence.	
1. Count to 100 by ones and by tens.	**K.4 The student will** **a) count forward to 100 and backward from 10;** b) identify one more than a number and one less than a number; and **c) count by fives and tens to 100.**
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	**K.4 The student will** **a) count forward to 100 and backward from 10;** **b) identify one more than a number and one less than a number;** and c) count by fives and tens to 100.
3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	**K.2 The student, given a set containing 15 or fewer concrete objects, will** **a) tell how many are in the set by counting the number of objects orally;** **b) write the numeral to tell how many are in the set; and** **c) select the corresponding numeral from a given set of numerals.** **1.1 The student will** a) count from 0 to 100 and write the corresponding numerals; and **b) group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.**
Count to tell the number of objects.	
4. Understand the relationship between numbers and quantities; connect counting to cardinality.	
a. When counting objects, say the number names in the standard	**K.1 The student, given two sets, each containing 10 or fewer concrete objects, will identify and describe one set as having**

CCSS for Mathematics – Kindergarten	Mathematics SOL
order, pairing each object with one and only one number name and each number name with one and only one object.	**more, fewer, or the same number of members as the other set, using the concept of one-to-one correspondence.** **K.1 CF** **• Match each member of one set with each member of another set, using the concept of one-to-one correspondence to compare the number of members between sets, where each set contains 10 or fewer objects.** **K.2 The student, given a set containing 15 or fewer concrete objects, will** **a) tell how many are in the set by counting the number of objects orally;** b) write the numeral to tell how many are in the set**;** and c) select the corresponding numeral from a given set of numerals.
b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.	**K.2 The student, given a set containing 15 or fewer concrete objects, will** **a) tell how many are in the set by counting the number of objects orally;** b) write the numeral to tell how many are in the set; and c) select the corresponding numeral from a given set of numerals. **K.2 CF** **• *Conservation of number* and *cardinality principle* are two important milestones in development to attaching meaning to counting.** **• The cardinality principle refers to the concept that the last counted number describes the total amount of the counted set. It is an extension of one-to-one correspondence.**
c. Understand that each successive number name refers to a	**K.4 The student will**

CCSS for Mathematics – Kindergarten	Mathematics SOL
quantity that is one larger.	a) count forward to 100 and backward from 10; **b) identify one more than a number and one less than a number;** and c) count by fives and tens to 100.
5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	**K.2 The student, given a set containing 15 or fewer concrete objects, will** **a) tell how many are in the set by counting the number of objects orally;** **b) write the numeral to tell how many are in the set; and** **c) select the corresponding numeral from a given set of numerals.**
Compare numbers.	
6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	**K.1 The student, given two sets, each containing 10 or fewer concrete objects, will identify and describe one set as having more, fewer, or the same number of members as the other set, using the concept of one-to-one correspondence.**
7. Compare two numbers between 1 and 10 presented as written numerals.	**K.2 The student, given a set containing 15 or fewer concrete objects, will** **a) tell how many are in the set by counting the number of objects orally;** **b) write the numeral to tell how many are in the set; and** **c) select the corresponding numeral from a given set of numerals.**
Operations and Algebraic Thinking K.OA	
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	
1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	**K.6 The student will model adding and subtracting whole numbers, using up to 10 concrete objects.**

CCSS for Mathematics – Kindergarten	Mathematics SOL
2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	**K.6 The student will model adding and subtracting whole numbers, using up to 10 concrete objects.** **1.6 The student will create and solve one-step story and picture problems using basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).	**K.6 The student will model adding and subtracting whole numbers, using up to 10 concrete objects.** **1.18 The student will demonstrate an understanding of equality through the use of the equal sign.** **1.18 CF** **• Model an equation that represents the relationship of two expressions of equal value.**
4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	**K.6 The student will model adding and subtracting whole numbers, using up to 10 concrete objects.** **1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
5. Fluently add and subtract within 5.	**1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
Number and Operations in Base Ten K.NBT	
Work with numbers 11–19 to gain foundations for place value.	
1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	**1.1 The student will** a) count from 0 to 100 and write the corresponding numerals; and **b) group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.** **1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
Measurement and Data K.MD	

CCSS for Mathematics – Kindergarten	Mathematics SOL
Describe and compare measurable attributes.	
1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	**K.8 The student will identify the instruments used to measure length (ruler), weight (scale), time (clock: digital and analog; calendar: day, month, and season), and temperature (thermometer).** **K.10 The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, and block.**
2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*	**K.10 The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, and block.**
Classify objects and count the number of objects in each category.	
3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	**K.15 The student will sort and classify objects according to attributes.**
Geometry K.G	
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).	
1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.	**K.12 The student will describe the location of one object relative to another (above, below, next to) and identify representations of plane geometric figures (circle, triangle,**

CCSS for Mathematics – Kindergarten	Mathematics SOL
	square, and rectangle) regardless of their positions and orientations in space.
2. Correctly name shapes regardless of their orientations or overall size.	**K.11 The student will** **a) identify, describe, and trace plane geometric figures (circle, triangle, square, and rectangle); and** b) compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).
3. Identify shapes as two-dimensional (lying in a plane, "flat") or three dimensional ("solid").	**K.11 The student will** **a) identify, describe, and trace plane geometric figures (circle, triangle, square, and rectangle**); and b) compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle). **2.16 The student will identify, describe, compare, and contrast plane and solid geometric figures (circle/sphere, square/cube, and rectangle/rectangular prism).**
Analyze, compare, create, and compose shapes.	
4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	**K.15 The student will sort and classify objects according to attributes.** **K.11 The student will** **a) identify, describe, and trace plane geometric figures (circle, triangle, square, and rectangle); and** **b) compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).** **1.12 The student will identify and trace, describe, and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, vertices, and right angles.** 2.16 The student will identify, describe, compare, and contrast plane and solid geometric figures (circle/sphere, square/cube, and rectangle/rectangular prism).

CCSS for Mathematics – Kindergarten	Mathematics SOL
5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	**1.13 The student will construct, model, and describe objects in the environment as geometric shapes (triangle, rectangle, square, and circle) and explain the reasonableness of each choice.**
6. Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*	**1.13 The student will construct, model, and describe objects in the environment as geometric shapes (triangle, rectangle, square, and circle) and explain the reasonableness of each choice.**

Mathematics SOL for kindergarten aligned with the CCSS at other grade levels	
Grade 2 – Measurement and Data 8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*	**K.7 The student will recognize a penny, nickel, dime, and quarter and will determine the value of a collection of pennies and/or nickels whose total value is 10 cents or less.**
Grade 1 – Measurement and Data 3. Tell and write time in hours and half-hours using analog and digital clocks.	**K.9 The student will tell time to the hour, using analog and digital clocks.**
Grade 2 – Measurement and Data 10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph. Grade 3 – Measurement and Data 3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent*	**K.14 The student will display gathered data in object graphs, picture graphs, and tables, and will answer questions related to the data.**

Mathematics SOL for kindergarten aligned with the CCSS at other grade levels	
5 pets.	
Grade 3 – Operations and Algebraic Thinking 9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.* Grade 4 – Operations and Algebraic Thinking 5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*	**K.16 The student will identify, describe, and extend repeating patterns.**

Mathematics SOL for kindergarten not explicitly stated in the CCSS at any grade level	
	K.3 The student, given an ordered set of ten objects and/or pictures, will indicate the ordinal position of each object, first through tenth, and the ordered position of each object.
	K.5 The student will identify the parts of a set and/or region that represent fractions for halves and fourths.
	K.13 The student will gather data by counting and tallying.

Grade 1

CCSS for Mathematics – Grade 1	Mathematics SOL
Operations and Algebraic Thinking 1.OA	
Represent and solve problems involving addition and subtraction.	
1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**1.6 The student will create and solve one-step story and picture problems using basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**1.6 The student will create and solve one-step story and picture problems using basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
Understand and apply properties of operations and the relationship between addition and subtraction.	
3. Apply properties of operations as strategies to add and subtract. *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*	**1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
4. Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.*	**1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
Add and subtract within 20.	
5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	**1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.**
6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1	**1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.**

CCSS for Mathematics – Grade 1	Mathematics SOL
= 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).	
Work with addition and subtraction equations.	
7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*	**1.18 The student will demonstrate an understanding of equality through the use of the equal sign.** **2.22 The student will demonstrate an understanding of equality by recognizing that the symbol = in an equation indicates equivalent quantities and the symbol ≠ indicates that quantities are not equivalent.**
8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*	**1.5 The student will recall basic addition facts with sums to 18 or less and the corresponding subtraction facts.** **1.18 The student will demonstrate an understanding of equality through the use of the equal sign.**
Number and Operations in Base Ten 1.NBT	
Extend the counting sequence.	
1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	**1.1 The student will** **a) count from 0 to 100 and write the corresponding numerals**; and b) group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.
Understand place value.	

CCSS for Mathematics – Grade 1	Mathematics SOL
2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a "ten." b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	**K.4 The student will** a) count forward to 100 and backward from 10; b) identify one more than a number and one less than a number; and **c) count by fives and tens to 100.** **1.1 The student will** a) count from 0 to 100 and write the corresponding numerals; and **b) group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.**
3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	**2.1 The student will** a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; b) round two-digit numbers to the nearest ten; and **c) compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (*greater than, less than,* or *equal to*).**
Use place value understanding and properties of operations to add and subtract.	
4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	**2.6 The student, given two whole numbers whose sum is 99 or less, will** **a) estimate the sum; and** **b) find the sum, using various methods of calculation.**
5. Given a two-digit number, mentally find 10 more or 10 less	**1.1 The student will**

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than the number, without having to count; explain the reasoning used.	**a) count from 0 to 100 and write the corresponding numerals; and** **b) group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.** **1.2 The student will count forward by ones, twos, fives, and tens to 100 and backward by ones from 30.**
6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**1.1 The student will** **a) count from 0 to 100 and write the corresponding numerals; and** **b) group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.** **1.2 The student will count forward by ones, twos, fives, and tens to 100 and backward by ones from 30.**
Measurement and Data 1.MD	
Measure lengths indirectly and by iterating length units.	
1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.	**K.10 The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, and block.** **1.9 The student will use nonstandard units to measure length, weight/mass, and volume.**
2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an	**1.9 The student will use nonstandard units to measure length, weight/mass, and volume.**

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object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*	
Tell and write time.	
3. Tell and write time in hours and half-hours using analog and digital clocks.	**K.9 The student will tell time to the hour, using analog and digital clocks.** **1.8 The student will tell time to the half-hour, using analog and digital clocks.**
Represent and interpret data.	
4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	**K.14 The student will display gathered data in object graphs, picture graphs, and tables, and will answer questions related to the data.** **1.15 The student will interpret information displayed in a picture or object graph, using the vocabulary *more, less, fewer, greater than, less than,* and *equal to*.**
Geometry 1.G	
Reason with shapes and their attributes.	
1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.	**K.15 The student will sort and classify objects according to attributes.** **1.12 The student will identify and trace, describe, and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, vertices, and right angles.** **1.16 The student will sort and classify concrete objects according to one or more attributes, including color, size, shape, and thickness.**
2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right	**5.13 The student, using plane figures (square, rectangle, triangle, parallelogram, rhombus, and trapezoid), will** **a) develop definitions of these plane figures; and**

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circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	**b) investigate and describe the results of combining and subdividing plane figures.**
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	**K.5 The student will identify the parts of a set and/or region that represent fractions for halves and fourths.** **1.3 The student will identify the parts of a set and/or region that represent fractions for halves, thirds, and fourths and write the fractions.**

Mathematics SOL for grade 1 aligned with the CCSS at other grade levels	
Grade 2 – Measurement and Data 8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*	**1.7 The student will** **a) identify the number of pennies equivalent to a nickel, a dime, and a quarter; and** **b) determine the value of a collection of pennies, nickels, and dimes whose total value is 100 cents or less.**
Grade 3 – Measurement and Data 2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**1.10 The student will compare, using the concepts of more, less, and equivalent,** **a) the volumes of two given containers; and** **b) the weight/mass of two objects, using a balance scale.**
Kindergarten – Geometry 4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	**1.12 The student will identify and trace, describe, and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, vertices, and right angles.**
Kindergarten – Geometry	**1.13 The student will construct, model, and describe objects in**

Mathematics SOL for grade 1 aligned with the CCSS at other grade levels	
5. Model shapes in the world by building shapes from components (e.g. sticks and clay balls) and drawing shapes. 6. Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*	**the environment as geometric shapes (triangle, rectangle, square, and circle) and explain the reasonableness of each choice.**
Grade 2 – Measurement and Data 10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph. Grade 3 – Measurement and Data 3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	**1.14 The student will investigate, identify, and describe various forms of data collection (e.g., recording daily temperature, lunch count, attendance, favorite ice cream), using tables, picture graphs, and object graphs.**
Grade 3 – Operations and Algebraic Thinking 9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.* Grade 4 – Operations and Algebraic Thinking 5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and*	**1.17 The student will recognize, describe, extend, and create a wide variety of growing and repeating patterns.**

Mathematics SOL for grade 1 aligned with the CCSS at other grade levels	
even numbers. Explain informally why the numbers will continue to alternate in this way.	

Mathematics SOL for grade 1 not explicitly stated in the CCSS at any grade level	
	1.4 The student, given a familiar problem situation involving magnitude, will **a) select a reasonable order of magnitude from three given quantities: a one-digit numeral, a two-digit numeral, and a three-digit numeral (e.g., 5, 50, 500); and** **b) explain the reasonableness of the choice.**
	1.11 The student will use calendar language appropriately (e.g., names of the months, *today, yesterday, next week, last week*).

Grade 2

CCSS for Mathematics – Grade 2	Mathematics SOL
Operations and Algebraic Thinking 2.OA	
Represent and solve problems involving addition and subtraction.	
1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	**2.6 The student, given two whole numbers whose sum is 99 or less, will** a) estimate the sum; and **b) find the sum, using various methods of calculation.** **2.7 The student, given two whole numbers, each of which is 99 or less, will** a) estimate the difference; and **b) find the difference, using various methods of calculation.** **2.8 The student will create and solve one- and two-step addition and subtraction problems, using data from simple tables, picture graphs, and bar graphs.**
Add and subtract within 20.	
2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	**2.5 The student will recall addition facts with sums to 20 or less and the corresponding subtraction facts.**
Work with equal groups of objects to gain foundations for multiplication.	
3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	**2.4 The student will** a) count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10; b) count backward by tens from 100; and **c) recognize even and odd numbers.** **2.4 CF** • **Use objects to determine whether a number is odd or even.** **5.3 The student will** a) identify and describe the characteristics of prime and composite

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	numbers; and **b) identify and describe the characteristics of even and odd numbers.** **5.17 The student will describe the relationship found in a number pattern and express the relationship.**
4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	**2.4 The student will** **a) count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10;** b) count backward by tens from 100; and c) recognize even and odd numbers. **2.4 CF** • **Skip counting by fives lays the foundation for** reading a clock effectively and telling time to the nearest five minutes, counting money, and **developing the multiplication facts for five.** • **Skip counting by tens is a precursor for** use of place value, addition, counting money, and **multiplying by multiples of 10.** **3.5 The student will recall multiplication facts through the twelves table, and the corresponding division facts.** **3.5 CF** • **Understand that multiplication is repeated addition. The array model, consisting of rows and columns (e.g., 3 rows of 4 columns for a 3- by-4 array) helps build the commutative property.**
Number and Operations in Base Ten 2.NBT	
Understand place value.	
1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:	

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a. 100 can be thought of as a bundle of ten tens — called a "hundred."	**2.1 The student will** **a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models;** b) round two-digit numbers to the nearest ten; and c) compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (*greater than, less than,* or *equal to*).
b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	
2. Count within 1000; skip-count by 5s, 10s, and 100s.	**2.4 The student will** **a) count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10;** **b) count backward by tens from 100**; and c) recognize even and odd numbers.
3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	**3.1 The student will** **a) read and write six-digit numerals and identify the place value and value of each digit;** b) round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand; and c) compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (*greater than, less than*, or *equal to*).
4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	**2.1 The student will** a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; b) round two-digit numbers to the nearest ten; and **c) compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (*greater than, less than,* or *equal to*).**
Use place value understanding and properties of operations to add and subtract.	
5. Fluently add and subtract within 100 using strategies based	**2.6 The student, given two whole numbers whose sum is 99 or**

CCSS for Mathematics – Grade 2	Mathematics SOL
on place value, properties of operations, and/or the relationship between addition and subtraction.	**less, will** a) estimate the sum; and **b) find the sum, using various methods of calculation.** **2.7 The student, given two whole numbers, each of which is 99 or less, will** a) estimate the difference; and **b) find the difference, using various methods of calculation.** **2.9 The student will recognize and describe the related facts that represent and describe the inverse relationship between addition and subtraction.**
6. Add up to four two-digit numbers using strategies based on place value and properties of operations.	**2.6 The student, given two whole numbers whose sum is 99 or less, will** a) estimate the sum; and **b) find the sum, using various methods of calculation.**
7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	**2.6 The student, given two whole numbers whose sum is 99 or less, will** a) estimate the sum; and **b) find the sum, using various methods of calculation.** **2.7 The student, given two whole numbers, each of which is 99 or less, will** a) estimate the difference; and **b) find the difference, using various methods of calculation.** **2.8 The student will create and solve one- and two-step addition and subtraction problems, using data from simple tables, picture graphs, and bar graphs.** **2.8 CF** • **Develop strategies for solving practical problems.**
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	**1.1 The student will** **a) count from 0 to 100 and write the corresponding numerals; and**

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	b) group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value. **2.4 The student will** **a) count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10;** **b) count backward by tens from 100; and** **c) recognize even and odd numbers.** **Grades K-3 CF** **Although young children first compute using objects and manipulatives, they gradually shift to performing computations mentally or using paper and pencil to record their thinking. Therefore, computation and estimation instruction in the early grades revolves around modeling, discussing, and recording a variety of problem situations. This approach helps students transition from the concrete to the representation to the symbolic in order to develop meaning for the operations and how they relate to each other.** **2.4 CF** **• Skip count by twos, fives, and tens to 100, using manipulatives, a hundred chart, mental mathematics, a calculator, and/or paper and pencil.** **2.6 CF** **• Strategies for mentally adding two-digit numbers include student-invented strategies, making-ten, partial sums, and counting on, among others.** **– partial sums: 56 + 41 = __** **50 + 40 = 90** **6 + 1 = 7**

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	90 + 7 = 97 **– counting on: 36 + 62 = __** **36 + 60 = 96** **96 + 2 = 98** **2.7 CF** **• Mental computational strategies for subtracting two-digit numbers might include** **– lead-digit or front-end strategy:** **56 – 21 = __** **50 – 20 = 30** **6 – 1 = 5** **30 + 5 = 35** **– counting up:** **87 – 25 = __** **20 + 60 = 80** **5 + 2 = 7** **60 + 2 = 62** **or** **87 – 25 = __** **25 + 60 = 85** **85 + 2 = 87** **60 + 2 = 62** **or** **87 – 25 = __** **25 + 2 = 27** **27 + 60 = 87** **2 + 60 = 62** **– partial differences:** **98 – 41 = __**

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	90 – 40 = 50 **8 – 1 = 7** **50 + 7 = 57.**
9. Explain why addition and subtraction strategies work, using place value and the properties of operations.	**2.9 The student will recognize and describe the related facts that represent and describe the inverse relationship between addition and subtraction.** **2.21 The student will solve problems by completing numerical sentences involving the basic facts for addition and subtraction. The student will create story problems, using the numerical sentences.** **2.21 CF** **• Understand various meanings of addition and subtraction and the relationship between the two operations.**
Measurement and Data 2.MD	
Measure and estimate lengths in standard units.	
1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	**2.11 The student will estimate and measure** **a) length to the nearest centimeter and inch;** b) weight/mass of objects in pounds/ounces and kilograms/grams, using a scale; and c) liquid volume in cups, pints, quarts, gallons, and liters.
2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	**2.11 The student will estimate and measure** **a) length to the nearest centimeter and inch;** b) weight/mass of objects in pounds/ounces and kilograms/grams, using a scale; and c) liquid volume in cups, pints, quarts, gallons, and liters.
3. Estimate lengths using units of inches, feet, centimeters, and meters.	**2.11 The student will estimate and measure** **a) length to the nearest centimeter and inch;** b) weight/mass of objects in pounds/ounces and kilograms/grams, using a scale; and

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	c) liquid volume in cups, pints, quarts, gallons, and liters. **3.9 The student will estimate and use U.S. Customary and metric units to measure** **a) length to the nearest 12 inch, inch, foot, yard, centimeter, and meter;** b) liquid volume in cups, pints, quarts, gallons, and liters; c) weight/mass in ounces, pounds, grams, and kilograms; and d) area and perimeter.
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	**2.11 The student will estimate and measure** **a) length to the nearest centimeter and inch;** b) weight/mass of objects in pounds/ounces and kilograms/grams, using a scale; and c) liquid volume in cups, pints, quarts, gallons, and liters.
Relate addition and subtraction to length.	
5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	**2.6 The student, given two whole numbers whose sum is 99 or less, will** a) estimate the sum; and **b) find the sum, using various methods of calculation.** **2.7 The student, given two whole numbers, each of which is 99 or less, will** a) estimate the difference; and **b) find the difference, using various methods of calculation.** **2.8 The student will create and solve one- and two-step addition and subtraction problems, using data from simple tables, picture graphs, and bar graphs.**
6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	**2.6 The student, given two whole numbers whose sum is 99 or less, will** a) estimate the sum; and **b) find the sum, using various methods of calculation.**

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	2.7 The student, given two whole numbers, each of which is 99 or less, will a) estimate the difference; and **b) find the difference, using various methods of calculation.**
Work with time and money.	
7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	**2.12 The student will tell and write time to the nearest five minutes, using analog and digital clocks.**
8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*	**K.7 The student will recognize a penny, nickel, dime, and quarter and will determine the value of a collection of pennies and/or nickels whose total value is 10 cents or less.** **1.7 The student will** **a) identify the number of pennies equivalent to a nickel, a dime, and a quarter; and** **b) determine the value of a collection of pennies, nickels, and dimes whose total value is 100 cents or less.** **2.10 The student will** **a) count and compare a collection of pennies, nickels, dimes, and quarters whose total value is $2.00 or less; and** **b) correctly use the cent symbol (¢), dollar symbol ($), and decimal point (.).**
Represent and interpret data.	
9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	**3.17 The student will** a) collect and organize data, using observations, measurements, surveys, or experiments; **b) construct a line plot, a picture graph, or a bar graph to represent the data; and** **c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.**

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10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.	**K.14 The student will display gathered data in object graphs, picture graphs, and tables, and will answer questions related to the data.** **1.14 The student will investigate, identify, and describe various forms of data collection (e.g., recording daily temperature, lunch count, attendance, favorite ice cream), using tables, picture graphs, and object graphs.** **1.15 The student will interpret information displayed in a picture or object graph, using the vocabulary *more, less, fewer, greater than, less than,* and *equal to*.** **2.17 The student will use data from experiments to construct picture graphs, pictographs, and bar graphs.** **2.19 The student will analyze data displayed in picture graphs, pictographs, and bar graphs.**
Geometry 2.G	
Reason with shapes and their attributes.	
1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	**2.16 The student will identify, describe, compare, and contrast plane and solid geometric figures (circle/sphere, square/cube, and rectangle/rectangular prism).** **2.16 CF** **• Trace faces of solid figures (e.g., cube and rectangular solid) to create the set of plane figures related to the solid figure.** **• Identify and describe plane and solid figures (e.g., circle/sphere, square/cube, and rectangle/rectangular prism), according to the number and shape of their faces, edges, and vertices using models.** **• Compare and contrast plane and solid geometric figures (e.g., circle/sphere, square/cube, and rectangle/rectangular prism) according to the number and shape of their faces, edges,**

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	vertices, and angles.
2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	**2.3 The student will** **a) identify the parts of a set and/or region that represent fractions for halves, thirds, fourths, sixths, eighths, and tenths;** b) write the fractions; and c) compare the unit fractions for halves, thirds, fourths, sixths, eighths, and tenths. **3.9 The student will estimate and use U.S. Customary and metric units to measure** a) length to the nearest $\frac{1}{2}$ inch, inch, foot, yard, centimeter, and meter; b) liquid volume in cups, pints, quarts, gallons, and liters; c) weight/mass in ounces, pounds, grams, and kilograms; and **d) area and perimeter.** **3.10 The student will** a) measure the distance around a polygon in order to determine perimeter; and **b) count the number of square units needed to cover a given surface in order to determine area.**
3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	**2.3 The student will** **a) identify the parts of a set and/or region that represent fractions for halves, thirds, fourths, sixths, eighths, and tenths;** b) write the fractions; and **c) compare the unit fractions for halves, thirds, fourths, sixths, eighths, and tenths.**

Mathematics SOL for grade 2 aligned with the CCSS at other grade levels	
Grade 3 – Operations and Algebraic Thinking 8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**2.1 The student will** a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; **b) round two-digit numbers to the nearest ten; and** c) compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (*greater than, less than,* or *equal to*).
Grade 3 – Measurement and Data 2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**2.11 The student will estimate and measure** a) length to the nearest centimeter and inch; **b) weight/mass of objects in pounds/ounces and kilograms/grams, using a scale; and** **c) liquid volume in cups, pints, quarts, gallons, and liters.**
Grade 6 – Number System 5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	**2.14 The student will read the temperature on a Celsius and/or Fahrenheit thermometer to the nearest 10 degrees.**
Grade 4 – Geometry 3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	**2.15 The student will** **a) draw a line of symmetry in a figure; and** **b) identify and create figures with at least one line of symmetry.**
Grade 3 – Operations and Algebraic Thinking 9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using	**2.20 The student will identify, create, and extend a wide variety of patterns.**

Mathematics SOL for grade 2 aligned with the CCSS at other grade levels	
properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.* Grade 4 – Operations and Algebraic Thinking 5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*	
Grade 1 – Operations and Algebraic Thinking 7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*	**2.22 The student will demonstrate an understanding of equality by recognizing that the symbol = in an equation indicates equivalent quantities and the symbol ≠ indicates that quantities are not equivalent.**

Mathematics SOL for grade 2 not explicitly stated in the CCSS at any grade level	
	2.2 The student will **a) identify the ordinal positions first through twentieth, using an ordered set of objects; and** **b) write the ordinal numbers.**
	2.3 The student will a) identify the parts of a set and/or region that represent fractions for halves, thirds, fourths, sixths, eighths, and tenths; **b) write the fractions; and** c) compare the unit fractions for halves, thirds, fourths, sixths, eighths, and tenths.
	2.6 The student, given two whole numbers whose sum is 99 or

Mathematics SOL for grade 2 not explicitly stated in the CCSS at any grade level	
	less, will **a) estimate the sum; and** b) find the sum, using various methods of calculation.
	2.7 The student, given two whole numbers, each of which is 99 or less, will **a) estimate the difference; and** b) find the difference, using various methods of calculation.
	2.13 The student will **a) determine past and future days of the week; and** **b) identify specific days and dates on a given calendar.**
	2.18 The student will use data from experiments to predict outcomes when the experiment is repeated.

Grade 3

CCSS for Mathematics – Grade 3	Mathematics SOL
Operations and Algebraic Thinking 3.OA	
Represent and solve problems involving multiplication and division.	
1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7.*	**3.5 The student will recall multiplication facts through the twelves table, and the corresponding division facts.** **3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.**
2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*	**3.5 The student will recall multiplication facts through the twelves table, and the corresponding division facts.** **3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.**
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	**3.2 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. The student will use these relationships to solve problems.** **3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.**
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true*	**3.2 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences.**

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in each of the equations 8 × ? = 48, 5 = □÷ 3, 6 × 6 = ?.	**The student will use these relationships to solve problems.**
Understand properties of multiplication and the relationship between multiplication and division.	
5. Apply properties of operations as strategies to multiply and divide. *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)*	**3.20 The student will** **a) investigate the identity and the commutative properties for addition and multiplication; and** **b) identify examples of the identity and commutative properties for addition and multiplication.** **4.16 The student will** a) recognize and demonstrate the meaning of equality in an equation; and **b) investigate and describe the associative property for addition and multiplication.** **5.19 The student will investigate and recognize the distributive property of multiplication over addition.**
6. Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*	**3.2 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. The student will use these relationships to solve problems.**
Multiply and divide within 100.	
7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	**3.2 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. The student will use these relationships to solve problems.** **3.5 The student will recall multiplication facts through the twelves table, and the corresponding division facts.**
Solve problems involving the four operations, and identify and explain patterns in arithmetic.	
8. Solve two-step word problems using the four operations.	**2.1 The student will**

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Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; **b) round two-digit numbers to the nearest ten; and** c) compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (*greater than, less than,* or *equal to*). **3.4 The student will estimate solutions to and solve single-step and multistep problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping.** **3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.** **4.4 The student will** **a) estimate sums, differences, products, and quotients of whole numbers;** **b) add, subtract, and multiply whole numbers;** **c) divide whole numbers, finding quotients with and without remainders; and** **d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.** **5.18 The student will** a) investigate and describe the concept of variable; **b) write an open sentence to represent a given mathematical relationship, using a variable;** c) model one-step linear equations in one variable, using addition and subtraction; and d) create a problem situation based on a given open sentence, using a single variable.
9. Identify arithmetic patterns (including patterns in the	**K.16 The student will identify, describe, and extend repeating**

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addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*	**patterns.** **1.17 The student will recognize, describe, extend, and create a wide variety of growing and repeating patterns.** **2.20 The student will identify, create, and extend a wide variety of patterns.** **3.19 The student will recognize and describe a variety of patterns formed using numbers, tables, and pictures, and extend the patterns, using the same or different forms.**
Number and Operations in Base Ten 3.NBT	
Use place value understanding and properties of operations to perform multi-digit arithmetic.	
1. Use place value understanding to round whole numbers to the nearest 10 or 100.	**2.1 The student will** a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; **b) round two-digit numbers to the nearest ten**; and c) compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (*greater than, less than,* or *equal to*). **3.1 The student will** a) read and write six-digit numerals and identify the place value and value of each digit; **b) round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand; and** c) compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (*greater than, less than*, or *equal to*).
2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**3.4 The student will estimate solutions to and solve single-step and multistep problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping.**
3. Multiply one-digit whole numbers by multiples of 10 in the	**3.5 The student will recall multiplication facts through the**

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range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value an properties of operations.	**twelves table, and the corresponding division facts.** **3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.** **3.19 The student will recognize and describe a variety of patterns formed using numbers, tables, and pictures, and extend the patterns, using the same or different forms.**
Number and Operations—Fractions 3.NF	
Develop understanding of fractions as numbers.	
1. Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*.	**K.5 The student will identify the parts of a set and/or region that represent fractions for halves and fourths.** **1.3 The student will identify the parts of a set and/or region that represent fractions for halves, thirds, and fourths and write the fractions.** **2.3 The student will** **a) identify the parts of a set and/or region that represent fractions for halves, thirds, fourths, sixths, eighths, and tenths;** b) write the fractions; and c) compare the unit fractions for halves, thirds, fourths, sixths, eighths, and tenths. **3.3 The student will** a) name and write fractions (including mixed numbers) represented by a model; **b) model fractions (including mixed numbers) and write the fractions' names**; and c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =).
2. Understand a fraction as a number on the number line;	

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represent fractions on a number line diagram.	
a. Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.	**3.3 The student will** **a) name and write fractions (including mixed numbers) represented by a model;** **b) model fractions (including mixed numbers) and write the fractions' names; and** c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =). **3.3 CF** **• A fraction is a way of representing part of a whole (as in a region/area model or a length/measurement model) or part of a group (as in a set model). Fractions are used to name a part of one thing or a part of a collection of things. Models can include pattern blocks, fraction bars, rulers, number line, etc.**
b. Represent a fraction *a*/*b* on a number line diagram by marking off *a* lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line.	**3.3 The student will** **a) name and write fractions (including mixed numbers) represented by a model;** **b) model fractions (including mixed numbers) and write the fractions' names; and** c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =). **3.3 CF** **• A fraction is a way of representing part of a whole (as in a region/area model or a length/measurement model) or part of a group (as in a set model). Fractions are used to name a part of one thing or a part of a collection of things. Models can include pattern blocks, fraction bars, rulers, number line, etc.**
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	

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a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	**4.2 The student will** a) compare and order fractions and mixed numbers; **b) represent equivalent fractions**; and c) identify the division statement that represents a fraction.
b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model.	**3.3 The student will** a) name and write fractions (including mixed numbers) represented by a model; b) model fractions (including mixed numbers) and write the fractions' names; and **c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =).** **3.3 CF** **• Compare fractions using the terms greater than, less than, or equal to and the symbols (<, >, and =). Comparisons are made between fractions with both like and unlike denominators, using models, concrete materials and pictures.** **4.2 The student will** a) compare and order fractions and mixed numbers; **b) represent equivalent fractions**; and c) identify the division statement that represents a fraction.
c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.*	**3.3 The student will** a) name and write fractions (including mixed numbers) represented by a model; b) model fractions (including mixed numbers) and write the fractions' names; and **c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =).**
d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize	**3.3 The student will** a) name and write fractions (including mixed numbers)

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that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	represented by a model; b) model fractions (including mixed numbers) and write the fractions' names; and **c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =).**
Measurement and Data 3.MD	
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	
1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	**3.11 The student will** **a) tell time to the nearest minute, using analog and digital clocks; and** **b) determine elapsed time in one-hour increments over a 12-hour period.**
2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**1.10 The student will compare, using the concepts of more, less, and equivalent,** **a) the volumes of two given containers; and** **b) the weight/mass of two objects, using a balance scale.** **2.11 The student will estimate and measure** a) length to the nearest centimeter and inch; **b) weight/mass of objects in pounds/ounces and kilograms/grams, using a scale; and** **c) liquid volume in cups, pints, quarts, gallons, and liters.** **3.9 The student will estimate and use U.S. Customary and metric units to measure** a) length to the nearest $\frac{1}{2}$ inch, inch, foot, yard, centimeter, and meter; **b) liquid volume in cups, pints, quarts, gallons, and liters;** **c) weight/mass in ounces, pounds, grams, and kilograms; and**

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	d) area and perimeter. **4.6 The student will** **a) estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate; and** b) identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms). **4.8 The student will** **a) estimate and measure liquid volume and describe the results in U.S. Customary units; and** **b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons).**
Represent and interpret data.	
3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	**K.14 The student will display gathered data in object graphs, picture graphs, and tables, and will answer questions related to the data.** **1.14 The student will investigate, identify, and describe various forms of data collection (e.g., recording daily temperature, lunch count, attendance, favorite ice cream), using tables, picture graphs, and object graphs.** **3.17 The student will** a) collect and organize data, using observations, measurements, surveys, or experiments; **b) construct a line plot, a picture graph, or a bar graph to represent the data**; and **c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.**
4. Generate measurement data by measuring lengths using	**3.17 The student will**

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rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	a) collect and organize data, using observations, measurements, surveys, or experiments; **b) construct a line plot, a picture graph, or a bar graph to represent the data**; and c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data. **3.9 The student will estimate and use U.S. Customary and metric units to measure** **a) length to the nearest $\frac{1}{2}$ inch, inch, foot, yard, centimeter, and meter;** b) liquid volume in cups, pints, quarts, gallons, and liters; c) weight/mass in ounces, pounds, grams, and kilograms; and d) area and perimeter.
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	
5. Recognize area as an attribute of plane figures and understand concepts of area measurement.	
a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.	**3.10 The student will** a) measure the distance around a polygon in order to determine perimeter; and **b) count the number of square units needed to cover a given surface in order to determine area.**
b. A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.	**3.9 The student will estimate and use U.S. Customary and metric units to measure** a) length to the nearest $\frac{1}{2}$ inch, inch, foot, yard, centimeter, and meter; b) liquid volume in cups, pints, quarts, gallons, and liters;

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	c) weight/mass in ounces, pounds, grams, and kilograms; and **d) area and perimeter.** **3.10 The student will** a) measure the distance around a polygon in order to determine perimeter; and **b) count the number of square units needed to cover a given surface in order to determine area.**
6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	**3.9 The student will estimate and use U.S. Customary and metric units to measure** a) length to the nearest $\frac{1}{2}$ inch, inch, foot, yard, centimeter, and meter; b) liquid volume in cups, pints, quarts, gallons, and liters; c) weight/mass in ounces, pounds, grams, and kilograms; and **d) area and perimeter.** **3.10 The student will** a) measure the distance around a polygon in order to determine perimeter; and **b) count the number of square units needed to cover a given surface in order to determine area.**
7. Relate area to the operations of multiplication and addition.	
a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	**3.5 The student will recall multiplication facts through the twelves table, and the corresponding division facts.** **3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.** **3.10 The student will** a) measure the distance around a polygon in order to determine

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	perimeter; and **b) count the number of square units needed to cover a given surface in order to determine area.**
b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	**3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.**
c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.	**3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.**
d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	**3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.**
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	
8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	**3.9 The student will estimate and use U.S. Customary and metric units to measure** a) length to the nearest $\frac{1}{2}$ inch, inch, foot, yard, centimeter, and meter; b) liquid volume in cups, pints, quarts, gallons, and liters; c) weight/mass in ounces, pounds, grams, and kilograms; and **d) area and perimeter.** **3.10 The student will** **a) measure the distance around a polygon in order to determine perimeter**; and

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	b) count the number of square units needed to cover a given surface in order to determine area.
Reason with shapes and their attributes.	
1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	**3.14 The student will identify, describe, compare, and contrast characteristics of plane and solid geometric figures (circle, square, rectangle, triangle, cube, rectangular prism, square pyramid, sphere, cone, and cylinder) by identifying relevant characteristics, including the number of angles, vertices, and edges, and the number and shape of faces, using concrete models.**
2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*	**3.3 The student will** **a) name and write fractions (including mixed numbers) represented by a model;** **b) model fractions (including mixed numbers) and write the fractions' names; and** c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =).

Mathematics SOL for grade 3 aligned with the CCSS at other grade levels	
Grade 2 – Number and Operations in Base Ten 3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. Grade 4 – Number and Operations in Base Ten 2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits, using >, =, and < symbols to record the results of comparisons.	**3.1 The student will** **a) read and write six-digit numerals and identify the place value and value of each digit;** b) round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand; and **c) compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (*greater than, less than*, or *equal to*).**
Grade 4 – Number and Operations - Fractions 3c. Add and subtract mixed numbers with like denominators,	**3.7 The student will add and subtract proper fractions having like denominators of 12 or less.**

Mathematics SOL for grade 3 aligned with the CCSS at other grade levels	
e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	
Grade 4 – Measurement and Data 2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	**3.8 The student will determine, by counting, the value of a collection of bills and coins whose total value is $5.00 or less, compare the value of the bills and coins, and make change.**
Grade 4 – Geometry 1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	**3.15 The student will identify and draw representations of points, line segments, rays, angles, and lines.**
Grade 8 – Geometry 2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	**3.16 The student will identify and describe congruent and noncongruent plane figures.**
Grade 7 – Statistics and Probability 5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	**3.18 The student will investigate and describe the concept of probability as chance and list possible results of a given situation.**

Mathematics SOL for grade 3 not explicitly stated in the CCSS at any grade level	
	3.12 The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.
	3.13 The student will read temperature to the nearest degree from a Celsius thermometer and a Fahrenheit thermometer. Real thermometers and physical models of thermometers will be used.
	3.17 The student will **a) collect and organize data, using observations, measurements, surveys, or experiments;** b) construct a line plot, a picture graph, or a bar graph to represent the data; and c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

Grade 4

CCSS for Mathematics – Grade 4	Mathematics SOL
Operations and Algebraic Thinking 4.OA	
Use the four operations with whole numbers to solve problems.	
1. Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	**3.20 The student will** **a) investigate the identity and the commutative properties for addition and multiplication; and** **b) identify examples of the identity and commutative properties for addition and multiplication.**
2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	**3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.** **4.4 The student will** **a) estimate sums, differences, products, and quotients of whole numbers;** **b) add, subtract, and multiply whole numbers;** **c) divide whole numbers, finding quotients with and without remainders; and** **d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.**
3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**4.4 The student will** **a) estimate sums, differences, products, and quotients of whole numbers;** **b) add, subtract, and multiply whole numbers;** **c) divide whole numbers, finding quotients with and without remainders; and** **d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.** **5.18 The student will**

CCSS for Mathematics – Grade 4	Mathematics SOL
	a) investigate and describe the concept of variable; **b) write an open sentence to represent a given mathematical relationship, using a variable;** **c) model one-step linear equations in one variable, using addition and subtraction; and** d) create a problem situation based on a given open sentence, using a single variable.
Gain familiarity with factors and multiples.	
4. Find the factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.	**4.5 The student will** **a) determine common multiples and factors, including least common multiple and greatest common factor;** b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors; c) add and subtract with decimals; and d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals. **5.3 The student will** **a) identify and describe the characteristics of prime and composite numbers; and** b) identify and describe the characteristics of even and odd numbers.
Generate and analyze patterns.	
5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and*	**K.16 The student will identify, describe, and extend repeating patterns.** **1.17 The student will recognize, describe, extend, and create a wide variety of growing and repeating patterns.** **2.20 The student will identify, create, and extend a wide variety**

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even numbers. Explain informally why the numbers will continue to alternate in this way.	**of patterns.** **4.15 The student will recognize, create, and extend numerical and geometric patterns.**
Number and Operations in Base Ten 4.NBT	
Generalize place value understanding for multi-digit whole numbers.	
1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*	**4.1 The student will** **a) identify orally and in writing the place value for each digit in a whole number expressed through millions;** b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.
2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits, using >, =, and < symbols to record the results of comparisons.	**3.1 The student will** **a) read and write six-digit numerals and identify the place value and value of each digit;** b) round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand; and **c) compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (*greater than, less than*, or *equal to*).** **4.1 The student will** **a) identify orally and in writing the place value for each digit in a whole number expressed through millions;** **b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and** c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.
3. Use place value understanding to round multi-digit whole	**4.1 The student will**

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numbers to any place.	a) identify orally and in writing the place value for each digit in a whole number expressed through millions; b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and **c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.**
Use place value understanding and properties of operations to perform multi-digit arithmetic.	
4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.	**4.4 The student will** **a) estimate sums, differences, products, and quotients of whole numbers;** **b) add, subtract, and multiply whole numbers;** c) divide whole numbers, finding quotients with and without remainders; and d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.
5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**4.4 The student will** a) estimate sums, differences, products, and quotients of whole numbers; **b) add, subtract, and multiply whole numbers;** c) divide whole numbers, finding quotients with and without remainders; and **d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.** **4.4 CF** **• A certain amount of practice is necessary to develop fluency with computational strategies for multidigit numbers; however, the practice must be meaningful, motivating, and systematic if students are to develop fluency in computation, whether**

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	mentally, with manipulative materials, or with paper and pencil.
6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**4.4 The student will** a) estimate sums, differences, products, and quotients of whole numbers; b) add, subtract, and multiply whole numbers; **c) divide whole numbers, finding quotients with and without remainders; and** d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers. **4.4 CF** **• A certain amount of practice is necessary to develop fluency with computational strategies for multidigit numbers; however, the practice must be meaningful, motivating, and systematic if students are to develop fluency in computation, whether mentally, with manipulative materials, or with paper and pencil.**
Number and Operations—Fractions 4-NF	
Extend understanding of fraction equivalence and ordering.	
1. Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	**4.2 The student will** a) compare and order fractions and mixed numbers; **b) represent equivalent fractions; and** c) identify the division statement that represents a fraction. **4.2 CF** **• Represent equivalent fractions through twelfths, using region/area models, set models, and measurement models.**
2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as	**3.3 The student will** a) name and write fractions (including mixed numbers) represented by a model;

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½. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	b) model fractions (including mixed numbers) and write the fractions' names; and **c) compare fractions having like and unlike denominators, using words and symbols (>, <, or =).** **4.2 The student will** **a) compare and order fractions and mixed numbers;** b) represent equivalent fractions; and c) identify the division statement that represents a fraction. **4.2 CF** **• Strategies for comparing fractions having unlike denominators may include** **— comparing fractions to familiar benchmarks (e.g., 0, ½ , 1);** **— finding equivalent fractions, using manipulative models such as fraction strips, number lines, fraction circles, rods, pattern blocks, cubes, Base-10 blocks, tangrams, graph paper, or a multiplication chart and patterns.**
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	
3. Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*.	
a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	**4.5 The student will** **a) determine common multiples and factors, including least common multiple and greatest common factor;** **b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors;** c) add and subtract with decimals; and **d) solve single-step and multistep practical problems involving**

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	addition and subtraction with fractions and with decimals. **4.5 CF** **• Students should investigate addition and subtraction with fractions, using a variety of models (e.g., fraction circles, fraction strips, rulers, linking cubes, pattern blocks).**
b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation (e.g., 3/8 = 1/8 + 1/8 + 1/8 and 3/8 = 1/8 + 2/8). Justify decompositions, e.g., by using a visual fraction model.	**Grades K-3 CF** **The focus of instruction in the number and number sense strand is to promote an understanding of counting, classification, whole numbers, place value, fractions, number relationships ("more than," "less than," and "equal to"), and the effects of single-step and multistep computations. These learning experiences should allow students to engage actively in a variety of problem solving situations and to model numbers (compose and decompose), using a variety of manipulatives. Additionally, students at this level should have opportunities to observe, to develop an understanding of the relationship they see between numbers, and to develop the skills to communicate these relationships in precise, unambiguous terms.**
c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	**3.7 The student will add and subtract proper fractions having like denominators of 12 or less.** **4.5 The student will** a) determine common multiples and factors, including least common multiple and greatest common factor; **b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors;** c) add and subtract with decimals; and

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	d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals. **5.6 The student will solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers and express answers in simplest form.** **5.6 CF** **To add or subtract with mixed numbers, students may use a number line, draw a picture, rewrite fractions with like denominators, or rewrite mixed numbers as fractions.**
d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	**4.5 The student will** a) determine common multiples and factors, including least common multiple and greatest common factor; b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors; c) add and subtract with decimals; and **d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals.** **4.5 CF** **• Students should investigate addition and subtraction with fractions, using a variety of models (e.g., fraction circles, fraction strips, rulers, linking cubes, pattern blocks).**
4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	**6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.
a. Understand a fraction *a*/*b* as a multiple of 1/*b*. *For example,*	**4.2 The student will**

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use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).	**a) compare and order fractions and mixed numbers;** b) represent equivalent fractions; and c) identify the division statement that represents a fraction. **6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions. **6.6 CF** **When multiplying a whole by a fraction such as 3 ½ , the meaning is the same as with multiplication of whole numbers: 3 groups the size of 1/2 of the whole.**
b. Understand a multiple of *a*/*b* as a multiple of 1/*b*, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5.* (*In general, n × (a/b) = (n × a)/b.*)	**4.2 The student will** **a) compare and order fractions and mixed numbers;** b) represent equivalent fractions; and c) identify the division statement that represents a fraction. **6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions. **6.6 CF** **• When multiplying a whole by a fraction such as 3 ½ , the meaning is the same as with multiplication of whole numbers: 3 groups the size of 1/2 of the whole.**
c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example: If each person at a party will eat 3/8 of a pound of roast beef, and there will be*	**6.6 The student will** a) multiply and divide fractions and mixed numbers; and **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction,**

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5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?	**multiplication, and division of fractions.**
Understand decimal notation for fractions, and compare decimal fractions.	
5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. *For example, express 3/10 as 30/100 and add 3/10 + 4/100 = 34/100.*	**4.2 The student will** a) compare and order fractions and mixed numbers; **b) represent equivalent fractions; and** c) identify the division statement that represents a fraction.
6. Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*	**4.3 The student will** a) read, write, represent, and identify decimals expressed through thousandths; b) round decimals to the nearest whole number, tenth, and hundredth; c) compare and order decimals; and **d) given a model, write the decimal and fraction equivalents.** **4.3 CF** **• Decimals and fractions represent the same relationships; however, they are presented in two different formats. The decimal 0.25 is written as 1/4. Decimal numbers are another way of writing fractions. When presented with the fraction 3/5 , the division expression representing a fraction is written as 3 divided by 5. The Base-10 models concretely relate fractions to decimals (e.g., 10-by-10 grids, meter sticks, number lines, decimal squares, money).** **• Provide a fraction model (halves, fourths, fifths), and ask students for its decimal equivalent.**
7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the	**4.3 The student will** **a) read, write, represent, and identify decimals expressed**

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two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	**through thousandths;** b) round decimals to the nearest whole number, tenth, and hundredth; **c) compare and order decimals; and** d) given a model, write the decimal and fraction equivalents. **4.3 CF** **• Understand that models are used to show decimal and fraction equivalents.** **• Compare decimals, using the symbols >, <, =.**
Measurement and Data 4.MD	
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; *l*, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of smaller unit. Record measurement equivalents in a two-column table. *For example: Know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs* (*1, 12*), (*2, 24*), (*3, 36*), ….	**4.6 The student will** a) estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate; and **b) identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms).** **4.7 The student will** a) estimate and measure length, and describe the result in both metric and U.S. Customary units; and **b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards; yards and miles) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters).** **4.8 The student will** a) estimate and measure liquid volume and describe the results in U.S. Customary units; and

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	b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons).
2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	**3.8 The student will determine, by counting, the value of a collection of bills and coins whose total value is $5.00 or less, compare the value of the bills and coins, and make change.** **4.5 The student will** a) determine common multiples and factors, including least common multiple and greatest common factor; b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors; **c) add and subtract with decimals; and** **d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals.** **4.9 The student will determine elapsed time in hours and minutes within a 12-hour period.**
3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure;** b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation; c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S. Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. **6.10 The student will**

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	a) define π (pi) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; **c) solve practical problems involving area and perimeter; and** d) describe and determine the volume and surface area of a rectangular prism. **6.10 CF** **• Experiences in deriving the formulas for area and perimeter, using manipulatives such as tiles, one inch cubes, adding machine tape, graph paper, geoboards, or tracing paper, promote an understanding of the formulas and facility in their use.**
Represent and interpret data.	
4. Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*	**3.17 The student will** **a) collect and organize data, using observations, measurements, surveys, or experiments;** **b) construct a line plot, a picture graph, or a bar graph to represent the data; and** **c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.** **4.5 The student will** a) determine common multiples and factors, including least common multiple and greatest common factor; **b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors;**

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	c) add and subtract with decimals; and **d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals.**
Geometric measurement: understand concepts of angle and measure angles.	
5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:	
a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.	**5.11 The student will measure right, acute, obtuse, and straight angles.** **5.11 CF** **• Angles are measured in degrees. There are up to 360 degrees in an angle. A degree is 1/360 of a complete rotation of a full circle. There are 360 degrees in a circle.**
b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	**5.11 The student will measure right, acute, obtuse, and straight angles.** **5.11 CF** **• Angles are measured in degrees. There are up to 360 degrees in an angle. A degree is 1/360 of a complete rotation of a full circle. There are 360 degrees in a circle.**
6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	**5.11 The student will measure right, acute, obtuse, and straight angles.** **5.11 CF** **• Students should understand how to work with a protractor or angle ruler as well as available computer software to measure and draw angles and triangles.**
7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve	**5.11 The student will measure right, acute, obtuse, and straight angles.** **5.11 CF**

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addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	• **Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts.** • **Solve addition and subtraction problems to find unknown angle measures on a diagram in practical and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.**
Geometry 4.G	
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	**3.15 The student will identify and draw representations of points, line segments, rays, angles, and lines.** **4.10 The student will** **a) identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices; and** **b) identify representations of lines that illustrate intersection, parallelism, and perpendicularity.**
2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specified size. Recognize right triangles as a category, and identify right triangles.	**5.12 The student will classify** a) angles as right, acute, obtuse, or straight; and **b) triangles as right, acute, obtuse, equilateral, scalene, or isosceles.** **5.13 The student, using plane figures (square, rectangle, triangle, parallelogram, rhombus, and trapezoid), will** **a) develop definitions of these plane figures; and** b) investigate and describe the results of combining and subdividing plane figures.
3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the	**2.15 The student will** **a) draw a line of symmetry in a figure; and**

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line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	**b) identify and create figures with at least one line of symmetry.**

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Grade 5 – Number and Operations– Fractions 3. Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*	**4.2 The student will** a) compare and order fractions and mixed numbers; b) represent equivalent fractions; and **c) identify the division statement that represents a fraction.**
Grade 5 – Number and Operations in Base Ten 4. Use place value understanding to round decimals to any place.	**4.3 The student will** a) read, write, represent, and identify decimals expressed through thousandths; **b) round decimals to the nearest whole number, tenth, and hundredth;** c) compare and order decimals; and d) given a model, write the decimal and fraction equivalents.
Grade 3 – Measurement and Data 2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a	**4.6 The student will** **a) estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate; and** b) identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms).

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measurement scale) to represent the problem.	
Grade 2 – Measurement and Data 1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. Grade 3 –Measurement and Data 4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	**4.7 The student will** **a) estimate and measure length, and describe the result in both metric and U.S. Customary units; and** b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards; yards and miles) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters).
Grade 3 – Measurement and Data 2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**4.8 The student will** **a) estimate and measure liquid volume and describe the results in U.S. Customary units; and** b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons).
Grade 8 – Geometry 2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	**4.11 The student will** **a) investigate congruence of plane figures after geometric transformations, such as reflection, translation, and rotation, using mirrors, paper folding, and tracing; and** **b) recognize the images of figures resulting from geometric transformations, such as translation, reflection, and rotation.**
Grade 7 – Statistics and Probability 5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely,	**4.13 The student will** **a) predict the likelihood of an outcome of a simple event; and** **b) represent probability as a number between 0 and 1, inclusive.**

Mathematics SOL for grade 4 aligned with the CCSS at other grade levels	
and a probability near 1 indicates a likely event.	
Grade 2 – Measurement and Data 10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph. Grade 3 – Measurement and Data (picture and bar graphs) 3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	**4.14 The student will collect, organize, display, and interpret data from a variety of graphs.**
Grade 1 –Operations and Algebraic Thinking 7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.* Grade 1 – Operations and Algebraic Thinking 3. Apply properties of operations as strategies to add and subtract. *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)* Grade 3 – Operations and Algebraic Thinking 5. Apply properties of operations as strategies to multiply and divide. *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 ×*	**4.16 The student will** **a) recognize and demonstrate the meaning of equality in an equation; and** **b) investigate and describe the associative property for addition and multiplication.**

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10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)	

Grade 5

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Operations and Algebraic Thinking 5.OA	
Write and interpret numerical expressions.	
1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	**5.7 The student will evaluate whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division.** **6.8 The student will evaluate whole number numerical expressions, using the order of operations.**
2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*	**5.7 The student will evaluate whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division.**
Analyze patterns and relationships.	
3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*	**5.15 The student, given a problem situation, will collect, organize, and interpret data in a variety of forms, using stem-and-leaf plots and line graphs.** **5.15 CF** **• Understand that line graphs show changes over time.** **5.17 The student will describe the relationship found in a number pattern and express the relationship.** **5.17 CF** **• Describe the relationship found in patterns, using words, tables, and symbols to express the relationship.**
Number and Operations in Base Ten 5.NBT	
Understand the place value system.	
1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	**4.1 The student will** **a) identify orally and in writing the place value for each digit in a whole number expressed through millions;**

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	b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand. **5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.** **5.1 CF** • **The structure of the Base-10 number system is based upon a simple pattern of tens in which each place is ten times the value of the place to its right. This is known as a ten-to-one place value relationship.**
2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.** **5.1 CF** • **The structure of the Base-10 number system is based upon a simple pattern of tens in which each place is ten times the value of the place to its right. This is known as a ten-to-one place value relationship.** **6.5 The student will investigate and describe concepts of positive exponents and perfect squares.** **6.5 CF** • **Recognize powers of ten by examining patterns in a place value chart: 10^4 = 10,000, 10^3 = 1000, 10^2 = 100, 10^1 = 10, 10^0 =1.**
3. Read, write, and compare decimals to thousandths.	
a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).	**4.3 The student will** **a) read, write, represent, and identify decimals expressed through thousandths;** b) round decimals to the nearest whole number, tenth, and

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	hundredth; c) compare and order decimals; and d) given a model, write the decimal and fraction equivalents. **5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.** **5.1 CF** • **Decimals may be written in a variety of forms:** — **Standard: 23.456** — **Written: Twenty-three and four hundred fifty-six thousandths** — **Expanded: (2 × 10) + (3 × 1) + (4 × 0.1) + (5 × 0.01) + (6 × 0.001)**
b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	**4.3 The student will** a) read, write, represent, and identify decimals expressed through thousandths; b) round decimals to the nearest whole number, tenth, and hundredth; **c) compare and order decimals; and** d) given a model, write the decimal and fraction equivalents. **5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.** **5.2 The student will** **a) recognize and name fractions in their equivalent decimal form and vice versa; and** **b) compare and order fractions and decimals in a given set from least to greatest and greatest to least.**
4. Use place value understanding to round decimals to any place.	**4.3 The student will** a) read, write, represent, and identify decimals expressed through thousandths;

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	b) round decimals to the nearest whole number, tenth, and hundredth; c) compare and order decimals; and d) given a model, write the decimal and fraction equivalents. **5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.**
Perform operations with multi-digit whole numbers and with decimals to hundredths.	
5. Fluently multiply multi-digit whole numbers using the standard algorithm.	**4.4 The student will** a) estimate sums, differences, products, and quotients of whole numbers; **b) add, subtract, and multiply whole numbers;** c) divide whole numbers, finding quotients with and without remainders; and **d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.** **4.4 CF** • **A certain amount of practice is necessary to develop fluency with computational strategies for multidigit numbers; however, the practice must be meaningful, motivating, and systematic if students are to develop fluency in computation, whether mentally, with manipulative materials, or with paper and pencil.** **5.4 The student will create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers.**

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6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**4.4 The student will** a) estimate sums, differences, products, and quotients of whole numbers; b) add, subtract, and multiply whole numbers; **c) divide whole numbers, finding quotients with and without remainders; and** **d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers.** **4.4 CF** • **Another model of multiplication is the "Partial Product" model.** **24** **× 3** **12 ← Multiply the ones: 3 × 4 = 12** **+ 60 ← Multiply the tens: 3 × 20 = 60** **72** • **Another model of multiplication is the "Area Model" (which also represents partial products) and should be modeled first with Base-10 blocks. (e.g., 23 x 68)** **5.4 CF** • **Solve single-step and multistep problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers, using paper and pencil, mental computation, and calculators in which** — **sums, differences, and products will not exceed five digits;** — **multipliers will not exceed two digits;** — **divisors will not exceed two digits; or** — **dividends will not exceed four digits.**
7. Add, subtract, multiply, and divide decimals to hundredths,	**5.5 The student will**

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using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and** **b) create and solve single-step and multistep practical problems involving decimals.** **5.5 CF** • **Understand the various meanings of *division* and its effect on whole numbers.** **5.5 CF** • **Addition and subtraction of decimals may be investigated using a variety of models (e.g., 10-by-10 grids, number lines, money).** • **Division is the operation of making equal groups or shares. When the original amount and the number of shares are known, divide to find the size of each share. When the original amount and the size of each share are known, divide to find the number of shares. Both situations may be modeled with Base-10 manipulatives.**
Number and Operations—Fractions 5.NF	
Use equivalent fractions as a strategy to add and subtract fractions.	
1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*	**4.5 The student will** a) determine common multiples and factors, including least common multiple and greatest common factor; **b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors;** c) add and subtract with decimals; and

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	d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals. **5.4 The student will create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers.** **5.6 The student will solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers and express answers in simplest form.** **5.6 CF** • **To add or subtract with fractions that do not have the same denominator, first find equivalent fractions with the least common denominator. Then add or subtract and write the answer in simplest form.**
2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.*	**4.5 The student will** a) determine common multiples and factors, including least common multiple and greatest common factor; **b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors;** c) add and subtract with decimals; and **d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals.** **4.5 CF** • **Use visual models to add and subtract with fractions and decimals.** **5.6 The student will solve single-step and multistep practical problems involving addition and subtraction with fractions and**

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	mixed numbers and express answers in simplest form. **5.6 CF** • **Addition and subtraction with fractions and mixed numbers can be modeled using a variety of concrete materials and pictorial representations as well as paper and pencil.** • **Develop and use strategies to estimate and compute addition and subtraction of fractions.**
Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	
3. Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*	**4.2 The student will** a) compare and order fractions and mixed numbers; b) represent equivalent fractions; and **c) identify the division statement that represents a fraction.** **4.2 CF** • **Identify the division statement that represents a fraction (e.g., $\frac{3}{5}$ means the same as 3 divided by 5).** • **A fraction is a way of representing part of a whole (as in a region/area model or a measurement model) or part of a group (as in a set model). A fraction is used to name a part of one thing or a part of a collection of things.** • **The denominator tells how many equal parts are in the whole or set. The numerator tells how many of those parts are being counted or described.**
4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **Using manipulatives to build conceptual understanding and using pictures and sketches to link concrete examples to the**

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	symbolic enhance students' understanding of operations with fractions and help students connect the meaning of whole number computation to fraction computation. • **Multiplication and division of fractions can be represented with arrays, paper folding, repeated addition, repeated subtraction, fraction strips, pattern blocks and area models.** • **When multiplying a whole by a fraction such as $3 \cdot \frac{1}{2}$, the meaning is the same as with multiplication of whole numbers: 3 groups the size of $\frac{1}{2}$, of the whole.** • **When multiplying a fraction by a fraction such as $\frac{2}{3} \cdot \frac{3}{4}$, we are asking for part of a part.** • **When multiplying a fraction by a whole number such as $\frac{1}{2} \times 6$, we are trying to find a part of the whole.** • **When multiplying fractions, what is the meaning of the operation? When multiplying a whole by a fraction such as $3 \cdot \frac{1}{2}$, the meaning is the same as with multiplication of whole numbers: 3 groups the size of $\frac{1}{2}$ of the whole. When multiplying a fraction by a fraction such as $\frac{2}{3} \cdot \frac{3}{4}$, we are asking for part of a part. When multiplying a fraction by a whole number such $\frac{1}{2} \times 6$, we are trying to find a part of the whole.** • **Demonstrate multiplication and division of fractions using multiple representations.** • **Model algorithms for multiplying and dividing with fractions using appropriate representations.** **6.6 The student will** **a) multiply and divide fractions and mixed numbers; and**

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	b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.
a. Interpret the product (*a*/*b*) × *q* as *a* parts of a partition of *q* into *b* equal parts; equivalently, as the result of a sequence of operations *a* × *q* ÷ *b*. *For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)*	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **Using manipulatives to build conceptual understanding and using pictures and sketches to link concrete examples to the symbolic enhance students' understanding of operations with fractions and help students connect the meaning of whole number computation to fraction computation.** • **Multiplication and division of fractions can be represented with arrays, paper folding, repeated addition, repeated subtraction, fraction strips, pattern blocks and area models.** • **When multiplying a whole by a fraction such as $3 \cdot \frac{1}{2}$, the meaning is the same as with multiplication of whole numbers: 3 groups the size of $\frac{1}{2}$, of the whole.** • **When multiplying a fraction by a fraction such as $\frac{2}{3} \cdot \frac{3}{4}$, we are asking for part of a part.** • **When multiplying a fraction by a whole number such as $\frac{1}{2} \times 6$, we are trying to find a part of the whole.** • **When multiplying fractions, what is the meaning of the operation? When multiplying a whole by a fraction such as $3 \cdot \frac{1}{2}$, the meaning is the same as with multiplication of whole numbers: 3 groups the size of $\frac{1}{2}$ of the whole. When multiplying a fraction by a fraction such as $\frac{2}{3} \cdot \frac{3}{4}$, we are asking**

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	for part of a part. When multiplying a fraction by a whole number such $\frac{1}{2} \times 6$, we are trying to find a part of the whole. • **Demonstrate multiplication and division of fractions using multiple representations.** • **Model algorithms for multiplying and dividing with fractions using appropriate representations.** **6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.
b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure;** **b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation;** c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S. Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. **5.8 CF** • **Find the sum, difference, and product of two numbers expressed as decimals through thousandths, using paper and pencil, estimation, mental computation, and calculators.** • **Determine the quotient, given a dividend expressed as a decimal through thousandths and a single-digit divisor. For**

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	example, 5.4 divided by 2 and 2.4 divided by 5. **6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **Using manipulatives to build conceptual understanding and using pictures and sketches to link concrete examples to the symbolic enhance students' understanding of operations with fractions and help students connect the meaning of whole number computation to fraction computation.**
5. Interpret multiplication as scaling (resizing), by:	
a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **When multiplying a whole by a fraction such as 3 x 1/2, the meaning is the same as with multiplication of whole numbers: 3 groups the size of ½ of the whole.** • **When multiplying a fraction by a fraction such as 2/3 x 3/4 , we are asking for part of a part.** • **When multiplying a fraction by a whole number such as ½ x 6, we are trying to find a part of the whole.** **6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.
b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given	**4.2 The student will** a) compare and order fractions and mixed numbers; **b) represent equivalent fractions**; and c) identify the division statement that represents a fraction.

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number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **When multiplying a whole by a fraction such as 3 x 1/2, the meaning is the same as with multiplication of whole numbers: 3 groups the size of ½ of the whole.** • **When multiplying a fraction by a fraction such as 2 /3 x 3/ 4 , we are asking for part of a part.** • **When multiplying a fraction by a whole number such as ½ x 6, we are trying to find a part of the whole.**
6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **Using manipulatives to build conceptual understanding and using pictures and sketches to link concrete examples to the symbolic enhance students' understanding of operations with fractions and help students connect the meaning of whole number computation to fraction computation.** • **Multiplication and division of fractions can be represented with arrays, paper folding, repeated addition, repeated subtraction, fraction strips, pattern blocks and area models.** • **When multiplying a whole by a fraction such as $3 \cdot \frac{1}{2}$, the meaning is the same as with multiplication of whole numbers: 3 groups the size of $\frac{1}{2}$, of the whole.** • **When multiplying a fraction by a fraction such as $\frac{2}{3} \cdot \frac{3}{4}$, we are asking for part of a part.** • **Demonstrate multiplication and division of fractions using multiple representations.**

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	6.6 The student will a) multiply and divide fractions and mixed numbers; and **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.**
7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.	
a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient.* *Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.*	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **For measurement division, the divisor is the number of groups. You want to know how many are in each of those groups. Division of fractions can be explained as how many of a given divisor are needed to equal the given dividend. In other words, for 1/4 ÷ 2/3 , the question is, "How many 2/3 make 1/4?"** • **For partition division, the divisor is the size of the group, so the quotient answers the question, "How much is the whole?" or "How much for one?"** **6.6 The student will** **a) multiply and divide fractions and mixed numbers**; and b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.
b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient.* *Use the relationship between multiplication and division to*	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **For measurement division, the divisor is the number of**

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explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.	**groups. You want to know how many are in each of those groups. Division of fractions can be explained as how many of a given divisor are needed to equal the given dividend. In other words, for 1/4 ÷ 2/3 , the question is, "How many 2/3 make 1/4?"** • **For partition division, the divisor is the size of the group, so the quotient answers the question, "How much is the whole?" or "How much for one?"** **6.6 The student will** **a) multiply and divide fractions and mixed numbers**; and b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.
c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*	**6.4 The student will demonstrate multiple representations of multiplication and division of fractions.** **6.4 CF** • **For measurement division, the divisor is the number of groups. You want to know how many are in each of those groups. Division of fractions can be explained as how many of a given divisor are needed to equal the given dividend. In other words, for 1/4 ÷ 2/3 , the question is, "How many 2/3 make 1/4?"** • **For partition division, the divisor is the size of the group, so the quotient answers the question, "How much is the whole?" or "How much for one?"** **6.6 The student will** **a) multiply and divide fractions and mixed numbers**; and b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication,

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	and division of fractions.
Measurement and Data 5.MD	
Convert like measurement units within a given measurement system.	
1. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multistep, real world problems.	**4.6 The student will** a) estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate; and **b) identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms).** **4.7 The student will** a) estimate and measure length, and describe the result in both metric and U.S. Customary units; and **b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards; yards and miles) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters).** **4.8 The student will** a) estimate and measure liquid volume and describe the results in U.S. Customary units; and **b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons).** **5.8 The student will** a) find perimeter, area, and volume in standard units of measure; b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation; **c) identify equivalent measurements within the metric system;**

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	d) estimate and then measure to solve problems, using U.S. Customary and metric units; and **e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units.**
Represent and interpret data.	
2. Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*	**5.6 The student will solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers and express answers in simplest form.** **6.6 The student will** a) multiply and divide fractions and mixed numbers; and **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.**
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	
3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	
a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure**; b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation; c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S. Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. **5.8 CF**

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	• **Develop a procedure for finding volume using manipulatives (e.g., cubes).** • **Determine volume in standard units.**
b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure**; b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation; c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S. Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. **5.8 CF** • **Develop a procedure for finding volume using manipulatives (e.g., cubes).** • **Determine volume in standard units.**
4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure**; b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation; c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S. Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units.

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	5.8 CF • **Develop a procedure for finding volume using manipulatives (e.g., cubes).** • **Determine volume in standard units.**
5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	
a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.	**6.10 The student will** a) define pi (π) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; c) solve practical problems involving area and perimeter; and **d) describe and determine the volume and surface area of a rectangular prism.** **6.10 CF** • **Experiences in deriving the formulas for area, perimeter, and volume using manipulatives such as tiles, one inch cubes, adding machine tape, graph paper, geoboards, or tracing paper, promote an understanding of the formulas and facility in their use.**
b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure;** **b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation;** c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S.

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	Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. **5.8 CF** • **Determine the perimeter of a polygon, with or without diagrams, when** — **the lengths of all sides of a polygon that is not a rectangle or a square are given;** — **the length and width of a rectangle are given; or** — **the length of a side of a square is given.** • **Estimate and determine the perimeter of a polygon, and area of a square, rectangle, and right triangle following the parameters listed above, using only whole number measurements given in metric or U.S. Customary units, and record the solution with the appropriate unit of measure (e.g., 24 square inches).** • **Estimate and determine the area of a square, with or without diagrams, when the length of a side is given.** **6.10 The student will** a) define pi (π) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; c) solve practical problems involving area and perimeter; and **d) describe and determine the volume and surface area of a rectangular prism.** **6.10 CF** • **The volume of a rectangular prism is computed by multiplying the area of the base, B, (length x width) by the height of the**

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	prism (*V* = *lwh* = *Bh*).
c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure;** **b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation;** c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S. Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. **5.8 CF** • **Estimate and determine the perimeter of a polygon, and area of a square, rectangle, and right triangle following the parameters listed above, using only whole number measurements given in metric or U.S. Customary units, and record the solution with the appropriate unit of measure (e.g., 24 square inches).** • **Estimate and determine the area of a square, with or without diagrams, when the length of a side is given.** **6.10 The student will** a) define pi (π) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; c) solve practical problems involving area and perimeter; and **d) describe and determine the volume and surface area of a rectangular prism.**

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Geometry 5.G	
Graph points on the coordinate plane to solve real-world and mathematical problems.	
1. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y* coordinate).	**5.15 The student, given a problem situation, will collect, organize, and interpret data in a variety of forms, using stem-and-leaf plots and line graphs.** **5.15 CF** • **Through experiences displaying data in a variety of graphical representations, students learn to select an appropriate representation.** • **Organize the data into a chart, table, stem-and-leaf plots, and line graphs.** • **Display data in line graphs and stem-and-leaf plots.** • **Construct line graphs, labeling the vertical axis with equal whole number, decimal, or fractional increments and the horizontal axis with continuous data commonly related to time (e.g., hours, days, months, years, and age). Line graphs will have no more than six identified points along a continuum for continuous data (e.g., the decades: 1950s, 1960s, 1970s, 1980s, 1990s, and 2000s).** **6.11 The student will** **a) identify the coordinates of a point in a coordinate plane; and** **b) graph ordered pairs in a coordinate plane.** **6.11 CF** • **In a coordinate plane, the coordinates of a point are typically represented by the ordered pair (*x*, *y*), where *x* is the first coordinate and *y* is the second coordinate. However, any letters may be used to label the axes and the corresponding ordered pairs.**

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	• **The quadrants of a coordinate plane are the four regions created by the two intersecting perpendicular number lines. Quadrants are named in counterclockwise order. The signs on the ordered pairs for quadrant I are (+,+); for quadrant II, (–,+); for quadrant III, (–, –); and for quadrant IV, (+,–).**
2. Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	**5.15 The student, given a problem situation, will collect, organize, and interpret data in a variety of forms, using stem-and-leaf plots and line graphs.** **5.15 CF** • **Through experiences displaying data in a variety of graphical representations, students learn to select an appropriate representation.** • **Organize the data into a chart, table, stem-and-leaf plots, and line graphs.** • **Display data in line graphs and stem-and-leaf plots.** • **Construct line graphs, labeling the vertical axis with equal whole number, decimal, or fractional increments and the horizontal axis with continuous data commonly related to time (e.g., hours, days, months, years, and age). Line graphs will have no more than six identified points along a continuum for continuous data (e.g., the decades: 1950s, 1960s, 1970s, 1980s, 1990s, and 2000s).** **6.11 The student will** **a) identify the coordinates of a point in a coordinate plane; and** **b) graph ordered pairs in a coordinate plane.**
Classify two-dimensional figures into categories based on their properties.	

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3. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*	**5.12 The student will classify** a) angles as right, acute, obtuse, or straight; and **b) triangles as right, acute, obtuse, equilateral, scalene, or isosceles.** **5.13 The student, using plane figures (square, rectangle, triangle, parallelogram, rhombus, and trapezoid), will** **a) develop definitions of these plane figures; and** b) investigate and describe the results of combining and subdividing plane figures. **5.13 CF** • **A rectangle is a parallelogram with four right angles. Since a rectangle is a parallelogram, a rectangle has the same properties as those of a parallelogram.** • **A square is a rectangle with four congruent sides. Since a square is a rectangle, a square has all the properties of a rectangle and of a parallelogram.** • **A rhombus is a parallelogram with four congruent sides. Opposite angles of a rhombus are congruent. Since a rhombus is a parallelogram, the rhombus has all the properties of a parallelogram.** • **A trapezoid is a quadrilateral with exactly one pair of parallel sides. The parallel sides are called *bases,* and the nonparallel sides are called *legs*. If the legs have the same length, then the trapezoid is an isosceles trapezoid.** **6.13 The student will describe and identify properties of quadrilaterals.** **6.13 CF** • **Sort and classify polygons as quadrilaterals, parallelograms, rectangles, trapezoids, kites, rhombi, and squares based on**

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	their properties. Properties include number of parallel sides, angle measures and number of congruent sides.
4. Classify two-dimensional figures in a hierarchy based on properties.	**5.13 The student, using plane figures (square, rectangle, triangle, parallelogram, rhombus, and trapezoid), will** **a) develop definitions of these plane figures; and** b) investigate and describe the results of combining and subdividing plane figures. **5.13 CF** • **A rectangle is a parallelogram with four right angles. Since a rectangle is a parallelogram, a rectangle has the same properties as those of a parallelogram.** • **A square is a rectangle with four congruent sides. Since a square is a rectangle, a square has all the properties of a rectangle and of a parallelogram.** • **A rhombus is a parallelogram with four congruent sides. Opposite angles of a rhombus are congruent. Since a rhombus is a parallelogram,** • **the rhombus has all the properties of a parallelogram.** • **A trapezoid is a quadrilateral with exactly one pair of parallel sides. The parallel sides are called *bases,* and the nonparallel sides are called *legs*. If the legs have the same length, then the trapezoid is an isosceles trapezoid.** **6.13 The student will describe and identify properties of quadrilaterals.** **6.13 CF** • **Sort and classify polygons as quadrilaterals, parallelograms, rectangles, trapezoids, kites, rhombi, and squares based on**

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	their properties. Properties include number of parallel sides, angle measures and number of congruent sides.

Mathematics SOL for grade 5 aligned with the CCSS at other grade levels	
Grade 4 – Operations and Algebraic Thinking 4. Find the factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. Grade 2 – Operations and Algebraic Thinking 3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	**5.3 The student will** **a) identify and describe the characteristics of prime and composite numbers; and** **b) identify and describe the characteristics of even and odd numbers.**
Grade 7 – Geometry 4. Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. Geometry [high school] – Circles 2. Identify and describe relationships among inscribed angles, radii, and chords. *Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*	**5.9 The student will identify and describe the diameter, radius, chord, and circumference of a circle.**
Grade 3 – Measurement and Data 1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and	**5.10 The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.**

Mathematics SOL for grade 5 aligned with the CCSS at other grade levels	
subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. Grade 4 – Measurement and Data 2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	
Grade 4 – Measurement and Data 5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees. 6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. 7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using	**5.11 The student will measure right, acute, obtuse, and straight angles.**

Mathematics SOL for grade 5 aligned with the CCSS at other grade levels	
an equation with a symbol for the unknown angle measure.	
Grade 4 - Geometry 1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	**5.12 The student will classify** **a) angles as right, acute, obtuse, or straight; and** b) triangles as right, acute, obtuse, equilateral, scalene, or isosceles.
Grade 4 – Geometry 2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	**5.13 The student, using plane figures (square, rectangle, triangle, parallelogram, rhombus, and trapezoid), will** a) develop definitions of these plane figures; and **b) investigate and describe the results of combining and subdividing plane figures.**
Grade 7 – Statistics and Probability 8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.	**5.14 The student will make predictions and determine the probability of an outcome by constructing a sample space.**
Grade 6 – Statistics and Probability 1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.* 2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. 3. Recognize that a measure of center for a numerical data set	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.**

Mathematics SOL for grade 5 aligned with the CCSS at other grade levels	
summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. 5. Summarize numerical data sets in relation to their context, such as by: c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	
Grade 6 – Expressions and Equations 6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. Grade 6 – Expressions and Equations 6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. 7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers. Grade 6 – Expressions and Equations	**5.18 The student will** **a) investigate and describe the concept of variable;** **b) write an open sentence to represent a given mathematical relationship, using a variable;** **c) model one-step linear equations in one variable, using addition and subtraction; and** **d) create a problem situation based on a given open sentence, using a single variable.**

Mathematics SOL for grade 5 aligned with the CCSS at other grade levels	
7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	
Grade 6 – The Number System 4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express 36 + 8 as 4 (9 + 2).*	**5.19 The student will investigate and recognize the distributive property of multiplication over addition.**

Grade 6

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Ratios and Proportional Relationships 6.RP	
Understand ratio concepts and use ratio reasoning to solve problems.	
1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*	**6.1 The student will describe and compare data, using ratios, and will use appropriate notations, such as *a/b, a* to *b*, and *a*:*b*.** **CF 6.1** • **A ratio is a comparison of any two quantities. A ratio is used to represent relationships within and between sets.** • **A ratio can compare part of a set to the entire set (part-whole comparison).** • **A ratio can compare part of a set to another part of the same set (part-part comparison).** • **A ratio can compare part of a set to a corresponding part of another set (part-part comparison).** • **A ratio can compare all of a set to all of another set (whole-whole comparison).** **6.2 The student will** **a) investigate and describe fractions, decimals, and percents as ratios;** b) identify a given fraction, decimal, or percent from a representation; c) demonstrate equivalent relationships among fractions, decimals, and percents; and d) compare and order fractions, decimals, and percents. **7. 4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** • **A rate is a ratio that compares two quantities measured in**

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	different units. A unit rate is a rate with a denominator of 1. Examples of rates include miles/hour and revolutions/minute.
2. Understand the concept of a unit rate *a*/*b* associated with a ratio *a*:*b* with *b* ≠ 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*	**6.1 The student will describe and compare data, using ratios, and will use appropriate notations, such as *a/b, a* to *b*, and *a*:*b*.** **7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.**
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	
a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	**6.1 The student will describe and compare data, using ratios, and will use appropriate notations, such as *a/b, a* to *b*, and *a*:*b*.** **7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.12 The student will represent relationships with tables, graphs, rules, and words.**
b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** • **A rate is a ratio that compares two quantities measured in different units. A unit rate is a rate with a denominator of 1. Examples of rates include miles/hour and revolutions/minute.**
c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	**6.2 The student will** a) investigate and describe fractions, decimals, and percents as ratios; **b) identify a given fraction, decimal, or percent from a representation;**

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	c) demonstrate equivalent relationships among fractions, decimals, and percents; and d) compare and order fractions, decimals, and percents. **7.4 CF** • **Using 10% as a benchmark, mentally compute 5%, 10%, 15%, or 20% in a practical situation such as tips, tax and discounts.** • **Solve problems involving tips, tax, and discounts. Limit problems to only one percent computation per problem.** **8.3 The student will** **a) solve practical problems involving rational numbers, percents, ratios, and proportions; and** b) determine the percent increase or decrease for a given situation.
d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	**6.1 The student will describe and compare data, using ratios, and will use appropriate notations, such as *a/b, a* to *b*, and *a*:*b*.** **6.2 The student will** **a) investigate and describe fractions, decimals, and percents as ratios;** b) identify a given fraction, decimal, or percent from a representation; c) demonstrate equivalent relationships among fractions, decimals, and percents; and d) compare and order fractions, decimals, and percents. **7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.**
The Number System 6.NS	
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	
1. Interpret and compute quotients of fractions, and solve word	**6.4 The student will demonstrate multiple representations of**

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problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*	**multiplication and division of fractions.** **6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.**
Compute fluently with multi-digit numbers and find common factors and multiples.	
2. Fluently divide multi-digit numbers using the standard algorithm.	**4.4 The student will** a) estimate sums, differences, products, and quotients of whole numbers; b) add, subtract, and multiply whole numbers; **c) divide whole numbers, finding quotients with and without remainders; and** d) solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers. **5.4 The student will create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers.**
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	**4.5 The student will** a) determine common multiples and factors, including least common multiple and greatest common factor; b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the

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	resulting fractions, using common multiples and factors; **c) add and subtract with decimals; and** d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals. **5.5 The student will** **a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and** b) create and solve single-step and multistep practical problems involving decimals. **6.7 The student will solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of decimals.**
4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express 36 + 8 as 4 (9 + 2).*	**4.5 The student will** **a) determine common multiples and factors, including least common multiple and greatest common factor;** b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors; c) add and subtract with decimals; and d) solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals. **5.19 The student will investigate and recognize the distributive property of multiplication over addition.** **7.16 The student will apply the following properties of operations with real numbers:** a) the commutative and associative properties for addition and multiplication; **b) the distributive property;**

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	c) the additive and multiplicative identity properties; d) the additive and multiplicative inverse properties; and e) the multiplicative property of zero.
Apply and extend previous understandings of numbers to the system of rational numbers.	
5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	**6.3 The student will** **a) identify and represent integers;** b) order and compare integers; and c) identify and describe absolute value of integers. **6.3 CF** • **Integers are the set of whole numbers, their opposites, and zero.** • **What role do negative integers play in practical situations? Some examples of the use of negative integers are found in temperature (below 0), finance (owing money), below sea level. There are many other examples.** **7.3 The student will** a) model addition, subtraction, multiplication and division of integers; and **b) add, subtract, multiply, and divide integers**. **7.3 CF** • **Integers are used in practical situations, such as temperature changes (above/below zero), balance in a checking account (deposits/withdrawals), and changes in altitude (above/below sea level).**
6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	

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a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.	**6.3 The student will** **a) identify and represent integers;** **b) order and compare integers; and** c) identify and describe absolute value of integers. **6.3 CF Understanding the Standard** • **Integers are the set of whole numbers, their opposites, and zero.** • **Positive integers are greater than zero.** • **Negative integers are less than zero.** • **Zero is an integer that is neither positive nor negative.** • **A negative integer is always less than a positive integer.** • **When comparing two negative integers, the negative integer that is closer to zero is greater.** • **An integer and its opposite are the same distance from zero on a number line. For example, the opposite of 3 is -3.** • **The absolute value of a number is the distance of a number from zero on the number line regardless of direction. Absolute value is represented as -6 = 6.**
b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	**6.11 The student will** **a) identify the coordinates of a point in a coordinate plane; and** **b) graph ordered pairs in a coordinate plane.**
c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	**6.2 The student will** a) investigate and describe fractions, decimals, and percents as ratios; b) identify a given fraction, decimal, or percent from a representation; c) demonstrate equivalent relationships among fractions, decimals, and percents; and

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	d) compare and order fractions, decimals, and percents. **6.3 The student will** **a) identify and represent integers;** **b) order and compare integers; and** c) identify and describe absolute value of integers. **6.11 The student will** **a) identify the coordinates of a point in a coordinate plane; and** **b) graph ordered pairs in a coordinate plane.**
7. Understand ordering and absolute value of rational numbers.	
a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.*	**6.3 The student will** a) identify and represent integers; **b) order and compare integers; and** c) identify and describe absolute value of integers.
b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3°C > –7°C to express the fact that –3°C is warmer than –7°C.*	**6.3 The student will** a) identify and represent integers; **b) order and compare integers; and** c) identify and describe absolute value of integers. **7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; **c) compare and order fractions, decimals, percents and numbers written in scientific notation;** d) determine square roots; and **e) identify and describe absolute value for rational numbers.**
c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars,*	**6.3 The student will** a) identify and represent integers; b) order and compare integers; and **c) identify and describe absolute value of integers.**

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write |–30| = 30 to describe the size of the debt in dollars.	**7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents and numbers written in scientific notation; d) determine square roots; and **e) identify and describe absolute value for rational numbers.**
d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.*	**6.3 The student will** a) identify and represent integers; b) order and compare integers; and **c) identify and describe absolute value of integers.** **7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; **c) compare and order fractions, decimals, percents and numbers written in scientific notation;** d) determine square roots; and **e) identify and describe absolute value for rational numbers.**
8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	**6.11 The student will** **a) identify the coordinates of a point in a coordinate plane; and** **b) graph ordered pairs in a coordinate plane.** **6.11 CF** • **Relate the coordinate of a point to the distance from each axis and relate the coordinates of a single point to another point on the same horizontal or vertical line.**
Expressions and Equations 6.EE	
Apply and extend previous understandings of arithmetic to	

<table>
<tr><th>CCSS for Mathematics – Grade 6</th><th>Mathematics SOL</th></tr>
<tr><td>algebraic expressions.</td><td></td></tr>
<tr><td>1. Write and evaluate numerical expressions involving whole-number exponents.</td><td>6.8 The student will evaluate whole number numerical expressions, using the order of operations.
6.8 CF
• Find the value of numerical expressions, using order of operations, mental mathematics, and appropriate tools. Exponents are limited to positive values.
7.13 The student will
a) write verbal expressions as algebraic expressions and sentences as equations and vice versa; and
b) evaluate algebraic expressions for given replacement values of the variables.</td></tr>
<tr><td>2. Write, read, and evaluate expressions in which letters stand for numbers.</td><td></td></tr>
<tr><td>a. Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation “Subtract y from 5” as 5 – y.</td><td>5.17 The student will describe the relationship found in a number pattern and express the relationship.
5.17 CF
• When the pattern data are expressed in a T-table, an expression can represent that data. An example is:
<table><tr><th>x</th><th>y</th></tr><tr><td>6</td><td>9</td></tr><tr><td>7</td><td>10</td></tr><tr><td>11</td><td>14</td></tr><tr><td>15</td><td>18</td></tr></table>This example defines the relationship as x + 3.
7.13 The student will
a) write verbal expressions as algebraic expressions and</td></tr>
</table>

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	sentences as equations and vice versa; and b) evaluate algebraic expressions for given replacement values of the variables.
b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.*	**6.18 The student will solve one-step linear equations in one variable involving whole number coefficients and positive rational solutions.** **6.18 CF** • **Identify and use the following algebraic terms appropriately: *equation*, v*ariable, expression, term,* and *coefficient*.** **7.13 The student will** **a) write verbal expressions as algebraic expressions and sentences as equations and vice versa; and** b) evaluate algebraic expressions for given replacement values of the variables.
c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s = 1/2.*	**5.7 The student will evaluate whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division.** **6.8 The student will evaluate whole number numerical expressions, using the order of operations.** **7.13 The student will** a) write verbal expressions as algebraic expressions and sentences as equations and vice versa; and **b) evaluate algebraic expressions for given replacement values of the variables.** **8.4 The student will apply the order of operations to evaluate algebraic expressions for given replacement values of the variables.**
3. Apply the properties of operations to generate equivalent expressions. *For example, apply the distributive property to the*	**6.19 The student will investigate and recognize** **a) the identity properties for addition and multiplication;**

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expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.	**b) the multiplicative property of zero; and** **c) the inverse property for multiplication.** **7.16 The student will apply the following properties of operations with real numbers:** **a) the commutative and associative properties for addition and multiplication;** **b) the distributive property;** **c) the additive and multiplicative identity properties;** **d) the additive and multiplicative inverse properties; and** **e) the multiplicative property of zero.**
4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.*	**8.4 The student will apply the order of operations to evaluate algebraic expressions for given replacement values of the variables.** **8.4 CF** • **Substitute numbers for variables in algebraic expressions and simplify the expressions by using the order of operations. Exponents are positive and limited to whole numbers less than 4. Square roots are limited to perfect squares.**
Reason about and solve one-variable equations and inequalities.	
5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	**6.18 The student will solve one-step linear equations in one variable involving whole number coefficients and positive rational solutions.** **6.18 CF** • **When solving an equation, why is it necessary to perform the same operation on both sides of an equal sign?** • **Represent and solve a one-step equation, using a variety of concrete materials such as colored chips, algebra tiles, or weights on a balance scale.**

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	6.20 The student will graph inequalities on a number line. **7.15 The student will** **a) solve one-step inequalities in one variable; and** **b) graph solutions to inequalities on the number line.** **7.15 CF** • **Identify a numerical value that satisfies the inequality.**
6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	**5.17 The student will describe the relationship found in a number pattern and express the relationship.** **5.17 CF** • **Describe the relationship found in patterns, using words, tables, and symbols to express the relationship.** **5.18 The student will** **a) investigate and describe the concept of variable;** b) write an open sentence to represent a given mathematical relationship, using a variable; c) model one-step linear equations in one variable, using addition and subtraction; and d) create a problem situation based on a given open sentence, using a single variable.
7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	**5.18 The student will** a) investigate and describe the concept of variable; **b) write an open sentence to represent a given mathematical relationship, using a variable;** **c) model one-step linear equations in one variable, using addition and subtraction; and** **d) create a problem situation based on a given open sentence, using a single variable.** **6.18 The student will solve one-step linear equations in one variable involving whole number coefficients and positive**

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	rational solutions.
8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	**6.20 The student will graph inequalities on a number line.** **6.20 CF** • **Given a simple inequality with integers, graph the relationship on a number line.** • **Given the graph of a simple inequality with integers, represent the inequality two different ways using symbols (<, >, <, >).** **7.15 The student will** **a) solve one-step inequalities in one variable; and** **b) graph solutions to inequalities on the number line.** **7.15 CF** • **Represent and demonstrate steps in solving inequalities in one variable, using concrete materials, pictorial representations, and algebraic sentences.** • **Graph solutions to inequalities on the number line.** • **Identify a numerical value that satisfies the inequality.**
Represent and analyze quantitative relationships between dependent and independent variables.	
9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.*	**7.12 The student will represent relationships with tables, graphs, rules, and words.** **8.17 The student will identify the domain, range, independent variable or dependent variable in a given situation.**

CCSS for Mathematics – Grade 6	Mathematics SOL
Geometry 6.G	
Solve real-world and mathematical problems involving area, surface area, and volume.	
1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure;** **b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation;** c) identify equivalent measurements within the metric system; d) estimate and then measure to solve problems, using U.S. Customary and metric units; and e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units. **6.10 The student will** a) define pi (π) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; **c) solve practical problems involving area and perimeter; and** d) describe and determine the volume and surface area of a rectangular prism. **8.11 The student will solve practical area and perimeter problems involving composite plane figures.** **8.11 CF** • **Subdivide a figure into triangles, rectangles, squares, trapezoids and semicircles. Estimate the area of subdivisions and combine to determine the area of the composite figure.** • **Use the attributes of the subdivisions to determine the**

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	perimeter and circumference of a figure. • **Apply perimeter, circumference and area formulas to solve practical problems.**
2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas *V = l w h* and *V = b h* to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	**5.8 The student will** **a) find perimeter, area, and volume in standard units of measure;** **b) differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation;** **c) identify equivalent measurements within the metric system;** **d) estimate and then measure to solve problems, using U.S. Customary and metric units; and** **e) choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units.** **5.8 CF** • **Develop a procedure for finding volume using manipulatives (e.g., cubes).** **6.10 The student will** a) define π (pi) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; c) solve practical problems involving area and perimeter; and **d) describe and determine the volume and surface area of a rectangular prism.**
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving	**6.12 The student will determine congruence of segments, angles, and polygons.** **6.12 CF** • **Draw polygons in the coordinate plane given coordinates for**

CCSS for Mathematics – Grade 6	Mathematics SOL
real-world and mathematical problems.	**the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving practical and mathematical problems.**
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	**6.10 The student will** a) define π (pi) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; c) solve practical problems involving area and perimeter; and **d) describe and determine the volume and surface area of a rectangular prism.** **7.5 The student will** **a) describe volume and surface area of cylinders;** **b) solve practical problems involving the volume and surface area of rectangular prisms and cylinders; and** **c) describe how changing one measured attribute of a rectangular prism affects its volume and surface area.** **7.5 CF** • **A rectangular prism can be represented on a flat surface as a net that contains six rectangles — two that have measures of the length and width of the base, two others that have measures of the length and height, and two others that have measures of the width and height. The surface area of a rectangular prism is the sum of the areas of all six faces (*SA* = 2*lw*+ 2*lh* + 2*wh*).**
Statistics and Probability 6.SP	
Develop understanding of statistical variability.	
1. Recognize a statistical question as one that anticipates	**5.16 The student will**

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variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*	**a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.** **6.14 The student, given a problem situation, will** **a) construct circle graphs;** **b) draw conclusions and make predictions, using circle graphs; and** **c) compare and contrast graphs that present information from the same data set.** **6.14 CF** **• To collect data for any problem situation, an experiment can be designed, a survey can be conducted, or other data-gathering strategies can be used. The data can be organized, displayed, analyzed, and interpreted to answer the problem.**
2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.** **6.15 The student will** **a) describe mean as balance point; and** **b) decide which measure of center is appropriate for a given purpose.**
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.**

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	5.16 CF • **Describe the impact on measures of center when a single value of a data set is added, removed, or changed.** **6.15 The student will** **a) describe mean as balance point; and** **b) decide which measure of center is appropriate for a given purpose.**
Summarize and describe distributions.	
4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	**3.17 The student will** a) collect and organize data, using observations, measurements, surveys, or experiments; **b) construct a line plot, a picture graph, or a bar graph to represent the data; and** c) read and interpret the data represented **7.11 The student, given data for a practical situation, will** **a) construct and analyze histograms; and** b) compare and contrast histograms with other types of graphs presenting information from the same data set. **A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.**
5. Summarize numerical data sets in relation to their context, such as by:	
a. Reporting the number of observations.	**6.14 The student, given a problem situation, will** **a) construct circle graphs;** **b) draw conclusions and make predictions, using circle graphs;** **c) compare and contrast graphs that present information from the same data set.** **6.14 CF** •**To collect data for any problem situation, an experiment can**

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	be designed, a survey can be conducted, or other data-gathering strategies can be used. The data can be organized, displayed, analyzed, and interpreted to answer the problem. **• Different types of graphs are used to display different types of data.** **– Bar graphs use categorical (discrete) data (e.g., months or eye color).** **– Line graphs use continuous data (e.g., temperature and time).** **– Circle graphs show a relationship of the parts to a whole.** **6.15 The student will** **a) describe mean as balance point; and** **b) decide which measure of center is appropriate for a given purpose.** **6.15 CF** **• Mean can be defined as the point on a number line where the data distribution is balanced. This means that the sum of the distances from the mean of all the points above the mean is equal to the sum of the distances of all the data points below the mean. This is the concept of mean as the balance point.** **7.11 The student, given data for a practical situation, will** **a) construct and analyze histograms; and** **b) compare and contrast histograms with other types of graphs presenting information from the same data set.**
b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.	**5.15 The student, given a problem situation, will collect, organize, and interpret data in a variety of forms, using stem-and-leaf plots and line graphs.** **5.15 CF** **• A key is often included to explain how to read the plot.**

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	6.14 The student, given a problem situation, will **a) construct circle graphs;** **b) draw conclusions and make predictions, using circle graphs;** **c) compare and contrast graphs that present information from the same data set.** **6.14 CF** **• To collect data for any problem situation, an experiment can be designed, a survey can be conducted, or other data-gathering strategies can be used. The data can be organized, displayed, analyzed, and interpreted to answer the problem.** **• Different types of graphs are used to display different types of data.** **– Bar graphs use categorical (discrete) data (e.g., months or eye color).** **– Line graphs use continuous data (e.g., temperature and time).** **– Circle graphs**
c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.** **A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.** **A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.** **6.15 The student will** **a) describe mean as balance point; and**

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	b) decide which measure of center is appropriate for a given purpose.
d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.** **6.15 The student will** **a) describe mean as balance point; and** **b) decide which measure of center is appropriate for a given purpose.** **A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.**

Mathematics SOL for grade 6 aligned with the CCSS at other grade levels	
Grade 5 — Number and Operations in Base Ten 2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**6.5 The student will investigate and describe concepts of positive exponents and perfect squares.**
Geometry [high school] – Congruence 1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.	**6.12 The student will determine congruence of segments, angles, and polygons.**
Statistics [high school] — Conditional Probability and the Rules of Probability 1. Describe events as subsets of a sample space (the set of	**6.16 The student will** **a) compare and contrast dependent and independent events; and**

Mathematics SOL for grade 6 aligned with the CCSS at other grade levels	
outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not"). 2. Understand that two events *A* and *B* are independent if the probability of *A* and *B* occurring together is the product of their probabilities, and use this characterization to determine if they are independent. 3. Understand the conditional probability of *A* given *B* as *P*(*A* and *B*)/*P*(*B*), and interpret independence of *A* and *B* as saying that the conditional probability of *A* given *B* is the same as the probability of *A*, and the conditional probability of *B* given *A* is the same as the probability of *B*.	**b) determine probabilities for dependent and independent events.**
Functions [high school] — Building Functions 1. Write a function that describes a relationship between two quantities. a. Determine an explicit expression, a recursive process, or steps for calculation from a context.	**6.17 The student will identify and extend geometric and arithmetic sequences.**

Mathematics SOL for grade 6 not explicitly stated in the CCSS at any grade level	
	6.9 The student will make ballpark comparisons between measurements in the U.S. Customary System of measurement and measurements in the metric system.

Grade 7

CCSS for Mathematics – Grade 7	Mathematics SOL
Ratios and Proportional Relationships 7.RP	
Analyze proportional relationships and use them to solve real-world and mathematical problems.	
1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.*	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** **• A rate is a ratio that compares two quantities measured in different units. A unit rate is a rate with a denominator of 1. Examples of rates include miles/hour and revolutions/minute.**
2. Recognize and represent proportional relationships between quantities.	
a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** **• A rate is a ratio that compares two quantities measured in different units. A unit rate is a rate with a denominator of 1. Examples of rates include miles/hour and revolutions/minute.** **7.6 The student will determine whether plane figures—quadrilaterals and triangles—are similar and write proportions to express the relationships between corresponding sides of similar figures.** **7.12 The student will represent relationships with tables, graphs, rules, and words.**
b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** **• A rate is a ratio that compares two quantities measured in different units. A unit rate is a rate with a denominator of 1. Examples of rates include miles/hour and revolutions/minute.**

CCSS for Mathematics – Grade 7	Mathematics SOL
	7.12 The student will represent relationships with tables, graphs, rules, and words. **A.8 The student, given a situation in a real-world context, will analyze a relation to determine whether a direct or inverse variation exists, and represent a direct variation algebraically and graphically and an inverse variation algebraically.** **A.8 CF** **• The constant of proportionality in a direct variation is represented by the ratio of the dependent variable to the independent variable.** **• A direct variation can be represented by a line passing through the origin.**
c. Represent proportional relationships by equations. *For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn*.	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** **• A rate is a ratio that compares two quantities measured in different units. A unit rate is a rate with a denominator of 1. Examples of rates include miles/hour and revolutions/minute.** **7.12 The student will represent relationships with tables, graphs, rules, and words.** **8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.**
d. Explain what a point *(x, y)* on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, *r)* where *r* is the unit rate.	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** **• A rate is a ratio that compares two quantities measured in different units. A unit rate is a rate with a denominator of 1. Examples of rates include miles/hour and**

CCSS for Mathematics – Grade 7	Mathematics SOL
	revolutions/minute. **7.12 The student will represent relationships with tables, graphs, rules, and words.** **8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.**
3. Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.*	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **8.3 The student will** **a) solve practical problems involving rational numbers, percents, ratios, and proportions; and** **b) determine the percent increase or decrease for a given situation.**
The Number System 7.NS	
Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	
1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	
a. Describe situations in which opposite quantities combine to make 0. *For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.*	**7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** b) add, subtract, multiply, and divide integers. **7.16 The student will apply the following properties of operations with real numbers:** a) the commutative and associative properties for addition and multiplication;

CCSS for Mathematics – Grade 7	Mathematics SOL
	b) the distributive property; c) the additive and multiplicative identity properties; **d) the additive and multiplicative inverse properties; and** e) the multiplicative property of zero.
b. Understand $p + q$ as the number located a distance $\|q\|$ from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	**6.3 The student will** a) identify and represent integers; b) order and compare integers; and **c) identify and describe absolute value of integers.** **7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents, and numbers written in scientific notation; d) determine square roots; and **e) identify and describe absolute value for rational numbers.** **7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** b) add, subtract, multiply, and divide integers. **7.16 The student will apply the following properties of operations with real numbers:** a) the commutative and associative properties for addition and multiplication; b) the distributive property; c) the additive and multiplicative identity properties; **d) the additive and multiplicative inverse properties; and** e) the multiplicative property of zero.
c. Understand subtraction of rational numbers as adding the	**6.3 The student will**

CCSS for Mathematics – Grade 7	Mathematics SOL
additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	a) identify and represent integers; b) order and compare integers; and **c) identify and describe absolute value of integers.** **7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents, and numbers written in scientific notation; d) determine square roots; and **e) identify and describe absolute value for rational numbers.** **7.1 CF** • **Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle to solve practical problems.** **7.16 The student will apply the following properties of operations with real numbers:** a) the commutative and associative properties for addition and multiplication; b) the distributive property; c) the additive and multiplicative identity properties; **d) the additive and multiplicative inverse properties; and** e) the multiplicative property of zero.
d. Apply properties of operations as strategies to add and subtract rational numbers.	**5.5 The student will** **a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and** **b) create and solve single-step and multistep practical problems involving decimals.**

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	5.6 The student will solve single-step and multistep practical problems involving addition and subtraction with fractions and mixed numbers and express answers in simplest form. **6.6 The student will** a) multiply and divide fractions and mixed numbers; and **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.** **7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** **b) add, subtract, multiply, and divide integers.** **7.16 The student will apply the following properties of operations with real numbers:** **a) the commutative and associative properties for addition and multiplication;** b) the distributive property; **c) the additive and multiplicative identity properties;** **d) the additive and multiplicative inverse properties; and** e) the multiplicative property of zero.
2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	
a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	**5.5 The student will** **a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and** **b) create and solve single-step and multistep practical problems involving decimals.**

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	6.6 The student will **a) multiply and divide fractions and mixed numbers; and** b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions. **7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** **b) add, subtract, multiply, and divide integers.** **7.16 The student will apply the following properties of operations with real numbers:** **a) the commutative and associative properties for addition and multiplication;** **b) the distributive property;** **c) the additive and multiplicative identity properties;** **d) the additive and multiplicative inverse properties; and** **e) the multiplicative property of zero.**
b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real world contexts.	**6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.** **7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** **b) add, subtract, multiply, and divide integers.**
c. Apply properties of operations as strategies to multiply and divide rational numbers.	**6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** **b) estimate solutions and then solve single-step and multistep**

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	practical problems involving addition, subtraction, multiplication, and division of fractions. **6.7 The student will solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of decimals.** **7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** **b) add, subtract, multiply, and divide integers.** **7.16 The student will apply the following properties of operations with real numbers:** **a) the commutative and associative properties for addition and multiplication;** **b) the distributive property;** **c) the additive and multiplicative identity properties;** **d) the additive and multiplicative inverse properties; and** **e) the multiplicative property of zero.**
d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	**6.2 The student will** **a) investigate and describe fractions, decimals and percents as ratios;** **b) identify a given fraction, decimal or percent from a representation;** **c) demonstrate equivalent relationships among fractions, decimals, and percents; and** **d) compare and order fractions, decimals, and percents.** **6.2 CF** **• Percents are used in real life for taxes, sales, data description, and data comparison.** **8.2 The student will describe orally and in writing the**

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	relationships between the subsets of the real number system. **8.2 CF** • **The set of rational numbers includes the set of all numbers that can be expressed as fractions in the form a/b where a and b are integers and b does not equal zero.**
3. Solve real-world and mathematical problems involving the four operations with rational numbers.	**6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.** **6.7 The student will solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of decimals.** **7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** **b) add, subtract, multiply, and divide integers.** **8.3 The student will** **a) solve practical problems involving rational numbers, percents, ratios, and proportions; and** **b) determine the percent increase or decrease for a given situation.**
Expressions and Equations 7.EE	
Use properties of operations to generate equivalent expressions.	
1. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	**7.14 The student will** **a) solve one- and two-step linear equations in one variable; and** b) solve practical problems requiring the solution of one- and two-step linear equations.

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	8.15 The student will **a) solve multistep linear equations in one variable on one and two sides of the equation;** b) solve two-step linear inequalities and graph the results on a number line; and **c) identify properties of operations used to solve an equation.** **A.2 The student will perform operations on polynomials, including** a) applying the laws of exponents to perform operations on expressions; **b) adding, subtracting, multiplying, and dividing polynomials; and** **c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.**
2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."*	**7.13 The student will** **a) write verbal expressions as algebraic expressions and sentences as equations and vice versa; and** b) evaluate algebraic expressions for given replacement values of the variables. **7.14 The student will** a) solve one- and two-step linear equations in one variable; and **b) solve practical problems requiring the solution of one- and two-step linear equations.**
Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	
3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole	**5.4 The student will create and solve single-step and multistep practical problems involving addition, subtraction,**

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numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*	**multiplication, and division with and without remainders of whole numbers.** **6.6 The student will** **a) multiply and divide fractions and mixed numbers; and** **b) estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions.** **6.7 The student will solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of decimals.** **7.3 The student will** **a) model addition, subtraction, multiplication, and division of integers; and** **b) add, subtract, multiply, and divide integers.** **7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **8.3 The student will** **a) solve practical problems involving rational numbers, percents, ratios, and proportions; and** **b) determine the percent increase or decrease for a given situation.**
4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	
a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the*	**7.14 The student will** **a) solve one- and two-step linear equations in one variable; and** **b) solve practical problems requiring the solution of one- and two-step linear equations.** **8.15 The student will**

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perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	**a) solve multistep linear equations in one variable on one and two sides of the equation;** b) solve two-step linear inequalities and graph the results on a number line; and **c) identify properties of operations used to solve an equation.**
b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*	**7.15 The student will** **a) solve one-step inequalities in one variable; and** **b) graph solutions to inequalities on the number line.** **8.15 The student will** a) solve multistep linear equations in one variable on one and two sides of the equation; **b) solve two-step linear inequalities and graph the results on a number line; and** **c) identify properties of operations used to solve an equation.**
Geometry 7.G	
Draw, construct, and describe geometrical figures and describe the relationships between them.	
1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.4 CF** • **Apply proportions to solve practical problems, including scale drawings. Scale factors shall have denominators no greater than 12 and decimals no less than tenths.** **7.8 The student, given a polygon in the coordinate plane, will represent transformations (**reflections, **dilations,** rotations, and translations**) by graphing in the coordinate plane.**
2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides,	**3.15 The student will identify and draw representations of points, line segments, rays, angles, and lines.** **3.15 CF**

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noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	• **Draw representations of points, line segments, rays, angles, and lines, using a ruler or straightedge.** **5.11 The student will measure right, acute, obtuse, and straight angles.** **5.11 CF** • **Identify the appropriate tools (e.g., protractor and straightedge or angle ruler as well as available software) used to measure and draw angles and triangles.**
3. Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	**8.7 The student will** **a) investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and** **b) describe how changing one measured attribute of a figure affects the volume and surface area.** **8.7 CF** • **Describe the two-dimensional figures that result from slicing three-dimensional figures parallel to the base (e.g., as in plane sections of right rectangular prisms and right rectangular pyramids).**
Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	
4. Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	**5.9 The student will identify and describe the diameter, radius, chord, and circumference of a circle.** **6.10 The student will** **a) define π (pi) as the ratio of the circumference of a circle to its diameter;** **b) solve practical problems involving circumference and area of a circle, given the diameter or radius;** **c) solve practical problems involving area and perimeter; and** d) describe and determine the volume and surface area of a

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	rectangular prism.
5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	**8.6 The student will** **a) verify by measuring and describe the relationships among vertical angles, adjacent angles, supplementary angles, and complementary angles; and** b) measure angles of less than 360°. **8.6 CF** • **Use the relationships among supplementary, complementary, vertical, and adjacent angles to solve practical problems.**
6. Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	**6.10 The student will** a) define pi (π) as the ratio of the circumference of a circle to its diameter; b) solve practical problems involving circumference and area of a circle, given the diameter or radius; **c) solve practical problems involving area and perimeter;** **d) describe and determine the volume and surface area of a rectangular prism.** **7.5 The student will** **a) describe volume and surface area of cylinders;** **b) solve practical problems involving the volume and surface area of rectangular prisms and cylinders; and** **c) describe how changing one measured attribute of a rectangular prism affects its volume and surface area.**
Statistics and Probability 7.SP	
Use random sampling to draw inferences about a population.	
1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand	**6.14 The student, given a problem situation, will** **a) construct circle graphs;** **b) draw conclusions and make predictions, using circle graphs; and**

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that random sampling tends to produce representative samples and support valid inferences.	**c) compare and contrast graphs that present information from the same data set.** **A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.** **AFDA.8 The student will design and conduct an experiment/survey. Key concepts include** **a) sample size;** **b) sampling technique;** c) controlling sources of bias and experimental error; **d) data collection; and** **e) data analysis and reporting.**
2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*	**A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.** **AFDA.8 The student will design and conduct an experiment/survey. Key concepts include** **a) sample size;** **b) sampling technique;** c) controlling sources of bias and experimental error; **d) data collection; and** **e) data analysis and reporting.**
Draw informal comparative inferences about two populations.	
3. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability*	**6.15 The student will** **a) describe mean as balance point; and** **b) decide which measure of center is appropriate for a given purpose.** **A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute**

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(mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.	**deviation, standard deviation, and z-scores.**
4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** b) describe mean as fair share; **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.** **6.15 The student will** a) describe mean as balance point; and **b) decide which measure of center is appropriate for a given purpose.**
Investigate chance processes and develop, use, and evaluate probability models.	
5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	**4.13 The student will** **a) predict the likelihood of an outcome of a simple event; and** **b) represent probability as a number between 0 and 1, inclusive.**
6. Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*	**5.14 The student will make predictions and determine the probability of an outcome by constructing a sample space.** **7.9 The student will investigate and describe the difference between the experimental probability and theoretical probability of an event.**
7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible	

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sources of the discrepancy.	
a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*	**7.9 The student will investigate and describe the difference between the experimental probability and theoretical probability of an event.**
b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*	**7.9 The student will investigate and describe the difference between the experimental probability and theoretical probability of an event.**
8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	
a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.	**5.14 The student will make predictions and determine the probability of an outcome by constructing a sample space.** **6.16 The student will** **a) compare and contrast dependent and independent events; and** **b) determine probabilities for dependent and independent events.** **7.10 The student will determine the probability of compound events, using the Fundamental (Basic) Counting Principle.**
b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.	**5.14 The student will make predictions and determine the probability of an outcome by constructing a sample space.** **6.16 The student will** **a) compare and contrast dependent and independent events; and** **b) determine probabilities for dependent and independent**

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	events **7.10 The student will determine the probability of compound events, using the Fundamental (Basic) Counting Principle.**
c. Design and use a simulation to generate frequencies for compound events. *For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?*	**6.16 The student will** **a) compare and contrast dependent and independent events; and** **b) determine probabilities for dependent and independent events.** **7.10 The student will determine the probability of compound events, using the Fundamental (Basic) Counting Principle.**

Mathematics SOL for grade 7 aligned with the CCSS at other grade levels	
Grade 8 — Expressions and Equations 1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, 32 × 3–5 = 3–3 = 1/33 = 1/27.* 2. Use square root and cube root symbols to represent solutions to equations of the form $x2 = p$ and $x3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational. 3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3 × 108 and the population of the world as 7 × 109, and determine that the world population is more than 20 times larger.* 4. Perform operations with numbers expressed in scientific	**7.1 The student will** **a) investigate and describe the concept of negative exponents for powers of ten;** **b) determine scientific notation for numbers greater than zero;** **c) compare and order fractions, decimals, percents, and numbers written in scientific notation;** **d) determine square roots; and** e) identify and describe absolute value for rational numbers.

Mathematics SOL for grade 7 aligned with the CCSS at other grade levels	
notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	
Grade 5—Operations and Algebraic Thinking 3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.* Functions [high school] — Building Functions 1. Write a function that describes a relationship between two quantities. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. 2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.	**7.2 The student will describe and represent arithmetic and geometric sequences, using variable expressions.**
Grade 6 — Statistics and Probability 4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	**7.11 The student, given data for a practical situation, will** **a) construct and analyze histograms; and** **b) compare and contrast histograms with other types of graphs presenting information from the same data set.**
Grade 6 — Expressions and Equations	**7.13 The student will**

Mathematics SOL for grade 7 aligned with the CCSS at other grade levels	
1. Write and evaluate numerical expressions involving whole-number exponents. 2. Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas* $V = s^3$ *and* $A = 6\ s^2$ *to find the volume and surface area of a cube with sides of length s = 1/2.*	a) write verbal expressions as algebraic expressions and sentences as equations and vice versa; and **b) evaluate algebraic expressions for given replacement values of the variables.**

Mathematics SOL for grade 7 not explicitly stated in the CCSS at any grade level	
	7.7 The student will compare and contrast the following quadrilaterals based on properties: parallelogram, rectangle, square, rhombus, and trapezoid.

Grade 8

CCSS for Mathematics – Grade 8	Mathematics SOL
The Number System 8.NS	
Know that there are numbers that are not rational, and approximate them by rational numbers.	
1. Know that numbers that are not rational are irrational. Understand informally that every number has a decimal expansion; the rational numbers are those with decimal expansions that terminate in 0s or eventually repeat. Know that other numbers are called irrational.	**8.2 The student will describe orally and in writing the relationships between the subsets of the real number system.**
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). *For example, by truncating the decimal expansion of √2, show that √2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*	**7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents, and numbers written in scientific notation; **d) determine square roots; and** e) identify and describe absolute value for rational numbers. **8.2 The student will describe orally and in writing the relationships between the subsets of the real number system.** **8.5 The student will** **a) determine whether a given number is a perfect square; and** **b) find the two consecutive whole numbers between which a square root lies.** **A.3 The student will express the square roots and cube roots of whole numbers and the square root of a monomial algebraic expression in simplest radical form.**
Expressions and Equations 8.EE	
Work with radicals and integer exponents.	
1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,* $3^2 \times 3^{-5}$	**6.5 The student will investigate and describe concepts of positive exponents and perfect squares.**

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= 3^{-3} = $(1/3)^3$ = 1/27.	**7.1 The student will** **a) investigate and describe the concept of negative exponents for powers of ten;** b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents, and numbers written in scientific notation; d) determine square roots; and e) identify and describe absolute value for rational numbers. **8.1 The student will** **a) simplify numerical expressions involving positive exponents, using rational numbers, order of operations, and properties of operations with real numbers; and** **b) compare and order decimals, fractions, percents, and numbers written in scientific notation.** **A.2 The student will perform operations on polynomials, including** **a) applying the laws of exponents to perform operations on expressions;** b) adding, subtracting, multiplying, and dividing polynomials; and c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.
2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.	**7.1 The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents, and numbers written in scientific notation;

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	d) determine square roots; and e) identify and describe absolute value for rational numbers. **8.2 The student will describe orally and in writing the relationships between the subsets of the real number system.** **8.5 The student will** **a) determine whether a given number is a perfect square; and** **b) find the two consecutive whole numbers between which a square root lies.** **A.3 The student will express the square roots and cube roots of whole numbers and the square root of a monomial algebraic expression in simplest radical form.**
3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger.*	**7.1 The student will** **a) investigate and describe the concept of negative exponents for powers of ten;** **b) determine scientific notation for numbers greater than zero;** **c) compare and order fractions, decimals, percents, and numbers written in scientific notation;** d) determine square roots; and e) identify and describe absolute value for rational numbers. **8.1 The student will** a) simplify numerical expressions involving positive exponents, using rational numbers, order of operations, and properties of operations with real numbers; and **b) compare and order decimals, fractions, percents, and numbers written in scientific notation.**
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small	**7.1 The student will** **a) investigate and describe the concept of negative exponents for powers of ten;** **b) determine scientific notation for numbers greater than zero;**

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quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	**c) compare and order fractions, decimals, percents, and numbers written in scientific notation;** d) determine square roots; and e) identify and describe absolute value for rational numbers. **8.1 The student will** **a) simplify numerical expressions involving positive exponents, using rational numbers, order of operations, and properties of operations with real numbers; and** **b) compare and order decimals, fractions, percents, and numbers written in scientific notation.**
Understand the connections between proportional relationships, lines, and linear equations.	
5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.** **8.16 The student will graph a linear equation in two variables.** **8.16 CF** • **Interpret the unit rate of the proportional relationship graphed as the slope of the graph, and compare two different proportional relationships represented in different ways.** **A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** b) writing the equation of a line when given the graph of the line,

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	two points on the line, or the slope and a point on the line.
6. Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation *y* = *mx* for a line through the origin and the equation *y* = *mx* + *b* for a line intercepting the vertical axis at *b*.	**7.6 The student will determine whether plane figures—quadrilaterals and triangles—are similar and write proportions to express the relationships between corresponding sides of similar figures.** **A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.
Analyze and solve linear equations and pairs of simultaneous linear equations.	
7. Solve linear equations in one variable.	
a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form *x* = *a*, *a* = *a*, or *a* = *b* results (where *a* and *b* are different numbers).	**8.15 The student will** **a) solve multistep linear equations in one variable with the variable on one and two sides of the equation;** b) solve two-step linear inequalities and graph the results on a number line; and c) identify properties of operations used to solve an equation. **A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically;

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	d) solving multistep linear equations algebraically and graphically; e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **A.4 CF** • **Determine if a linear equation in one variable has one, an infinite number, or no solutions.**
b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	**8.15 The student will** **a) solve multistep linear equations in one variable with the variable on one and two sides of the equation;** b) solve two-step linear inequalities and graph the results on a number line; and **c) identify properties of operations used to solve an equation.** **A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; **b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets;** c) solving quadratic equations algebraically and graphically; **d) solving multistep linear equations algebraically and graphically;** e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of

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	equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
8. Analyze and solve pairs of simultaneous linear equations.	
a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; d) solving multistep linear equations algebraically and graphically; **e) solving systems of two linear equations in two variables algebraically and graphically; and** f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **A.4 CF** • **Determine whether a system of two linear equations has one solution, no solution, or infinite solutions.**
b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.*	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically;

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	d) solving multistep linear equations algebraically and graphically; **e) solving systems of two linear equations in two variables algebraically and graphically; and** f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
c. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; **d) solving multistep linear equations algebraically and graphically;** **e) solving systems of two linear equations in two variables algebraically and graphically; and** **f) solving real-world problems involving equations and systems of equations.** Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **A.4 CF** • **Systems of two linear equations can be used to model two real-world conditions that must be satisfied simultaneously.**
Functions 8.F	
Define, evaluate, and compare functions.	
1. Understand that a function is a rule that assigns to each input	**7.12 The student will represent relationships with tables,**

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exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	**graphs, rules, and words.** **8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.** **8.16 The student will graph a linear equation in two variables.** **8.17 The student will identify the domain, range, independent variable, or dependent variable in a given situation.**
2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*	**7.12 The student will represent relationships with tables, graphs, rules, and words.** **8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.** **8.14 CF** • **Describe and represent relations and functions, using tables, graphs, words, and rules. Given one representation, students will be able to represent the relation in another form.**
3. Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.*	**8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.** **8.16 The student will graph a linear equation in two variables.** **A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** **b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.** **A.6 The student will graph linear equations and linear**

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	inequalities in two variables, including **a) determining the slope of a line when given an equation of the line, the graph of the line, or** **two points on the line. Slope will be described as rate of change and will be positive,** **negative, zero, or undefined; and** **b) writing the equation of a line when given the graph of the line, two points on the line, or the** **slope and a point on the line.** **A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** b) domain and range; c) zeros of a function; d) *x*- and *y*-intercepts; e) finding the values of a function for elements in its domain; and **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.**
Use functions to model relationships between quantities.	
4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (*x*, *y*) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	**8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.** **8.16 The student will graph a linear equation in two variables.** **8.16 CF** • **A linear equation represents a situation with a constant rate. For example, when driving at a rate of 35 mph, the distance increases as the time increases, but the rate of speed remains**

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	the same. **A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** **b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.** **A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** a) determining whether a relation is a function; b) domain and range; c) zeros of a function; **d) *x*- and *y*-intercepts;** **e) finding the values of a function for elements in its domain; and** f) making connections between and among multiple representations.
5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	**8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.** **8.14 CF** • **Describe and represent relations and functions, using tables, graphs, words, and rules. Given one representation, students will be able to represent the relation in another form.** **8.16 The student will graph a linear equation in two variables.** **A.7 The student will investigate and analyze function (linear and**

CCSS for Mathematics – Grade 8	Mathematics SOL
	quadratic) families and their characteristics both algebraically and graphically, including a) determining whether a relation is a function; b) domain and range; c) zeros of a function; d) *x*- and *y*-intercepts; e) finding the values of a function for elements in its domain; and **f) making connections between and among multiple representations.**
Geometry 8.G	
Understand congruence and similarity using physical models, transparencies, or geometry software.	
1. Verify experimentally the properties of rotations, reflections, and translations:	
a. Lines are taken to lines, and line segments to line segments of the same length.	**7.8 The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane.** **8.8 The student will** **a) apply transformations to plane figures; and** **b) identify applications of transformations.**
b. Angles are taken to angles of the same measure.	
c. Parallel lines are taken to parallel lines.	
2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	**4.11 The student will** **a) investigate congruence of plane figures after geometric transformations, such as reflection, translation, and rotation, using mirrors, paper folding, and tracing; and** **b) recognize the images of figures resulting from geometric transformations, such as translation, reflection, and rotation.** **7.8 The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane.**

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	8.8 The student will **a) apply transformations to plane figures; and** **b) identify applications of transformations.**
3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	**7.8 The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane.** **8.8 The student will** **a) apply transformations to plane figures; and** **b) identify applications of transformations.**
4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two dimensional figures, describe a sequence that exhibits the similarity between them.	**7.6 The student will determine whether plane figures—quadrilaterals and triangles—are similar and write proportions to express the relationships between corresponding sides of similar figures.** **7.8 The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane.** **8.8 The student will** **a) apply transformations to plane figures; and** **b) identify applications of transformations.**
5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*	**8.6 The student will** **a) verify by measuring and describe the relationships among vertical angles, adjacent angles, supplementary angles, and complementary angles; and** **b) measure angles of less than 360°.** **G.2 The student will use the relationships between angles formed by two lines cut by a transversal to** **a) determine whether two lines are parallel;** **b) verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and**

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	c) solve real-world problems involving angles formed when parallel lines are cut by a transversal. **G.7 The student, given information in the form of a figure or statement, will prove two triangles are similar, using algebraic and coordinate methods as well as deductive proofs.**
Understand and apply the Pythagorean Theorem	
6. Explain a proof of the Pythagorean Theorem and its converse.	**8.10 The student will** **a) verify the Pythagorean Theorem; and** b) apply the Pythagorean Theorem.
7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	**8.10 The student will** a) verify the Pythagorean Theorem; and **b) apply the Pythagorean Theorem.**
8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	**8.10 The student will** **a) verify the Pythagorean Theorem; and** **b) apply the Pythagorean Theorem.** **8.10 CF** • **Find the measure of a side of a right triangle, given the measures of the other two sides.** • **Solve practical problems involving right triangles by using the Pythagorean Theorem.**
Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	
9. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	**8.7 The student will** **a) investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and** **b) describe how changing one measured attribute of a figure affects the volume and surface area.**
Statistics and Probability 8.SP	
Investigate patterns of association in bivariate data.	

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1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	**8.13 The student will** **a) make comparisons, predictions, and inferences, using information displayed in graphs; and** **b) construct and analyze scatterplots.**
2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	**8.13 The student will** **a) make comparisons, predictions, and inferences, using information displayed in graphs; and** **b) construct and analyze scatterplots.** **8.13 CF** • **Collect, organize, and interpret a data set of no more than 20 items using scatterplots. Predict from the trend an estimate of the line of best fit with a drawing.**
3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*	**8.13 The student will** **a) make comparisons, predictions, and inferences, using information displayed in graphs; and** **b) construct and analyze scatterplots.** **A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line. **A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models.**

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	Mathematical models will include linear and quadratic functions.
4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*	**PS.7 The student, using two-way tables, will analyze categorical data to describe patterns and departure from patterns and to find marginal frequency and relative frequencies, including conditional frequencies.**

Mathematics SOL for grade 8 aligned with the CCSS at other grade levels	
Grade 6 – Ratios and Proportional Relationships 3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. Grade 7 – The Number System 3. Solve real-world and mathematical problems involving the four operations with rational numbers. Grade 7 – Ratios and Proportional Relationships 3. Use proportional relationships to solve multistep ratio and	**8.3 The student will** **a) solve practical problems involving rational numbers, percents, ratios, and proportions; and** **b) determine the percent increase or decrease for a given situation.**

Mathematics SOL for grade 8 aligned with the CCSS at other grade levels	
percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities, and commissions, fees, percent increase and decrease, percent error.*	
Grade 6 – Expressions and Equations 2. Write, read, and evaluate expressions in which letters stand for numbers. c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s = 1/2.*	**8.4 The student will apply the order of operations to evaluate algebraic expressions for given replacement values of the variables.**
Grade 6 – Geometry 1. Find the area of right triangles, other triangles, special and polygons by composing into rectangles or decomposing triangles and other shapes; apply these techniques solving real-world and mathematical problems.	**8.11 The student will solve practical area and perimeter problems involving composite plane figures.**
Statistics [high school] – Conditional Probability and the Rules for Probability 2. Understand that two events *A* and *B* are independent if the probability of *A* and *B* occurring together is the product of their probabilities, and use this characterization to determine if they are independent. 3. Understand the conditional probability of *A* given *B* as *P*(*A* and *B*)/*P*(*B*), and interpret independence of *A* and *B* as saying that the conditional probability of *A* given *B* is the same as the probability of *A*, and the conditional probability of *B* given *A* is	**8.12 The student will determine the probability of independent and dependent events with and without replacement.**

Mathematics SOL for grade 8 aligned with the CCSS at other grade levels	
the same as the probability of *B*.	
Grade 7 – Expressions and Equations 4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*	**8.15 The student will** a) solve multistep linear equations in one variable with the variable on one and two sides of the equation; **b) solve two-step linear inequalities and graph the results on a number line; and** c) identify properties of operations used to solve an equation.

Mathematics SOL for grade 8 not explicitly stated in the CCSS at any grade level	
	8.9 The student will construct a three-dimensional model, given the top or bottom, side, and front views.

Mathematics | High School – Number and Quantity

- The Common Core State Standards in high school mathematics are not presented in a format for each course, such as Algebra I, Geometry, Algebra II, etc. Rather, they are organized in the conceptual categories of:
  - Number and Quantity;
  - Algebra;
  - Functions;
  - Modeling (embedded within content and indicated with ⋆);
  - Geometry; and
  - Statistics and Probability.
- The CCSS conceptual categories for high school specify content that all students should learn in order to be college and career ready. In addition, the CCSS include content, indicated with "(+)", that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics.

CCSS for Mathematics – Number and Quantity	Mathematics SOL
The Real Number System N-RN	
Extend the properties of exponents to rational exponents.	
1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. *For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3)3}$ to hold, so $(5^{1/3})^3$ must equal 5.*	**A.2 The student will perform operations on polynomials, including** **a) applying the laws of exponents to perform operations on expressions;** b) adding, subtracting, multiplying, and dividing polynomials; and c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.	**A.2 The student will perform operations on polynomials, including** **a) applying the laws of exponents to perform operations on expressions;** b) adding, subtracting, multiplying, and dividing polynomials; and c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations. **AII.1 The student, given rational, radical, or polynomial expressions, will** a) add, subtract, multiply, divide, and simplify rational algebraic expressions; b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents;

CCSS for Mathematics – Number and Quantity	Mathematics SOL
	c) write radical expressions as expressions containing rational exponents and vice versa; and d) factor polynomials completely.
Use properties of rational and irrational numbers.	
3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	**8.2 The student will describe orally and in writing the relationships between the subsets of the real number system.** **8.2 CF** • **Recognize that the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.**
Quantities★ N-Q	
Reason quantitatively and use units to solve problems.	
1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	**7.4 The student will solve single-step and multistep practical problems, using proportional reasoning.** **7.5 The student will** a) describe volume and surface area of cylinders; **b) solve practical problems involving the volume and surface area of rectangular prisms and cylinders; and** **c) describe how changing one measured attribute of a rectangular prism affects its volume and surface area.** **7.11 The student, given data for a practical situation, will** a) construct and analyze histograms; and **b) compare and contrast histograms with other types of graphs presenting information from the same data set.** **7.14 The student will** **a) solve one- and two-step linear equations in one variable; and**
2. Define appropriate quantities for the purpose of descriptive modeling.	
3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	

CCSS for Mathematics – Number and Quantity	Mathematics SOL
	b) solve practical problems requiring the solution of one- and two-step linear equations. **8.3 The student will** **a) solve practical problems involving rational numbers, percents, ratios, and proportions; and** b) determine the percent increase or decrease for a given situation. **8.11 The student will solve practical area and perimeter problems involving composite plane figures.** **8.13 The student will** **a) make comparisons, predictions, and inferences, using information displayed in graphs; and** **b) construct and analyze scatterplots.**
The Complex Number System N–CN	
Perform arithmetic operations with complex numbers.	
1. Know there is a complex number *i* such that $i^2 = -1$, and every complex number has the form $a + bi$ with *a* and *b* real.	**AII.3 The student will perform operations on complex numbers, express the results in simplest form using patterns of the powers of *i*, and identify field properties that are valid for the complex numbers.**
2. Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.	**AII.3 The student will perform operations on complex numbers, express the results in simplest form using patterns of the powers of *i*, and identify field properties that are valid for the complex numbers.**
3. (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.	**AII.3 The student will perform operations on complex numbers, express the results in simplest form using patterns of the powers of *i*, and identify field properties that are valid for the complex numbers.**
Represent complex numbers and their operations on the complex plane.	

CCSS for Mathematics – Number and Quantity	Mathematics SOL
4. (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.	**MA.10 The student will investigate and identify the characteristics of the graphs of polar equations, using graphing utilities. This will include classification of polar equations, the effects of changes in the parameters in polar equations, conversion of complex numbers from rectangular form to polar form and vice versa, and the intersection of the graphs of polar equations.**
5. (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. *For example,* $(-1 - \sqrt{3}i)^3 = 8$ *because* $(-1 - \sqrt{3}i)$ *has modulus* 2 *and argument* 120°.	**MA.10 The student will investigate and identify the characteristics of the graphs of polar equations, using graphing utilities. This will include classification of polar equations, the effects of changes in the parameters in polar equations, conversion of complex numbers from rectangular form to polar form and vice versa, and the intersection of the graphs of polar equations.**
6. (+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.	**MA.10 The student will investigate and identify the characteristics of the graphs of polar equations, using graphing utilities. This will include classification of polar equations, the effects of changes in the parameters in polar equations, conversion of complex numbers from rectangular form to polar form and vice versa, and the intersection of the graphs of polar equations.**
Use complex numbers in polynomial identities and equations.	
7. Solve quadratic equations with real coefficients that have complex solutions.	**AII.4 The student will solve, algebraically and graphically,** a) absolute value equations and inequalities; **b) quadratic equations over the set of complex numbers;** c) equations containing rational algebraic expressions; and d) equations containing radical expressions. Graphing calculators will be used for solving and for confirming the algebraic solutions.
8. (+) Extend polynomial identities to the complex numbers. *For example, rewrite* $x^2 + 4$ *as* $(x + 2i)(x - 2i)$.	

CCSS for Mathematics – Number and Quantity	Mathematics SOL
9. (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.	**AII.8 The student will investigate and describe the relationships among solutions of an equation, zeros of a function, *x*-intercepts of a graph, and factors of a polynomial expression.** **AII.8 CF** ● **The *Fundamental Theorem of Algebra* states that, including complex and repeated solutions, an nth degree polynomial equation has exactly n roots (solutions).**
Vector and Matrix Quantities N–VM	
Represent and model with vector quantities.	
1. (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., ***v***, |***v***|, ||***v***||, ***v***).	**MA.11 The student will perform operations with vectors in the coordinate plane and solve real-world problems, using vectors. This will include the following topics: operations of addition, subtraction, scalar multiplication, and inner (dot) product; norm of a vector; unit vector; graphing; properties; simple proofs; complex numbers (as vectors); and perpendicular components.**
2. (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.	
3. (+) Solve problems involving velocity and other quantities that can be represented by vectors.	
Perform operations on vectors.	
4. (+) Add and subtract vectors.	
a. Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes.	**MA.11 The student will perform operations with vectors in the coordinate plane and solve real-world problems, using vectors. This will include the following topics: operations of addition, subtraction, scalar multiplication, and inner (dot) product; norm of a vector; unit vector; graphing; properties; simple proofs; complex numbers (as vectors); and perpendicular components.**
b. Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.	
c. Understand vector subtraction ***v*** – ***w*** as ***v*** + (–***w***), where –***w*** is the additive inverse of ***w***, with the same magnitude as ***w*** and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and	

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perform vector subtraction component-wise.	
5. (+) Multiply a vector by a scalar.	
a. Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$.	**MA.11 The student will perform operations with vectors in the coordinate plane and solve real-world problems, using vectors. This will include the following topics: operations of addition, subtraction, scalar multiplication, and inner (dot) product; norm of a vector; unit vector; graphing; properties; simple proofs; complex numbers (as vectors); and perpendicular components.**
b. Compute the magnitude of a scalar multiple $c\boldsymbol{v}$ using $\|\|c\boldsymbol{v}\|\| = \|c\|\boldsymbol{v}$. Compute the direction of $c\boldsymbol{v}$ knowing that when $\|c\|\boldsymbol{v} \neq 0$, the direction of $c\boldsymbol{v}$ is either along $\boldsymbol{v}$ (for $c > 0$) or against $\boldsymbol{v}$ (for $c < 0$).	
Perform operations on matrices and use matrices in applications.	
6. (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.	**MA.14 The student will use matrices to organize data and will add and subtract matrices, multiply matrices, multiply matrices by a scalar, and use matrices to solve systems of equations.**
7. (+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.	
8. (+) Add, subtract, and multiply matrices of appropriate dimensions.	
9. (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.	
10. (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.	
11. (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.	
12. (+) Work with 2 × 2 matrices as a transformations of the	

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plane, and interpret the absolute value of the determinant in terms of area.	

Mathematics | High School – Algebra

- The Common Core State Standards in high school mathematics are not presented in a format for each course, such as Algebra I, Geometry, Algebra II, etc. Rather, they are organized in the conceptual categories of:
  - Number and Quantity;
  - Algebra;
  - Functions;
  - Modeling (embedded within content and indicated with ⋆);
  - Geometry; and
  - Statistics and Probability.
- The CCSS conceptual categories for high school specify content that all students should learn in order to be college and career ready. In addition, the CCSS include content, indicated with "(+)", that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics.

CCSS for Mathematics – Algebra	Mathematics SOL
Seeing Structure in Expressions A-SSE	
Interpret the structure of expressions	
1. Interpret expressions that represent a quantity in terms of its context.★	
a. Interpret parts of an expression, such as terms, factors, and coefficients.	**6.18 The student will solve one-step linear equations in one variable involving whole number coefficients and positive rational solutions.** **6.18 CF** • **Identify and use the following algebraic terms appropriately: *equation*, *variable, expression, term,* and *coefficient*.**
b. Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret* $P(1+r)^n$ *as the product of P and a factor not depending on P.*	**A.1 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables.**
2. Use the structure of an expression to identify ways to rewrite it. *For example, see* $x^4 - y^4$ *as* $(x^2)^2 - (y^2)^2$, *thus recognizing it as a difference of squares that can be factored as* $(x^2 - y^2)(x^2 + y^2)$.	**A.2 The student will perform operations on polynomials, including** a) applying the laws of exponents to perform operations on expressions; b) adding, subtracting, multiplying, and dividing polynomials; and **c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.** **AII.1 The student, given rational, radical, or polynomial expressions, will** a) add, subtract, multiply, divide, and simplify rational algebraic expressions; b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents;

CCSS for Mathematics – Algebra	Mathematics SOL
	c) write radical expressions as expressions containing rational exponents and vice versa; and **d) factor polynomials completely.** **AII.1 CF** • **Factor polynomials by applying general patterns including difference of squares, sum and difference of cubes, and perfect square trinomials.**
Write expressions in equivalent forms to solve problems	
3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.★	
a. Factor a quadratic expression to reveal the zeros of the function it defines.	**A.2 The student will perform operations on polynomials, including** a) applying the laws of exponents to perform operations on expressions; b) adding, subtracting, multiplying, and dividing polynomials; and **c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.** **A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; **c) solving quadratic equations algebraically and graphically;** d) solving multistep linear equations algebraically and graphically; e) solving systems of two linear equations in two variables

CCSS for Mathematics – Algebra	Mathematics SOL
	algebraically and graphically; and f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **A.4 CF** • **Identify the roots or zeros of a quadratic function over the real number system as the solution(s) to the quadratic equation that is formed by setting the given quadratic expression equal to zero.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** a) domain and range, including limited and discontinuous domains and ranges; **b) zeros;** c) x- and y-intercepts; d) intervals in which a function is increasing or decreasing; e) asymptotes; f) end behavior; g) inverse of a function; and h) composition of multiple functions. **Graphing calculators will be used as a tool to assist in investigation of functions.**
b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.	**A.2 The student will perform operations on polynomials, including** **a) applying the laws of exponents to perform operations on expressions;** **b) adding, subtracting, multiplying, and dividing polynomials; and** **c) factoring completely first- and second-degree binomials and**

CCSS for Mathematics – Algebra	Mathematics SOL
	trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations. **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and** **logarithmic) families and their characteristics. Key concepts include** a) continuity; **b) local and absolute maxima and minima;** c) domain and range; d) zeros; e) intercepts; f) intervals in which the function is increasing/decreasing; g) end behaviors; and h) asymptotes. **AII.1 The student, given rational, radical, or polynomial expressions, will** a) add, subtract, multiply, divide, and simplify rational algebraic expressions; b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents; c) write radical expressions as expressions containing rational exponents and vice versa; and **d) factor polynomials completely.**
c. Use the properties of exponents to transform expressions for exponential functions. *For example the expression* 1.15^t *can be rewritten as* $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ *to reveal the approximate equivalent monthly interest rate if the annual rate*	**A.2 The student will perform operations on polynomials, including** **a) applying the laws of exponents to perform operations on expressions;**

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is 15%.	b) adding, subtracting, multiplying, and dividing polynomials; and c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations. **AFDA.3 The student will collect data and generate an equation for the curve (linear, quadratic, exponential, and logarithmic) of best fit to model real-world problems or applications. Students will use the best fit equation to interpolate function values, make decisions, and justify conclusions with algebraic and/or graphical models.** **AII.9 The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions.**
4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. *For example, calculate mortgage payments.*★	**AII.2 The student will investigate and apply the properties of arithmetic and geometric sequences and series to solve real-world problems, including writing the first *n* terms, finding the *n*th term, and evaluating summation formulas. Notation will include Σ and *an*.**
Arithmetic with Polynomials and Rational Expressions A-APR	
Perform arithmetic operations on polynomials	
1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	**A.2 The student will perform operations on polynomials, including** **a) applying the laws of exponents to perform operations on expressions;** **b) adding, subtracting, multiplying, and dividing polynomials; and** c) factoring completely first- and second-degree binomials and

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	trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations. **A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; **b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets;** c) solving quadratic equations algebraically and graphically; d) solving multistep linear equations algebraically and graphically; e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
Understand the relationship between zeros and factors of polynomials	
2. Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x – a$ is $p(a)$, so $p(a) = 0$ if and only if $(x – a)$ is a factor of $p(x)$.	**AII.1 The student, given rational, radical, or polynomial expressions, will** **a) add, subtract, multiply, divide, and simplify rational algebraic expressions;** **b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents;** c) write radical expressions as expressions containing rational exponents and vice versa; and d) factor polynomials completely.

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3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	**A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** a) determining whether a relation is a function; b) domain and range; **c) zeros of a function;** d) *x*- and *y*-intercepts; e) finding the values of a function for elements in its domain; and f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic. **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** a) continuity; b) local and absolute maxima and minima; c) domain and range; **d) zeros;** e) intercepts; f) intervals in which the function is increasing/decreasing; g) end behaviors; and h) asymptotes. **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** a) domain and range, including limited and discontinuous domains and ranges; **b) zeros;** c) *x*- and *y*-intercepts; d) intervals in which a function is increasing or decreasing;

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	e) asymptotes; f) end behavior; g) inverse of a function; and h) composition of multiple functions. Graphing calculators will be used as a tool to assist in investigation of functions. **AII.8 The student will investigate and describe the relationships among solutions of an equation, zeros of a function, *x*-intercepts of a graph, and factors of a polynomial expression.**
Use polynomial identities to solve problems	
4. Prove polynomial identities and use them to describe numerical relationships. *For example, the polynomial identity* $(x^2 + y^2)^2 = (x^2 – y^2)^2 + (2xy)^2$ *can be used to generate Pythagorean triples.*	**A.2 The student will perform operations on polynomials, including** **a) applying the laws of exponents to perform operations on expressions;** **b) adding, subtracting, multiplying, and dividing polynomials; and** **c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.** **AII.1 The student, given rational, radical, or polynomial expressions, will** **a) add, subtract, multiply, divide, and simplify rational algebraic expressions;** **b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents;** **c) write radical expressions as expressions containing rational exponents and vice versa; and** **d) factor polynomials completely.**

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	AII.1 CF • **Verify polynomial identities including the difference of squares, sum and difference of cubes, and perfect square trinomials.**
5. (+) Know and apply the Binomial Theorem for the expansion of $(x+y)^n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.	**MA.4 The student will expand binomials having positive integral exponents through the use of the Binomial Theorem, the formula for combinations, and Pascal's Triangle.**
Rewrite rational expressions	
6. Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.	**AII.1 The student, given rational, radical, or polynomial expressions, will** **a) add, subtract, multiply, divide, and simplify rational algebraic expressions;** **b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents;** c) write radical expressions as expressions containing rational exponents and vice versa; and d) factor polynomials completely.
7. (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.	
Creating Equations★ A-CED	
Create equations that describe numbers or relationships	
1. Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; **c) solving quadratic equations algebraically and graphically;** **d) solving multistep linear equations algebraically and graphically;**

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	e) solving systems of two linear equations in two variables algebraically and graphically; and **f) solving real-world problems involving equations** and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **A.4 CF** **• Solve multistep linear equations in one variable.** **A.5 The student will solve multistep linear inequalities in two variables, including** **a) solving multistep linear inequalities algebraically and graphically;** b) justifying steps used in solving inequalities, using axioms of inequality and properties of order that are valid for the set of real numbers and its subsets; c) solving real-world problems involving inequalities; and d) solving systems of inequalities. **A.5 CF** **• Solve multistep linear inequalities in one variable.** **AII.4 The student will solve, algebraically and graphically,** **a) absolute value equations and inequalities;** **b) quadratic equations over the set of complex numbers;** **c) equations containing rational algebraic expressions; and** d) equations containing radical expressions. Graphing calculators will be used for solving and for confirming the algebraic solutions. **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** a) domain and range, including limited and discontinuous domains

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	and ranges; **b) zeros;** **c) *x*- and *y*-intercepts;** d) intervals in which a function is increasing or decreasing; e) asymptotes; f) end behavior; g) inverse of a function; and h) composition of multiple functions. Graphing calculators will be used as a tool to assist in investigation of functions.
2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; **d) solving multistep linear equations algebraically and graphically;** e) solving systems of two linear equations in two variables algebraically and graphically; and **f) solving real-world problems involving equations** and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **A.6 The student will graph linear equations** and linear inequalities **in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be**

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	described as rate of change and will be positive, negative, zero, or undefined; and **b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.**
3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. *For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.*	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; d) solving multistep linear equations algebraically and graphically; **e) solving systems of two linear equations in two variables algebraically and graphically; and** **f) solving real-world problems involving equations and systems of equations.** Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **A.5 The student will solve multistep linear inequalities in two variables, including** a) solving multistep linear inequalities algebraically and graphically; b) justifying steps used in solving inequalities, using axioms of inequality and properties of order that are valid for the set of real numbers and its subsets; **c) solving real-world problems involving inequalities; and** **d) solving systems of inequalities.** **AFDA.5 The student will determine optimal values in problem situations by identifying constraints and using linear programming techniques.**

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	AII.5 The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically. Graphing calculators will be used as a tool to visualize graphs and predict the number of solutions.
4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. *For example, rearrange Ohm's law V = IR to highlight resistance R.*	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** **a) solving literal equations (formulas) for a given variable;** b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; d) solving multistep linear equations algebraically and graphically; e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
Reasoning with Equations and Inequalities A-REI	
Understand solving equations as a process of reasoning and explain the reasoning	
1. Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; **b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets;** c) solving quadratic equations algebraically and graphically; d) solving multistep linear equations algebraically and graphically;

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	e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	**AII.4 The student will solve, algebraically and graphically,** a) absolute value equations and inequalities; b) quadratic equations over the set of complex numbers; **c) equations containing rational algebraic expressions; and** **d) equations containing radical expressions.** **Graphing calculators will be used for solving and for confirming the algebraic solutions.**
Solve equations and inequalities in one variable	
3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** **a) solving literal equations (formulas) for a given variable;** b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; **d) solving multistep linear equations algebraically and graphically;** e) solving systems of two linear equations in two variables algebraically and graphically; and **f) solving real-world problems involving equations** and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.

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	A.4 CF **• Solve multistep linear equations in one variable.** **A.5 The student will solve multistep linear inequalities in two variables, including** **a) solving multistep linear inequalities algebraically and graphically;** b) justifying steps used in solving inequalities, using axioms of inequality and properties of order that are valid for the set of real numbers and its subsets; c) solving real-world problems involving inequalities; and d) solving systems of inequalities. **A.5 CF** **• Solve multistep linear inequalities in one variable.**
4. Solve quadratic equations in one variable.	
a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x – p)^2 =$ q that has the same solutions. Derive the quadratic formula from this form.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; **c) solving quadratic equations algebraically and graphically;** d) solving multistep linear equations algebraically and graphically; e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **AII.4 The student will solve, algebraically and graphically,**

CCSS for Mathematics – Algebra	Mathematics SOL
	a) absolute value equations and inequalities; b**) quadratic equations over the set of complex numbers;** c) equations containing rational algebraic expressions; and d) equations containing radical expressions. Graphing calculators will be used for solving and for confirming the algebraic solutions. **AII.4 CF** • **Recognize that the quadratic formula can be derived by applying the completion of squares to any quadratic equation in standard form.** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed.** **Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.**
b. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; **c) solving quadratic equations algebraically and graphically;** d) solving multistep linear equations algebraically and graphically; e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of equations.

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	Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **AII.4 The student will solve, algebraically and graphically,** a) absolute value equations and inequalities; **b) quadratic equations over the set of complex numbers;** c) equations containing rational algebraic expressions; and **Graphing calculators will be used for solving and for confirming the algebraic solutions.**
Solve systems of equations	
5. Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; d) solving multistep linear equations algebraically and graphically; **e) solving systems of two linear equations in two variables algebraically and graphically; and** f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	
7. Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. *For example, find the points of intersection between the line* $y = -3x$ and the circle $x^2 + y^2 = 3$.	**AII.5 The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically. Graphing calculators will be used as a tool to visualize graphs and predict the number of solutions.**
8. (+) Represent a system of linear equations as a single matrix equation in a vector variable.	**MA.14 The student will use matrices to organize data and will add and subtract matrices, multiply matrices, multiply matrices by a**

CCSS for Mathematics – Algebra	Mathematics SOL
9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3 × 3 or greater).	**scalar, and use matrices to solve systems of equations.**
Represent and solve equations and inequalities graphically	
10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	**A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line. **AFDA.4 The student will transfer between and analyze multiple representations of functions, including algebraic formulas, graphs, tables, and words. Students will select and use appropriate representations for analysis, interpretation, and prediction.** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed.** **Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.**
11. Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations.	**A.4 The student will solve multistep linear and quadratic equations in two variables, including** a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are

CCSS for Mathematics – Algebra	Mathematics SOL
Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.★	valid for the set of real numbers and its subsets; c) solving quadratic equations algebraically and graphically; d) solving multistep linear equations algebraically and graphically; **e) solving systems of two linear equations in two variables algebraically and graphically; and** f) solving real-world problems involving equations and systems of equations. **Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.** **AFDA.5 The student will determine optimal values in problem situations by identifying constraints and using linear programming techniques.** **AII.5 The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically. Graphing calculators will be used as a tool to visualize graphs and predict the number of solutions.**
12. Graph the solutions to a linear inequality in two variables as a half plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	**A.5 The student will solve multistep linear inequalities in two variables, including** a) solving multistep linear inequalities algebraically and graphically; b) justifying steps used in solving inequalities, using axioms of inequality and properties of order that are valid for the set of real numbers and its subsets; **c) solving real-world problems involving inequalities; and** **d) solving systems of inequalities.** **A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or**

CCSS for Mathematics – Algebra	Mathematics SOL
	undefined; and b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.

Mathematics | High School – Functions

- The Common Core State Standards in high school mathematics are not presented in a format for each course, such as Algebra I, Geometry, Algebra II, etc. Rather, they are organized in the conceptual categories of:
  - Number and Quantity;
  - Algebra;
  - Functions;
  - Modeling (embedded within content and indicated with ⋆);
  - Geometry; and
  - Statistics and Probability.
- The CCSS conceptual categories for high school specify content that all students should learn in order to be college and career ready. In addition, the CCSS include content, indicated with "(+)", that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics.

CCSS for Mathematics – Functions	Mathematics SOL
Interpreting Functions F-IF	
Understand the concept of a function and use function notation	
1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If *f* is a function and *x* is an element of its domain, then *f*(*x*) denotes the output of *f* corresponding to the input *x*. The graph of *f* is the graph of the equation *y* = *f*(*x*).	**8.14 The student will make connections between any two representations (tables, graphs, words, and rules) of a given relationship.** **8.14 CF** • **Describe and represent relations and functions, using tables, graphs, words, and rules. Given one representation, students will be able to represent the relation in another form.** • **A relation is any set of ordered pairs. For each first member, there may be many second members.** • **A function is a relation in which there is one and only one second member for each first member.** • **As a table of values, a function has a unique value assigned to the second variable for each value of the first variable.** • **As a graph, a function is any curve (including straight lines) such that any vertical line would pass through the curve only once.** • **Some relations are functions; all functions are relations.** **A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** c) zeros of a function; d) *x*- and *y*-intercepts; **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric,**

CCSS for Mathematics – Functions	Mathematics SOL
	graphic, and algebraic.
2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	**A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** a) determining whether a relation is a function; b) domain and range; c) zeros of a function; d) *x*- and *y*-intercepts; **e) finding the values of a function for elements in its domain; and** f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.
3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. *For example, the Fibonacci sequence is defined recursively by f(0) = f(1) = 1, f(n+1) = f(n) + f(n-1) for n ≥ 1.*	**AII.2 The student will investigate and apply the properties of arithmetic and geometric sequences and series to solve real-world problems, including writing the first *n* terms, finding the *n*th term, and evaluating summation formulas. Notation will include Σ and a_n.**
Interpret functions that arise in applications in terms of the context	
4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*★	**A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;** **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric,**

CCSS for Mathematics – Functions	Mathematics SOL
	graphic, and algebraic. **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** **h) asymptotes.** **AFDA.2 The student will use knowledge of transformations to write an equation, given the graph of a function (linear, quadratic, exponential, and logarithmic).** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.**
5. Relate the domain of a function to its graph and, where	**8.17 The student will identify the domain, range, independent**

CCSS for Mathematics – Functions	Mathematics SOL
applicable, to the quantitative relationship it describes. *For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.*★	**variable or dependent variable in a given situation.** **8.17 CF** • **Identify examples of domain, range, independent variable, and dependent variable.** • **Determine the domain of a function.** • **Determine the range of a function.** • **Determine the independent variable of a relationship.** • **Determine the dependent variable of a relationship.** **A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** c) zeros of a function; d) *x*- and *y*-intercepts; **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.**
6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.★	**A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.
Analyze functions using different representations	
7. Graph functions expressed symbolically and show key	

CCSS for Mathematics – Functions	Mathematics SOL
features of the graph, by hand in simple cases and using technology for more complicated cases.★	
a. Graph linear and quadratic functions and show intercepts, maxima, and minima.	**A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** a) determining whether a relation is a function; **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;** e) finding the values of a function for elements in its domain; and f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic. **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** a) continuity; **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** g) end behaviors; and h) asymptotes. **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;**

CCSS for Mathematics – Functions	Mathematics SOL
	c) *x*- and *y*-intercepts; **d) intervals in which a function is increasing or decreasing;** e) asymptotes; f) end behavior; g) inverse of a function; and h) composition of multiple functions. **Graphing calculators will be used as a tool to assist in investigation of functions.**
b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	**AII.4 The student will solve, algebraically and graphically,** **a) absolute value equations and inequalities;** b) quadratic equations over the set of complex numbers; c) equations containing rational algebraic expressions; and d) equations containing radical expressions. Graphing calculators will be used for solving and for confirming the algebraic solutions. **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed.** **Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.**
c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.	**A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;**

CCSS for Mathematics – Functions	Mathematics SOL
	e) finding the values of a function for elements in its domain; and **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.** **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** h) asymptotes. **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** e) asymptotes; **f) end behavior;** g) inverse of a function; and h) composition of multiple functions. **Graphing calculators will be used as a tool to assist in investigation of functions.**
d. (+) Graph rational functions, identifying zeros and	**AFDA.1 The student will investigate and analyze function (linear,**

CCSS for Mathematics – Functions	Mathematics SOL
asymptotes when suitable factorizations are available, and showing end behavior.	**quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** **h) asymptotes.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** g) inverse of a function; and h) composition of multiple functions. **Graphing calculators will be used as a tool to assist in investigation of functions.** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these**

CCSS for Mathematics – Functions	Mathematics SOL
	functions.
e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.	**AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** **h) asymptotes.** **AFDA.2 The student will use knowledge of transformations to write an equation, given the graph of a function (linear, quadratic, exponential, and logarithmic).** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;**

CCSS for Mathematics – Functions	Mathematics SOL
	e) asymptotes; **f) end behavior;** g) inverse of a function; and h) composition of multiple functions. **Graphing calculators will be used as a tool to assist in investigation of functions.** **T.6 The student, given one of the six trigonometric functions in standard form, will** **a) state the domain and the range of the function;** **b) determine the amplitude, period, phase shift, vertical shift, and asymptotes;** **c) sketch the graph of the function by using transformations for at least a two-period interval; and** **d) investigate the effect of changing the parameters in a trigonometric function on the graph of the function.**
8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.	
a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.	**A.2 The student will perform operations on polynomials, including** a) applying the laws of exponents to perform operations on expressions; b) adding, subtracting, multiplying, and dividing polynomials; and **c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.** **A.4 The student will solve multistep linear and quadratic equations in two variables, including**

CCSS for Mathematics – Functions	Mathematics SOL
	a) solving literal equations (formulas) for a given variable; b) justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets; **c) solving quadratic equations algebraically and graphically;** d) solving multistep linear equations algebraically and graphically; e) solving systems of two linear equations in two variables algebraically and graphically; and f) solving real-world problems involving equations and systems of equations. Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. **AII.1 The student, given rational, radical, or polynomial expressions, will** a) add, subtract, multiply, divide, and simplify rational algebraic expressions; b) add, subtract, multiply, divide, and simplify radical expressions containing rational numbers and variables, and expressions containing rational exponents; c) write radical expressions as expressions containing rational exponents and vice versa; and **d) factor polynomials completely.** **AII.4 The student will solve, algebraically and graphically,** a) absolute value equations and inequalities; **b) quadratic equations over the set of complex numbers;** c) equations containing rational algebraic expressions; and d) equations containing radical expressions. Graphing calculators will be used for solving and for confirming the algebraic solutions.

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	AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** g) inverse of a function; and h) composition of multiple functions.
b. Use the properties of exponents to interpret expressions for exponential functions. *For example, identify percent rate of change in functions such as* $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{t/10}$, *and classify them as representing exponential growth or decay.*	**AFDA.3 The student will collect data and generate an equation for the curve (linear, quadratic, exponential, and logarithmic) of best fit to model real-world problems or applications. Students will use the best fit equation to interpolate function values, make decisions, and justify conclusions with algebraic and/or graphical models.** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;**

CCSS for Mathematics – Functions	Mathematics SOL
	c) *x*- and *y*-intercepts; **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** g) inverse of a function; and h) composition of multiple functions. **Graphing calculators will be used as a tool to assist in investigation of functions.**
9. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.*	**A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;** **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.** **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and**

CCSS for Mathematics – Functions	Mathematics SOL
	h) asymptotes. **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.**
Building Functions F-BF	
Build a function that models a relationship between two quantities	
1. Write a function that describes a relationship between two quantities.★	
a. Determine an explicit expression, a recursive process, or steps for calculation from a context.	**6.17 The student will identify and extend geometric and arithmetic sequences.**
b. Combine standard function types using arithmetic	**7.2 The student will describe and represent arithmetic and**

CCSS for Mathematics – Functions	Mathematics SOL
operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.*	**geometric sequences, using variable expressions.** **A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;** **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.** **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** **h) asymptotes.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;**

CCSS for Mathematics – Functions	Mathematics SOL
	d) intervals in which a function is increasing or decreasing; **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.**
c. (+) Compose functions. *For example, if T(y) is the temperature in the atmosphere as a function of height, and h(t) is the height of a weather balloon as a function of time, then T(h(t)) is the temperature at the location of the weather balloon as a function of time.*	**AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** a) domain and range, including limited and discontinuous domains and ranges; b) zeros; c) *x*- and *y*-intercepts; d) intervals in which a function is increasing or decreasing; e) asymptotes; f) end behavior; g) inverse of a function; and **h) composition of multiple functions.** Graphing calculators will be used as a tool to assist in investigation of functions.
2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.★	**AII.2 The student will investigate and apply the properties of arithmetic and geometric sequences and series to solve real-world problems, including writing the first *n* terms, finding the *n*th term, and evaluating summation formulas. Notation will include Σ and a_n.**
Build new functions from existing functions	
3. Identify the effect on the graph of replacing *f*(*x*) by *f*(*x*) + *k*, *k* *f*(*x*), *f*(*kx*), and *f*(*x* + *k*) for specific values of *k* (both positive and negative); find the value of *k* given the graphs. Experiment with	**A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the**

CCSS for Mathematics – Functions	Mathematics SOL
cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.*	**line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** **b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.** **A.6 CF** • **Use the parent function *y* = *x* and describe transformations defined by changes in the slope or *y*-intercept.** • **Use transformational graphing to investigate effects of changes in equation parameters on the graph of the equation.** **A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;** **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.** **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;**

CCSS for Mathematics – Functions	Mathematics SOL
	f) intervals in which the function is increasing/decreasing; **g) end behaviors; and** **h) asymptotes.** **AFDA.2 The student will use knowledge of transformations to write an equation, given the graph of a function (linear, quadratic, exponential, and logarithmic).** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.**
4. Find inverse functions.	
a. Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. *For*	**AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include**

CCSS for Mathematics – Functions	Mathematics SOL
example, $f(x) = 2x^3$ for $x > 0$ or $f(x) = (x+1)/(x–1)$ for $x \neq 1$.	**a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.** **AII.7 CF** • **Find the inverse of a function.** • **Find the composition of two functions.** • **Graph the inverse of a function as a reflection across the line *y* = *x*.** • **Use composition of functions to verify two functions are inverses. Investigate exponential and logarithmic functions, using the graphing calculator.** • **Convert between logarithmic and exponential forms of an equation with bases consisting of natural numbers.**
b. (+) Verify by composition that one function is the inverse of another.	
c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.	
d. (+) Produce an invertible function from a non-invertible function by restricting the domain.	
5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.	
Linear, Quadratic, and Exponential Models★ F-LE	
Construct and compare linear and exponential models and solve problems	
1. Distinguish between situations that can be modeled with linear functions and with exponential functions.	
a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal	**A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and**

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factors over equal intervals. b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another. c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.	**solve real-world problems, using mathematical models. Mathematical models will include linear and quadratic functions.** **AFDA.3 The student will collect data and generate an equation for the curve (linear, quadratic, exponential, and logarithmic) of best fit to model real-world problems or applications. Students will use the best fit equation to interpolate function values, make decisions, and justify conclusions with algebraic and/or graphical models.** **AFDA.4 The student will transfer between and analyze multiple representations of functions, including algebraic formulas, graphs, tables, and words. Students will select and use appropriate representations for analysis, interpretation, and prediction.** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.9 The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions.**
2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).	**A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be**

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	described as rate of change and will be positive, negative, zero, or undefined; and **b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.** **A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;** **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.** **A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models. Mathematical models will include linear and quadratic functions.** **AFDA.3 The student will collect data and generate an equation for the curve (linear, quadratic, exponential, and logarithmic) of best fit to model real-world problems or applications. Students will use the best fit equation to interpolate function values, make decisions, and justify** **conclusions with algebraic and/or graphical models.** **AFDA.4 The student will transfer between and analyze multiple representations of functions, including algebraic formulas, graphs, tables, and words. Students will select and use appropriate representations for analysis, interpretation, and**

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	prediction. **AII.2 The student will investigate and apply the properties of arithmetic and geometric sequences and series to solve real-world problems, including writing the first *n* terms, finding the *n*th term, and evaluating summation formulas. Notation will include Σ and a_n.** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.9 The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions.**
3. Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.	**AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** **h) asymptotes.**

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	AFDA.2 The student will use knowledge of transformations to write an equation, given the graph of a function (linear, quadratic, exponential, and logarithmic). **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.** **AII.9 The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions.**
4. For exponential models, express as a logarithm the solution	**AFDA.1 The student will investigate and analyze function (linear,**

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to $ab^{ct} = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.	**quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;** **d) zeros;** **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** **h) asymptotes.** **AFDA.2 The student will use knowledge of transformations to write an equation, given the graph of a function (linear, quadratic, exponential, and logarithmic).** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;**

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	g) inverse of a function; and **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.** **MA.9 The student will investigate and identify the characteristics of exponential and logarithmic functions in order to graph these functions and solve equations and real-world problems. This will include the role of e, natural and common logarithms, laws of exponents and logarithms, and the solution of logarithmic and exponential equations.**
Interpret expressions for functions in terms of the situation they model	
5. Interpret the parameters in a linear or exponential function in terms of a context.	**A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including** **a) determining whether a relation is a function;** **b) domain and range;** **c) zeros of a function;** **d) *x*- and *y*-intercepts;** **e) finding the values of a function for elements in its domain; and** **f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.** **AFDA.1 The student will investigate and analyze function (linear, quadratic, exponential, and logarithmic) families and their characteristics. Key concepts include** **a) continuity;** **b) local and absolute maxima and minima;** **c) domain and range;**

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	d) zeros; **e) intercepts;** **f) intervals in which the function is increasing/decreasing;** **g) end behaviors; and** **h) asymptotes.** **AFDA.2 The student will use knowledge of transformations to write an equation, given the graph of a function (linear, quadratic, exponential, and logarithmic).** **AII.6 The student will recognize the general shape of function (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) families and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed. Graphing calculators will be used as a tool to investigate the shapes and behaviors of these functions.** **AII.7 The student will investigate and analyze functions algebraically and graphically. Key concepts include** **a) domain and range, including limited and discontinuous domains and ranges;** **b) zeros;** **c) *x*- and *y*-intercepts;** **d) intervals in which a function is increasing or decreasing;** **e) asymptotes;** **f) end behavior;** **g) inverse of a function; and** **h) composition of multiple functions.** **Graphing calculators will be used as a tool to assist in investigation of functions.** **AII.9 The student will collect and analyze data, determine the**

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	equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions.
Trigonometric Functions F-TF	
Extend the domain of trigonometric functions using the unit circle	
1. Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.	**G.11 The student will use angles, arcs, chords, tangents, and secants to** a) investigate, verify, and apply properties of circles; b) solve real-world problems involving properties of circles; and **c) find arc lengths and areas of sectors in circles.** **T.3 The student will find, without the aid of a calculator, the values of the trigonometric functions of the special angles and their related angles as found in the unit circle. This will include converting angle measures from radians to degrees and vice versa.**
2. Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.	**T.1 The student, given a point other than the origin on the terminal side of an angle, will use the definitions of the six trigonometric functions to find the sine, cosine, tangent, cotangent, secant, and cosecant of the angle in standard position. Trigonometric functions defined on the unit circle will be related to trigonometric functions defined in right triangles.**
3. (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for pi/3, pi/4 and pi/6, and use the unit circle to express the values of sine, cosines, and tangent for *x*, pi+*x*, and 2pi–*x* in terms of their values for *x*, where *x* is any real number.	**G.8 The student will solve real-world problems involving right triangles by using the Pythagorean Theorem and its converse, properties of special right triangles, and right triangle trigonometry.** **T.1 The student, given a point other than the origin on the terminal side of an angle, will use the definitions of the six**

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	trigonometric functions to find the sine, cosine, tangent, cotangent, secant, and cosecant of the angle in standard position. Trigonometric functions defined on the unit circle will be related to trigonometric functions defined in right triangles.
4. (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.	**T.6 The student, given one of the six trigonometric functions in standard form, will** **a) state the domain and the range of the function;** **b) determine the amplitude, period, phase shift, vertical shift, and asymptotes;** **c) sketch the graph of the function by using transformations for at least a two-period interval; and** **d) investigate the effect of changing the parameters in a trigonometric function on the graph of the function.**
Model periodic phenomena with trigonometric functions	
5. Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.★	**T.6 The student, given one of the six trigonometric functions in standard form, will** **a) state the domain and the range of the function;** **b) determine the amplitude, period, phase shift, vertical shift, and asymptotes;** **c) sketch the graph of the function by using transformations for at least a two-period interval; and** **d) investigate the effect of changing the parameters in a trigonometric function on the graph of the function.**
6. (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.	**T.7 The student will identify the domain and range of the inverse trigonometric functions and recognize the graphs of these functions. Restrictions on the domains of the inverse trigonometric functions will be included.**
7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using	**T.4 The student will find, with the aid of a calculator, the value of any trigonometric function and inverse trigonometric function.**

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technology, and interpret them in terms of the context.★	**T.7 The student will identify the domain and range of the inverse trigonometric functions and recognize the graphs of these functions. Restrictions on the domains of the inverse trigonometric functions will be included.**
Prove and apply trigonometric identities	
8. Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find sin(θ), cos(θ), or tan(θ) given sin(θ), cos(θ), or tan(θ) and the quadrant of the angle.	**T.2 The student, given the value of one trigonometric function, will find the values of the other trigonometric functions, using the definitions and properties of the trigonometric functions.** **T.5 The student will verify basic trigonometric identities and make substitutions, using the basic identities.**
9. (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.	**T.9 The student will identify, create, and solve real-world problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.** **T.9 CF** • **Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.**

Mathematics | High School – Geometry

- The Common Core State Standards in high school mathematics are not presented in a format for each course, such as Algebra I, Geometry, Algebra II, etc. Rather, they are organized in the conceptual categories of:
  - Number and Quantity;
  - Algebra;
  - Functions;
  - Modeling (embedded within content and indicated with ⋆);
  - Geometry; and
  - Statistics and Probability.
- The CCSS conceptual categories for high school specify content that all students should learn in order to be college and career ready. In addition, the CCSS include content, indicated with "(+)", that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics.

CCSS for Mathematics – Geometry	Mathematics SOL
Congruence G-CO	
Experiment with transformations in the plane	
1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.	**G.2 The student will use the relationships between angles formed by two lines cut by a transversal to** **a) determine whether two lines are parallel;** **b) verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and** **c) solve real-world problems involving angles formed when parallel lines are cut by a transversal.** **G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include** **a) investigating and using formulas for finding distance, midpoint, and slope;** b) applying slope to verify and determine whether lines are parallel or perpendicular; c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods. **G.11 The student will use angles, arcs, chords, tangents, and secants to** **a) investigate, verify, and apply properties of circles;** b) solve real-world problems involving properties of circles; and **c) find arc lengths and areas of sectors in circles.**
2. Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as	**G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will**

CCSS for Mathematics – Geometry	Mathematics SOL
inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).	**include** a) investigating and using formulas for finding distance, midpoint, and slope; b) applying slope to verify and determine whether lines are parallel or perpendicular; c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and **d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods.**
3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.	**G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include** a) investigating and using formulas for finding distance, midpoint, and slope; b) applying slope to verify and determine whether lines are parallel or perpendicular; **c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and** **d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods.**
4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.	**7.8 The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane.** **G.2 The student will use the relationships between angles formed by two lines cut by a transversal to** **a) determine whether two lines are parallel;** **b) verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and**

CCSS for Mathematics – Geometry	Mathematics SOL
	c) solve real-world problems involving angles formed when parallel lines are cut by a transversal. **G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include** **a) investigating and using formulas for finding distance, midpoint, and slope;** **b) applying slope to verify and determine whether lines are parallel or perpendicular;** **c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and** **d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods.**
5. Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.	**8.8 The student will** **a) apply transformations to plane figures; and** b) identify applications of transformations. **G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include** a) investigating and using formulas for finding distance, midpoint, and slope; b) applying slope to verify and determine whether lines are parallel or perpendicular; c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and **d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods.**

CCSS for Mathematics – Geometry	Mathematics SOL
Understand congruence in terms of rigid motions	
6. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.	**G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include** a) investigating and using formulas for finding distance, midpoint, and slope; b) applying slope to verify and determine whether lines are parallel or perpendicular; c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and **d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods.** **G.6 The student, given information in the form of a figure or statement, will prove two triangles are congruent, using algebraic and coordinate methods as well as deductive proofs.**
7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.	**G.6 The student, given information in the form of a figure or statement, will prove two triangles are congruent, using algebraic and coordinate methods as well as deductive proofs.**
8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	**G.6 The student, given information in the form of a figure or statement, will prove two triangles are congruent, using algebraic and coordinate methods as well as deductive proofs.**
Prove geometric theorems	
9. Prove theorems about lines and angles. *Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from*	**G.2 The student will use the relationships between angles formed by two lines cut by a transversal to** **a) determine whether two lines are parallel;** **b) verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and**

CCSS for Mathematics – Geometry	Mathematics SOL
the segment's endpoints.	**c) solve real-world problems involving angles formed when parallel lines are cut by a transversal.**
10. Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.*	**G.5 The student, given information concerning the lengths of sides and/or measures of angles in triangles, will** **a) order the sides by length, given the angle measures;** **b) order the angles by degree measure, given the side lengths;** **c) determine whether a triangle exists; and** **d) determine the range in which the length of the third side must lie.** **These concepts will be considered in the context of real-world situations.** **G.6 The student, given information in the form of a figure or statement, will prove two triangles are congruent, using algebraic and coordinate methods as well as deductive proofs.**
11. Prove theorems about parallelograms. *Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.*	**G.9 The student will verify characteristics of quadrilaterals and use properties of quadrilaterals to solve real-world problems.**
Make geometric constructions	
12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). *Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.*	**G.4 The student will construct and justify the constructions of** **a) a line segment congruent to a given line segment;** **b) the perpendicular bisector of a line segment;** **c) a perpendicular to a given line from a point not on the line;** **d) a perpendicular to a given line at a given point on the line;** **e) the bisector of a given angle;** **f) an angle congruent to a given angle; and** **g) a line parallel to a given line through a point not on the given line.**

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13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.	**G.4 The student will construct and justify the constructions of** **a) a line segment congruent to a given line segment;** **b) the perpendicular bisector of a line segment;** **c) a perpendicular to a given line from a point not on the line;** **d) a perpendicular to a given line at a given point on the line;** **e) the bisector of a given angle;** **f) an angle congruent to a given angle; and** **g) a line parallel to a given line through a point not on the given line.** **G.4 CF** • **Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.**
Similarity, Right Triangles, and Trigonometry G-SRT	
Understand similarity in terms of similarity transformations	
1. Verify experimentally the properties of dilations given by a center and a scale factor:	
a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.	**8.8 The student will** **a) apply transformations to plane figures; and** b) identify applications of transformations. **8.8 CF** • **A dilation of a geometric figure is a transformation that changes the size of a figure by a scale factor to create a similar figure.**
b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	
2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.	**G.7 The student, given information in the form of a figure or statement, will prove two triangles are similar, using algebraic and coordinate methods as well as deductive proofs.** **G.14 The student will use similar geometric objects in two- or three-dimensions to** **a) compare ratios between side lengths, perimeters, areas, and**

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	volumes; b) determine how changes in one or more dimensions of an object affect area and/or volume of the object; c) determine how changes in area and/or volume of an object affect one or more dimensions of the object; and **d) solve real-world problems about similar geometric objects.**
3. Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.	**G.7 The student, given information in the form of a figure or statement, will prove two triangles are similar, using algebraic and coordinate methods as well as deductive proofs.**
Prove theorems involving similarity	
4. Prove theorems about triangles. *Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.*	**G.7 The student, given information in the form of a figure or statement, will prove two triangles are similar, using algebraic and coordinate methods as well as deductive proofs.**
5. Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	**G.6 The student, given information in the form of a figure or statement, will prove two triangles are congruent, using algebraic and coordinate methods as well as deductive proofs.** **G.7 The student, given information in the form of a figure or statement, will prove two triangles are similar, using algebraic and coordinate methods as well as deductive proofs.** **G.10 The student will solve real-world problems involving angles of polygons.** **G.14 The student will use similar geometric objects in two- or three-dimensions to** **a) compare ratios between side lengths, perimeters, areas, and volumes;** **b) determine how changes in one or more dimensions of an object affect area and/or volume of the object;** **c) determine how changes in area and/or volume of an object**

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	affect one or more dimensions of the object; and **d) solve real-world problems about similar geometric objects.**
Define trigonometric ratios and solve problems involving right triangles	
6. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	**G.8 The student will solve real-world problems involving right triangles by using the Pythagorean Theorem and its converse, properties of special right triangles, and right triangle trigonometry.** **G.8 CF** • **The ratios of side lengths in similar right triangles (adjacent/hypotenuse or opposite/hypotenuse) are independent of the scale factor and depend only on the angle the hypotenuse makes with the adjacent side, thus justifying the definition and calculation of trigonometric functions using the ratios of side lengths for similar right triangles.** • **Determine whether a triangle formed with three given lengths is a right triangle.** • **Solve for missing lengths in geometric figures, using properties of 45°-45°-90° triangles.** • **Solve for missing lengths in geometric figures, using properties of 30°-60°-90° triangles.** • **Solve problems involving right triangles, using sine, cosine, and tangent ratios.** • **Solve real-world problems, using right triangle trigonometry and properties of right triangles.**
7. Explain and use the relationship between the sine and cosine of complementary angles.	**G.8 The student will solve real-world problems involving right triangles by using the Pythagorean Theorem and its converse, properties of special right triangles, and right triangle trigonometry.**

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	G.8 CF • **Explain and use the relationship between the sine and cosine of complementary angles.**
8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.★	**G.8 The student will solve real-world problems involving right triangles by using the Pythagorean Theorem and its converse, properties of special right triangles, and right triangle trigonometry.**
Apply trigonometry to general triangles	
9. (+) Derive the formula $A = 1/2\ ab\ \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.	**G.8 The student will solve real-world problems involving right triangles by using the Pythagorean Theorem and its converse, properties of special right triangles, and right triangle trigonometry.** **G.8 CF** • **Another formula for the area of a triangle is $\frac{1}{2}ab\sin(C)$.**
10. (+) Prove the Laws of Sines and Cosines and use them to solve problems.	**T.9 The student will identify, create, and solve real-world problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.**
11. (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).	
Circles G-C	
Understand and apply theorems about circles	
1. Prove that all circles are similar.	**G.11 The student will use angles, arcs, chords, tangents, and secants to** **a) investigate, verify, and apply properties of circles;** **b) solve real-world problems involving properties of circles; and** c) find arc lengths and areas of sectors in circles.

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2. Identify and describe relationships among inscribed angles, radii, and chords. *Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*	**G.11 The student will use angles, arcs, chords, tangents, and secants to** **a) investigate, verify, and apply properties of circles;** **b) solve real-world problems involving properties of circles; and** c) find arc lengths and areas of sectors in circles. **G.11 CF** • **Find lengths, angle measures, and arc measures associated with** – **two intersecting chords;** – **two intersecting secants;** – **an intersecting secant and tangent;** – **two intersecting tangents; and** – **central and inscribed angles.**
3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	**G.4 The student will construct and justify the constructions of** **a) a line segment congruent to a given line segment;** **b) the perpendicular bisector of a line segment;** **c) a perpendicular to a given line from a point not on the line;** **d) a perpendicular to a given line at a given point on the line;** **e) the bisector of a given angle;** **f) an angle congruent to a given angle; and** **g) a line parallel to a given line through a point not on the given line.** **G.4 CF** • **Construct the inscribed and circumscribed circles of a triangle.** **G.9 The student will verify characteristics of quadrilaterals and use properties of quadrilaterals to solve real-world problems.** **G.9 CF** • **Prove properties of angles for a quadrilateral inscribed in a circle.**
4. (+) Construct a tangent line from a point outside a given	**G.4 The student will construct and justify the constructions of**

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circle to the circle.	**a) a line segment congruent to a given line segment;** **b) the perpendicular bisector of a line segment;** **c) a perpendicular to a given line from a point not on the line;** **d) a perpendicular to a given line at a given point on the line;** **e) the bisector of a given angle;** **f) an angle congruent to a given angle; and** **g) a line parallel to a given line through a point not on the given line.** **G.4 CF** • **Construct a tangent line from a point outside a given circle to the circle.**
Find arc lengths and areas of sectors of circles	
5. Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.	**G.11 The student will use angles, arcs, chords, tangents, and secants to** **a) investigate, verify, and apply properties of circles;** **b) solve real-world problems involving properties of circles; and** **c) find arc lengths and areas of sectors in circles.** **G.11 CF** • **Calculate the area of a sector and the length of an arc of a circle, using proportions.** • **Verify properties of circles, using deductive reasoning, algebraic, and coordinate methods.**
Expressing Geometric Properties with Equations G-GPE	
Translate between the geometric description and the equation for a conic section	
1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.	**G.12 The student, given the coordinates of the center of a circle and a point on the circle, will write the equation of the circle.** **G.12 CF** • **Identify the center, radius, and diameter of a circle from a given**

CCSS for Mathematics – Geometry	Mathematics SOL
	standard equation. • **Use the distance formula to find the radius of a circle.** • **Given the coordinates of the center and radius of the circle, identify a point on the circle.** • **Given the equation of a circle in standard form, identify the coordinates of the center and find the radius of the circle.** • **Given the coordinates of the endpoints of a diameter, find the equation of the circle.** • **Given the coordinates of the center and a point on the circle, find the equation of the circle.** • **Recognize that the equation of a circle of given center and radius is derived using the Pythagorean Theorem.**
2. Derive the equation of a parabola given a focus and directrix.	**MA.8 The student will investigate and identify the characteristics of conic section equations in (*h, k*) and standard forms. Transformations in the coordinate plane will be used to graph conic sections.**
3. (+) Derive the equations of ellipses and hyperbolas given foci and directrices.	**MA.8 The student will investigate and identify the characteristics of conic section equations in (*h, k*) and standard forms. Transformations in the coordinate plane will be used to graph conic sections.**
Use coordinates to prove simple geometric theorems algebraically	
4. Use coordinates to prove simple geometric theorems algebraically. *For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1, √3) lies on the circle centered at the origin and containing the point (0, 2).*	**G.2 The student will use the relationships between angles formed by two lines cut by a transversal to** a) determine whether two lines are parallel; **b) verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and** c) solve real-world problems involving angles formed when parallel lines are cut by a transversal.

CCSS for Mathematics – Geometry	Mathematics SOL
	G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include **a) investigating and using formulas for finding distance, midpoint, and slope;** **b) applying slope to verify and determine whether lines are parallel or perpendicular;** c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods. **G.12 The student, given the coordinates of the center of a circle and a point on the circle, will write the equation of the circle.**
5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).	**G.2 The student will use the relationships between angles formed by two lines cut by a transversal to** **a) determine whether two lines are parallel;** **b) verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and** c) solve real-world problems involving angles formed when parallel lines are cut by a transversal. **G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include** **a) investigating and using formulas for finding distance, midpoint, and slope;** **b) applying slope to verify and determine whether lines are parallel or perpendicular;**

CCSS for Mathematics – Geometry	Mathematics SOL
	c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods.
6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.	**G.3 The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include** **a) investigating and using formulas for finding distance, midpoint, and slope;** b) applying slope to verify and determine whether lines are parallel or perpendicular; c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and d) determining whether a figure has been translated, reflected, rotated, or dilated, using coordinate methods.
7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.★	
Geometric Measurement and Dimension G-GMD	
Explain volume formulas and use them to solve problems	
1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. *Use dissection arguments, Cavalieri's principle, and informal limit arguments.*	**6.10 The student will** **a) define π (pi) as the ratio of the circumference of a circle to its diameter;** **b) solve practical problems involving circumference and area of a circle, given the diameter or radius;** **c) solve practical problems involving area and perimeter; and** d) describe and determine the volume and surface area of a rectangular prism. **8.7 The student will** **a) investigate and solve practical problems involving volume and**

CCSS for Mathematics – Geometry	Mathematics SOL
	surface area of prisms, cylinders, cones, and pyramids; and b) describe how changing one measured attribute of a figure affects the volume and surface area. **G.11 The student will use angles, arcs, chords, tangents, and secants to** **a) investigate, verify, and apply properties of circles;** **b) solve real-world problems involving properties of circles; and** c) find arc lengths and areas of sectors in circles. **G.13 The student will use formulas for surface area and volume of three-dimensional objects to solve real-world problems.** **G.14 The student will use similar geometric objects in two- or three-dimensions to** **a) compare ratios between side lengths, perimeters, areas, and volumes;** **b) determine how changes in one or more dimensions of an object affect area and/or volume of the object;** **c) determine how changes in area and/or volume of an object affect one or more dimensions of the object; and** **d) solve real-world problems about similar geometric objects.**
2. (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.	**G.14 The student will use similar geometric objects in two- or three-dimensions to** **a) compare ratios between side lengths, perimeters, areas, and volumes;** **b) determine how changes in one or more dimensions of an object affect area and/or volume of the object;** **c) determine how changes in area and/or volume of an object affect one or more dimensions of the object; and** **d) solve real-world problems about similar geometric objects.**
3. Use volume formulas for cylinders, pyramids, cones, and	**8.7 The student will**

CCSS for Mathematics – Geometry	Mathematics SOL
spheres to solve problems.★	**a) investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and** b) describe how changing one measured attribute of a figure affects the volume and surface area. **G.13 The student will use formulas for surface area and volume of three-dimensional objects to solve real-world problems.**
Visualize relationships between two-dimensional and three-dimensional objects	
4. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	**8.7 The student will** **a) investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and** b) describe how changing one measured attribute of a figure affects the volume and surface area.
Modeling with Geometry G-MG	
Apply geometric concepts in modeling situations	
1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).★	**8.7 The student will** **a) investigate and solve practical problems involving volume and surface area of prisms, cylinders, cones, and pyramids; and** b) describe how changing one measured attribute of a figure affects the volume and surface area. **8.9 The student will construct a three-dimensional model, given the top or bottom, side, and front views.** **G.10 The student will solve real-world problems involving angles of polygons.** **G.10 CF** **• Identify tessellations in art, construction, and nature.** **G.13 The student will use formulas for surface area and volume of three-dimensional objects to solve real-world problems.** **G.14 The student will use similar geometric objects in two- or**
2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).★	
3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).★	

CCSS for Mathematics – Geometry	Mathematics SOL
	three-dimensions to **a) compare ratios between side lengths, perimeters, areas, and volumes;** b) determine how changes in one or more dimensions of an object affect area and/or volume of the object; c) determine how changes in area and/or volume of an object affect one or more dimensions of the object; and **d) solve real-world problems about similar geometric objects.**

Mathematics | High School – Statistics and Probability

- The Common Core State Standards in high school mathematics are not presented in a format for each course, such as Algebra I, Geometry, Algebra II, etc. Rather, they are organized in the conceptual categories of:
  - Number and Quantity;
  - Algebra;
  - Functions;
  - Modeling (embedded within content and indicated with ⋆);
  - Geometry; and
  - Statistics and Probability.
- The CCSS conceptual categories for high school specify content that all students should learn in order to be college and career ready. In addition, the CCSS include content, indicated with "(+)", that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics.

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
Interpreting Categorical and Quantitative Data S-ID	
Summarize, represent, and interpret data on a single count or measurement variable	
1. Represent data with plots on the real number line (dot plots, histograms, and box plots).	**7.11 The student, given data for a practical situation, will** **a) construct and analyze histograms; and** **b) compare and contrast histograms with other types of graphs presenting information from the same data set.** **8.13 The student will** **a) make comparisons, predictions, and inferences, using information displayed in graphs; and** b) construct and analyze scatterplots. **A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.** **PS.1 The student will analyze graphical displays of univariate data, including dotplots, stemplots, and histograms, to identify and describe patterns and departures from patterns, using central tendency, spread, clusters, gaps, and outliers.** **Appropriate technology will be used to create graphical displays.**
2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.	**5.16 The student will** **a) describe mean, median, and mode as measures of center;** **b) describe mean as fair share;** **c) find the mean, median, mode, and range of a set of data; and** **d) describe the range of a set of data as a measure of variation.** **6.15 The student will** **a) describe mean as balance point; and** **b) decide which measure of center is appropriate for a given purpose.** **A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	deviation, standard deviation, and z-scores. **A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.** **PS.2 The student will analyze numerical characteristics of univariate data sets to describe patterns, and departures from patterns, using mean, median, mode, variance, standard deviation, interquartile range, range, and outliers.** **PS.3 The student will compare distributions of two or more univariate data sets, analyzing center and spread (within group and between group variations), clusters and gaps, shapes, outliers, or other unusual features.**
3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).	**A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.** **A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.** **PS.2 The student will analyze numerical characteristics of univariate data sets to describe patterns, and departures from patterns, using mean, median, mode, variance, standard deviation, interquartile range, range, and outliers.** **PS.3 The student will compare distributions of two or more univariate data sets, analyzing center and spread (within group and between group variations), clusters and gaps, shapes, outliers, or other unusual features.**
4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.	**AFDA.7 The student will analyze the normal distribution. Key concepts include** **a) characteristics of normally distributed data;** **b) percentiles;** **c) normalizing data, using z-scores; and**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	d) area under the standard normal curve and probability. **AII.11 The student will identify properties of a normal distribution and apply those properties to determine probabilities associated with areas under the standard normal curve.** **PS.16 The student will identify properties of a normal distribution and apply the normal distribution to determine probabilities, using a table or graphing calculator.**
Summarize, represent, and interpret data on two categorical and quantitative variable	
5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.	**PS.7 The student, using two-way tables, will analyze categorical data to describe patterns and departure from patterns and to find marginal frequency and relative frequencies, including conditional frequencies.**
6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.	
a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. *Use given functions or choose a function suggested by the context. Emphasize linear and exponential models.*	**8.13 The student will** **a) make comparisons, predictions, and inferences, using information displayed in graphs; and** **b) construct and analyze scatterplots.** **A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models. Mathematical models will include linear and quadratic functions.** **AFDA.3 The student will collect data and generate an equation for the curve (linear, quadratic, exponential, and logarithmic) of best fit to model real-world problems or applications. Students will use the best fit equation to interpolate function values,**
b. Informally assess the fit of a function by plotting and analyzing residuals.	
c. Fit a linear function for a scatter plot that suggests a linear association.	

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	make decisions, and justify conclusions with algebraic and/or graphical models. **AII.9 The student will collect and analyze data, determine the equation of the curve of best fit, make predictions, and solve real-world problems, using mathematical models. Mathematical models will include polynomial, exponential, and logarithmic functions.** **PS.5 The student will find and interpret linear correlation, use the method of least squares regression to model the linear relationship between two variables, and use the residual plots to assess linearity.**
Interpret linear models	
7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.	**A.6 The student will graph linear equations and linear inequalities in two variables, including** **a) determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and** b) writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line. **A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models.**
8. Compute (using technology) and interpret the correlation coefficient of a linear fit.	**A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models.** **AFDA.3 The student will collect data and generate an equation for the curve (linear, quadratic, exponential, and logarithmic) of best fit to model real-world problems or applications. Students**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	will use the best fit equation to interpolate function values, make decisions, and justify conclusions with algebraic and/or graphical models. **AFDA.3 CF** • **Least squares regression generates the equation of the line that minimizes the sum of the squared distances between the data points and the line.** • **A correlation coefficient measures the degree of association between two variables that are related linearly.** **PS.5 The student will find and interpret linear correlation, use the method of least squares regression to model the linear relationship between two variables, and use the residual plots to assess linearity.**
9. Distinguish between correlation and causation.	**8.13 The student will** **a) make comparisons, predictions, and inferences, using information displayed in graphs; and** **b) construct and analyze scatterplots.** **8.13 CF** • **Interpret a set of data points in a scatterplot as having a positive relationship, a negative relationship, or no relationship.** **AFDA.3 The student will collect data and generate an equation for the curve (linear, quadratic, exponential, and logarithmic) of best fit to model real-world problems or applications. Students will use the best fit equation to interpolate function values, make decisions, and justify conclusions with algebraic and/or graphical models.** **PS.4 The student will analyze scatterplots to identify and describe the relationship between two variables, using shape;**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	strength of relationship; clusters; positive, negative, or no association; outliers; and influential points. **PS.5 The student will find and interpret linear correlation, use the method of least squares regression to model the linear relationship between two variables, and use the residual plots to assess linearity.**
Making Inferences and Justifying Conclusions S-IC	
Understand and evaluate random processes underlying statistical experiments	
1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	**AFDA.8 The student will design and conduct an experiment/survey. Key concepts include** **a) sample size;** **b) sampling technique;** **c) controlling sources of bias and experimental error;** **d) data collection; and** **e) data analysis and reporting.** **PS.8 The student will describe the methods of data collection in a census, sample survey, experiment, and observational study and identify an appropriate method of solution for a given problem setting.** **PS.9 The student will plan and conduct a survey. The plan will address sampling techniques (e.g., simple random, stratified) and methods to reduce bias.** **PS.10 The student will plan and conduct an experiment. The plan will address control, randomization, and measurement of experimental error.**
2. Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. *For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?*	
Make inferences and justify conclusions from sample surveys, experiments, and observational studies	
3. Recognize the purposes of and differences among sample	**AFDA.8 The student will design and conduct an**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
surveys, experiments, and observational studies; explain how randomization relates to each.	**experiment/survey. Key concepts include** **a) sample size;** **b) sampling technique;** **c) controlling sources of bias and experimental error;** **d) data collection; and** **e) data analysis and reporting.** **PS.8 The student will describe the methods of data collection in a census, sample survey, experiment, and observational study and identify an appropriate method of solution for a given problem setting.** **PS.9 The student will plan and conduct a survey. The plan will address sampling techniques (e.g., simple random, stratified) and methods to reduce bias.** **PS.10 The student will plan and conduct an experiment. The plan will address control, randomization, and measurement of experimental error.**
4. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	
5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	
6. Evaluate reports based on data.	
Conditional Probability and the Rules of Probability S-CP	
Understand independence and conditional probability and use them to interpret data	
1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).	**6.16 The student will** **a) compare and contrast dependent and independent events; and** **b) determine probabilities for dependent and independent events.** **6.16 CF** • **The probability of an event occurring is equal to the ratio of desired outcomes to the total number of possible outcomes (sample space).** **AFDA.6 The student will calculate probabilities. Key concepts**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	include **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and **e) Law of Large Numbers.** **PS.11 The student will identify and describe two or more events as complementary, dependent, independent, and/or mutually exclusive.**
2. Understand that two events *A* and *B* are independent if the probability of *A* and *B* occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	**6.16 The student will** **a) compare and contrast dependent and independent events; and** **b) determine probabilities for dependent and independent events.** **8.12 The student will determine the probability of independent and dependent events with and without replacement.** **AFDA.6 The student will calculate probabilities. Key concepts include** **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and **e) Law of Large Numbers.** **PS.11 The student will identify and describe two or more events as complementary, dependent, independent, and/or mutually exclusive.** **PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	Large Numbers concept, the addition rule, and the multiplication rule.
3. Understand the conditional probability of *A* given *B* as *P*(*A* and *B*)/*P*(*B*), and interpret independence of *A* and *B* as saying that the conditional probability of *A* given *B* is the same as the probability of *A*, and the conditional probability of *B* given *A* is the same as the probability of *B*.	**6.16 The student will** **a) compare and contrast dependent and independent events; and** **b) determine probabilities for dependent and independent events.** **7.10 The student will determine the probability of compound events, using the Fundamental (Basic) Counting Principle.** **8.12 The student will determine the probability of independent and dependent events with and without replacement.** **AFDA.6 The student will calculate probabilities. Key concepts include** **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and **e) Law of Large Numbers.** **PS.11 The student will identify and describe two or more events as complementary, dependent, independent, and/or mutually exclusive.** **PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of Large Numbers concept, the addition rule, and the multiplication rule.**
4. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if	**PS.7 The student, using two-way tables, will analyze categorical data to describe patterns and departure from patterns and to find marginal frequency and relative frequencies, including**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
events are independent and to approximate conditional probabilities. *For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.*	**conditional frequencies.**
5. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. *For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.*	**6.16 The student will** **a) compare and contrast dependent and independent events; and** **b) determine probabilities for dependent and independent events.** **7.10 The student will determine the probability of compound e vents, using the Fundamental (Basic) Counting Principle.** **8.12 The student will determine the probability of independent and dependent events with and without replacement.** **AFDA.6 The student will calculate probabilities. Key concepts include** **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and **e) Law of Large Numbers.** **PS.11 The student will identify and describe two or more events as complementary, dependent, independent, and/or mutually exclusive.** **PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
	Large Numbers concept, the addition rule, and the multiplication rule.
Use the rules of probability to compute probabilities of compound events in a uniform probability model	
6. Find the conditional probability of *A* given *B* as the fraction of *B*'s outcomes that also belong to *A,* and interpret the answer in terms of the model.	**AFDA.6 The student will calculate probabilities. Key concepts include** **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and **e) Law of Large Numbers.** **PS.11 The student will identify and describe two or more events as complementary, dependent, independent, and/or mutually exclusive.** **PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of Large Numbers concept, the addition rule, and the multiplication rule.**
7. Apply the Addition Rule, P(A or B) = P(A) + P(B) – P(A and B), and interpret the answer in terms of the model.	
8. (+) Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(B|A) = P(B)P(A|B), and interpret the answer in terms of the model.	
9. (+) Use permutations and combinations to compute probabilities of compound events and solve problems.	**AFDA.6 The student will calculate probabilities. Key concepts include** a) conditional probability; b) dependent and independent events; c) addition and multiplication rules; **d) counting techniques (permutations and combinations); and** e) Law of Large Numbers. **AII.12 The student will compute and distinguish between permutations and combinations and use technology for applications.**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
Using Probability to Make Decisions S-MD	
Calculate expected values and use them to solve problems	
1. (+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.	**PS.14 The student will simulate probability distributions, including binomial and geometric.** **PS.19 The student will identify the meaning of sampling distribution with reference to random variable, sampling statistic, and parameter and explain the Central Limit Theorem. This will include sampling distribution of a sample proportion, a sample mean, a difference between two sample proportions, and a difference between two sample means.**
2. (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.	**AFDA.6 The student will calculate probabilities. Key concepts include** **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and e) Law of Large Numbers. **PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of Large Numbers concept, the addition rule, and the multiplication rule.** **PS.13 The student will develop, interpret, and apply the binomial probability distribution for discrete random variables, including computing the mean and standard deviation for the binomial variable.**
3. (+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. *For example, find*	**PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of**

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.	**Large Numbers concept, the addition rule, and the multiplication rule.** **PS.13 The student will develop, interpret, and apply the binomial probability distribution for discrete random variables, including computing the mean and standard deviation for the binomial variable.** **PS.14 The student will simulate probability distributions, including binomial and geometric.**
4. (+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. *For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?*	**AFDA.6 The student will calculate probabilities. Key concepts include** **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and e) Law of Large Numbers. PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of Large Numbers concept, the addition rule, and the multiplication rule.**
Use probability to evaluate outcomes of decisions	
5. (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.	
a. Find the expected payoff for a game of chance. *For example, find the expected winnings from a state lottery ticket or a game at a fast food restaurant.*	**AFDA.6 The student will calculate probabilities. Key concepts include** **a) conditional probability;** **b) dependent and independent events;** **c) addition and multiplication rules;** d) counting techniques (permutations and combinations); and
b. Evaluate and compare strategies on the basis of expected values. *For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but*	

CCSS for Mathematics – Statistics and Probability	Mathematics SOL
reasonable, chances of having a minor or a major accident.	**e) Law of Large Numbers.** **PS.12 The student will find probabilities (relative frequency and theoretical), including conditional probabilities for events that are either dependent or independent, by applying the Law of Large Numbers concept, the addition rule, and the multiplication rule.**
6. (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	
7. (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).	

Board of Education Agenda Item

Item: N. **Date:** January 13, 2011

Topic: First Review of Revisions of Industry, Professional, or Trade Association Certification Examinations and Occupational Competency Assessments to Meet the Requirements for the Board of Education's Career and Technical Education and Advanced Mathematics and Technology Seals and the Student-Selected Verified Credit.

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Origin:

____ Topic presented for information only (no board action required)

_X_ Board review required by
- ____ State or federal law or regulation
- _X_ Board of Education regulation
- ___ Other:

_X_ Action requested at this meeting ____ Action requested at future meeting: _____

Previous Review/Action:

____ No previous board review/action

_X_ Previous review/action
- date September 28, 2000; April 26, 2001; April 24 & 25, 2002; May 28, 2003; June 25, 2003; February 25, 2004; February 23, 2005; November 30, 2005, November 29, 2006, January 10, 2008, January 15, 2009, and January 14, 2010.
- action Additions and/or deletions were made to the list of board-approved examinations, assessments, and licensures.

Background Information:

The *Regulations Establishing Standards for Accrediting Public Schools in Virginia*, requirements for graduation 8 VAC 20-131-50.I.3, provide students who demonstrate academic excellence and/or outstanding achievement the opportunity to earn the Board of Education's Career and Technical Education Seal.

8 VAC 20-131-50.I.3 - "The Board of Education's Career and Technical Education Seal will be awarded to students who earn a Standard or Advanced Studies Diploma and complete a prescribed sequence of courses in a career and technical education concentration or specialization that they choose and maintain a "B" or better average in those courses; or (i) pass an examination or occupational competency assessment in a career and technical education concentration or specialization that confers certification or an occupational competency credential from a recognized industry, trade or professional association or (ii) acquire a professional license in that career and technical education field from the Commonwealth of Virginia. The Board shall approve all professional licenses and examinations used to satisfy these requirements."

The *Regulations Establishing Standards for Accrediting Public Schools in Virginia*, requirements for graduation 8 VAC 20-131-50.I.4, provide students who demonstrate academic excellence and/or outstanding achievement the opportunity to earn the Board of Education's Seal of Advanced Mathematics and Technology.

8 VAC 20-131-50.I.4 – "The Board of Education's Seal of Advanced Mathematics and Technology will be awarded to students who earn either a Standard or Advanced Studies Diploma and (i) satisfy all of the mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a "B" average or better, and (ii) either (a) pass an examination in a career and technical education field that confers certification from a recognized industry, or trade or professional association, (b) acquire a professional license in a career and technical education field from the Commonwealth of Virginia, or (c) pass an examination approved by the Board that confers college-level credit in a technology or computer science area. The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements."

The *Regulations Establishing Standards for Accrediting Public Schools in Virginia* make the following provisions relative to students earning verified units of credit:

8 VAC 20-131-110.C Standard and verified units of credit
The Board may from time to time approve additional tests for the purpose of awarding verified credit. Such additional tests, which enable students to earn verified units of credit, must, at a minimum, meet the following criteria:

1. The test must be standardized and graded independently of the school or school division in which the test is given;
2. The test must be knowledge-based;
3. The test must be administered on a multi-state or international basis, or administered as part of another state's accountability assessment program; and
4. To be counted in a specific academic area, the test must measure content that incorporates or exceeds the SOL content in the course for which verified credit is given.

8 VAC 20-131-50.B.2 (Footnotes 5 and 6 and C., Footnote 5) Requirements for graduation
Verified Credits Required
Student Selected Test [5]
[5] A student may utilize additional assessments for earning verified credit in computer science, technology, career and technical education, or other areas as prescribed by the Board in 8VAC 20-131-110.
[6]Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student selected verified credit and (ii) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board of Education as an additional test to verify student achievement.

Summary of Major Elements:
The attached list of industry, professional, trade association certifications, or occupational competency assessments meets the Board's requirements as noted in 8 VAC 20-131-50.I.3, 8 VAC 20-131-50.I.4, 8 VAC 20-131-110, and 8 VAC 20-131-50.B.4 (Footnotes 5 and 6 and C., Footnote 5) for the Career and Technical Education Seal, the Seal of Advanced Mathematics and Technology, and student-selected verified credit.

The 58 additional industry certification examinations and occupational competency assessments in bold print have been identified as meeting criteria to satisfy requirements for the Career and Technical Education Seal and student-selected verified credit. Six of these examinations have been identified as meeting criteria to satisfy requirements for the Advanced Mathematics and Technology Seal. A list of previously approved examinations and recommended additional examinations is attached.

Industry, professional, and trade association certifications are continually being revised or discontinued to stay current with technology and new techniques. These changes may be such that individual certifications are no longer available, no longer meet the Board of Education's criteria for diploma seals or student-selected verified credit, or require additional criteria such as work experience beyond high school. Changes have been made in 13 of the certifications that were previously approved by the Board. A list of certification examinations that are recommended for deletion from the Board-approved list is attached.

As a result of the proposed additions and deletions to this list there are:

- 277 credentials eligible for student-selected verified credit;
- 272 credentials eligible for the Career and Technical Education Seal; and
- 35 credentials eligible for the Advanced Mathematics and Technology Seal.

Superintendent's Recommendation:
The Superintendent of Public Instruction recommends that the Board of Education accept for first review the revised list of industry certification examinations, occupational competency assessments, and licenses to meet the requirements for the Board of Education's Career and Technical Education and Advanced Mathematics and Technology Seals and the student-selected verified credit.

Impact on Resources:
Federal Carl Perkins funds may be used to help teachers and programs become certified. State funds will be used to assist students to become certified or pass an occupational competency assessment.

Timetable for Further Review/Action:
After final approval, a Superintendent's Memorandum will notify school divisions of these additions to and deletions from the approved list of industry certifications, occupational competency assessments, and licenses.

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
January 13, 2011 (Proposed)				
		Meets Board of Education Criteria		
Name of Credential	Issuing Organization	Student Selected Verified Credit	Career and Technical Education Seal	Advanced Mathematics and Technology Seal
AGRICULTURAL EDUCATION				
Agricultural Biotechnology Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Agriculture Mechanics Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Agribusiness Examination	New York State Department of Education	X	X	
Animal Systems Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Commercial Pesticide Applicator Certification	Virginia Department of Agriculture and Consumer Services	X	X	
Floriculture-Greenhouse Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Floriculture Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Forestry Products & Processing Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Greenhouse Operators Certification Program	Southeast Greenhouse Growers Association	X	X	
Horticulture-Landscaping Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Horticulture-Olericulture and Pomology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Natural Resource Systems Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Outdoor Power Equipment Certifications (Pass any one Outdoor Power Equipment exam)	Equipment and Engine Training Council	X	X	
Power Equipment Technology Examination	**SkillsUSA**	**X**	**X**	
Pet Sitters Certification	National Association Professional Pet Sitters	X	X	
Production Agriculture Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Private Applicator Certification	Virginia Department of Agriculture and Consumer Services	X	X	
Registered Technician Certification	Virginia Department of Agriculture and Consumer Services	X	X	
Small Engine Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
January 13, 2011 (Proposed)				
		Meets Board of Education Criteria		
Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Small Animal Science Examination	National Occupational Competency Testing Institute (NOCTI)	X	X	
Small Animal Care Examination	New York State Department of Education	X	X	
BUSINESS AND INFORMATION TECHNOLOGY				
Accounting-Basic Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Accounting – Complete Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Administrative Assisting Assessment	National Occupational Competency Testing Institute (NOCTI	X	X	
Administrative Services Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Adobe Certified Associate (Pass any one test in this program)	Adobe Systems Incorporated	X	X	X
Apple Pro Certification Program (Pass any one exam in this program)	Apple, Inc.	X	X	X
Banking and Related Services Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Business Financial Management Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Business and Information Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	X
Brainbench Network Administration Certifications (Pass any one test in this category)	Brainbench	X	X	X
Brainbench Systems Administration Certifications (Pass any one test in this category)	Brainbench	X	X	X
(Pass any one test in this category)				
Brainbench Software Development Certifications (Pass any one test in this category)	Brainbench	X	X	X
Brainbench Web Design and Development Certifications (Pass any one test in this category)	Brainbench	X	X	X

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
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Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Brainbench Web Administration Certifications (Pass any one test in this category)	Brainbench	X	X	X
Brainbench Desktop Publishing Certifications (Pass any one test in this category)	Brainbench	X	X	X
Certified Internet Web Professional (CIW) Program (Pass any one exam in this program)	ProsoftTraining	X	X	X
Certified Novell Administrator (CNA)	Novell	X	X	X
Computer Programming Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	X
Computer Programming Examination	**SkillsUSA**	**X**	**X**	**X**
Financial and Investment Planning Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Financial Literacy Certification (WISE)	Working in Support of Education (WISE)	X	X	
Fundamental Business Concepts	ASK Institute (DECA/MarkED)	X	X	
General Management Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Human Resources Management Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
IC3 Certification	Certiport	X	X	X
Linux+ Certification	CompTIA	X	X	X
Microsoft Certified Professional (Pass any one Microsoft Professional exam)	Microsoft	X	X	X
Microsoft Technology Associate (MTA) Program (Pass any one exam)	**Microsoft**	**X**	**X**	**X**
Microsoft Office Specialist (MOS)—(Pass any one MOS exam of any version)	Microsoft	X	X	
Network+ Certification	CompTIA	X	X	X
Oracle Certification Program Examinations (Pass any one Oracle certification exam)	Oracle Corporation	X	X	X
Virtual Enterprise Assessment	**National Occupational Competency Testing Institute (NOCTI) and Certiport**	**X**	**X**	
W!SE Financial Literacy Certification	Working in Support of Education (W!SE)	X	X	
CAREER AND TECHNICAL EDUCATION GENERIC CREDENTIALS				

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
January 13, 2011 (Proposed)				
		Meets Board of Education Criteria		
Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Digital Literacy Certification Test (must be taken in combination with the Virginia Workplace Readiness Assessment)	Microsoft	X	X	
National Career Readiness Certificate	**ACT, WorkKeys®**	**X**	**X**	
Virginia Workplace Readiness Assessment/IC3 Certification Exams (pass Virginia Workplace Readiness Assessment and any one of three IC3 exams)	National Occupational Competency Testing Institute (NOCTI) and Certiport	X	X	
Workplace Readiness Skills for the Commonwealth Examination	**Career and Technical Education Consortium of States (CTECS)**	**X**	**X**	
FAMILY AND CONSUMER SCIENCES EDUCATION				
Broad Field Family and Consumer Sciences Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	
Commercial Foods Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Commercial Baking Examination	**SkillsUSA**	**X**	**X**	
Culinary Arts Prep Cook-Level 1 Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Culinary Arts Cook-Level 2 Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Culinary Arts Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	
Culinary Arts Examination	**SkillsUSA**	**X**	**X**	
Early Childhood Care and Education Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Early Childhood Education Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	
Education Careers Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	
Education and Training Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Family Services Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	
Fashion, Textiles, and Apparel Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	

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Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Hospitality Management—-Food and Beverage Option Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Hospitality Management—Lodging Option Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Interior Design Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	
Nutrition Examination	American Association of Family and Consumer Sciences (AAFCS)	X	X	
ParaPro	Educational Testing Service	X	X	
Personal and Family Finance Certification	American Association of Family & Consumer Sciences (AAFCS)	X	X	
ProStart Program Certification (Levels I and/or 2)	Education Foundation of the National Restaurant Association	X	X	
Retail Commercial Baking Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Restaurant, Food and Beverage Services Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
ServeSafe Certification	Education Foundation of the National Restaurant Association	X	X	
START Certification (Hospitality Skills)	American Hotel and Lodging Association (AH&LA)	X	X	
HEALTH AND MEDICAL SCIENCES EDUCATION				
Certified Clinical Medical Assistant Examination	**National Healthcareer Association**	**X**	**X**	
Certified Dental Assistant: Infection Control Examination (ICE)	Dental Assisting National Board, Inc.	X	X	
Certified Dental Assistant: Radiation Health & Safety Examination (RHS)	Dental Assisting National Board, Inc.	X	X	
Certified Veterinary Assistant	Animal Care Technologies	X	X	
Dental Assisting Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Diagnostic Services Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
EMS First Responder Certification	Department of Health, Office of Emergency Medical Services	X	X	
Emergency Medical Technician	Department of Health, Office of Emergency Medical Services	X	X	

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Health Assisting Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Health Informatics Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Home Health Aide Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Medical Assisting Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Medical Assisting Examination	**SkillsUSA**	**X**	**X**	
National Health Care Foundation Skills Standards Assessment	National Consortium on Health Science & Technical Education	X	X	
NRDA Certification (Dental Assisting)	National Allied Health Registry/National Association for Health Professionals	X	X	
NRDA Certification (Medical Assisting)	National Allied Health Registry/National Association for Health Professionals	X	X	
Nurse Aide	Virginia Board of Nursing	X	X	
Nurse Assisting Examination	**SkillsUSA**	**X**	**X**	
Nursing Assisting Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Practical Nursing Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Practical Nursing Examination	**SkillsUSA**	**X**	**X**	
Therapeutic Services Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Virginia Pharmacy Technician Examination	Virginia Board of Pharmacy	X	X	
MARKETING				
Concepts of Finance Examination	ASK Institute (DECA/MarkED)	X	X	
Concepts of Entrepreneurship and Management Examination	ASK Institute (DECA/MarkED)	X	X	
Fundamental Marketing Concepts	ASK Institute (DECA/MarkED)	X	X	
Lodging Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Lodging Management Program Certification (Levels 1 and/or 2)	American Hotel and Lodging Association (AH&LA)	X	X	
National Professional Certification in Customer Service	National Retail Federation Foundation	X	X	

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Retail Trades Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Retail Management Examination	**National Retail Federation Foundation**	X	X	
Recreation, Amusements, and Attractions Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Sales Certification	National Retail Federation Foundation	X	X	
Travel and Tourism Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
MILITARY SCIENCE				
Armed Services Vocational Aptitude Battery Examination	United States Military Entrance Processing Command	X	X	
JROTC Skills for Success Assessment	**Department of Defense**	**X**	**X**	
TECHNOLOGY EDUCATION				
3D Visualization & Animation Examination	**SkillsUSA**	**X**	**X**	
ADDA Architectural Drafting Examination	American Design Drafting Association	X	X	
ADDA Mechanical Drafting Examination	American Design Drafting Association	X	X	
ADDA Mechanical Drafting Apprentice Examination	**American Design Drafting Association**	**X**	**X**	
ADDA Architectural Drafting Apprentice Examination	**American Design Drafting Association**	**X**	**X**	
AutoCAD Certifications (Pass any one exam)	Brainbench	X	X	
Autodesk Application Certification Program (Pass any one exam)	Autodesk	X	X	
Autodesk Certification Program (Pass any one exam at fundamentals level)	**Autodesk**	**X**	**X**	
Automated Manufacturing Technology Examination	SkillsUSA	X	X	
Architectural Drafting Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Architectural Drafting Examination	SkillsUSA	X	X	
Certified SolidWorks Professional (Pass any one exam)	SolidWorks Corporation	X	X	
Certified SolidWorks Associate Examination	**SolidWorks Corporation**	**X**	**X**	

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		Meets Board of Education Criteria		
Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Electronic Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Electronics Application & Technology Examination	**SkillsUSA**	**X**	**X**	
Engineering Technology Examination	**SkillsUSA**	**X**	**X**	
Manufacturing Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Pre-Engineering Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Pre-Skills Assessment for Mastercam Assessment	Mastercam--Administered by National Occupational Competency Testing Institute (NOCTI)	X	X	
Project Lead the Way End-of-Course Tests (Pass any one end-of-course exam)	**Project Lead The Way**	**X**	**X**	**X**
Robotics Examination	**SkillsUSA**	**X**	**X**	
STARS Certification Examination	Digital Quest, Inc.	X	X	
Technical Drafting Examination	**SkillsUSA**	**X**	**X**	
TRADE AND INDUSTRIAL EDUCATION				
A+ Certification (Pass any one exam from 2009 certification program)	CompTIA	X	X	X
Access Certification	American Culinary Federation, Inc. (ACF)	X	X	
Advertising Design Examination	PrintED Co-brand, SkillsUSA	X	X	
Advertising and Design Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Audio-Radio Production Examination	**SkillsUSA**	**X**	**X**	
Audio-Visual Communications Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Automotive Technician Core Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Automotive Technician Standard Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Automotive Technician Advanced Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Automotive Technician Examination (ASE)–(Pass any one exam from Automobile Technician Test Series)	National Institute for Automotive Service Excellence	X	X	

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Aviation Maintenance (Secondary) Examination	**SkillsUSA**	**X**	**X**	
Basic Installer Exam, Mobile Electronics Certified Professional	Consumer Electronics Association	X	X	
BICSI Registered Installer Certification, Level 1	BICSI (International Telecommunications Association)	X	X	
Broadcasting and Journalism Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Building Construction Occupations Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Building Trades Maintenance Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
CAD Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
CAD/CAM Assessment	National Occupational Competency Testing Institute (NOCTI	X	X	
Cabinetmaking Examination	**SkillsUSA**	**X**	**X**	
Cabinetmaking Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Carpentry Examination	**SkillsUSA**	**X**	**X**	
Carpentry Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Carpentry Level One, National Construction Career Test	National Center for Construction Education & Research (NCCER)	X	X	
Certified Computer Service Technician	Electronics Technicians Association, International (ETA)	X	X	X
Certified Electronics Technician Associate (CET)	Electronics Technicians Association, International (ETA)	X	X	
Certified Satellite Dish Installer	Electronics Technicians Association, International (ETA)	X	X	
CISCO CCNA Academy End-of-Course Examinations (Pass any two end-of-course exams, Levels 1-4)	CISCO Systems	X	X	X
CISCO Certified Networking Associate (Pass any one exam in CCNA certification program)	CISCO Systems	X	X	X
Collision Repair Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	

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Collision Repair and Refinishing Technician (ASE)-(Pass any one exam from Collision Repair & Refinish Test Series)	National Institute for Automotive Service Excellence	X	X	
Collision Repair/Refinishing Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Computer Maintenance Technology Examination	**SkillsUSA**	**X**	**X**	**X**
Computer Networking Fundamentals Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	X
Computer Repair Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	X
CNC Milling and Turning Technology Examination	**SkillsUSA**	**X**	**X**	
Construction Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Construction Masonry-Blocklaying Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Construction Masonry-Bricklaying Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Construction Technology Test	National Center for Constructional Education & Research (NCCER)	X	X	
Computer Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	X
CompTIA Strata Fundamentals of IT Technology Certification	**Certiport**	**X**	**X**	**X**
Copper Based Cabling Certification	RBT Systems, Inc.	X	X	
Core: Introductory Craft Skills, National Construction Career Test	National Center For Construction Education & Research (NCCER)	X	X	
Cosmetology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Cosmetology Examination	**SkillsUSA**	**X**	**X**	
Criminal Justice Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Criminal Justice Examination/CSI	**SkillsUSA**	**X**	**X**	
Customer Service Examination	**SkillsUSA**	**X**	**X**	
Data Cabling Installer Certification (DCIC)	Electronics Technicians Association, International (ETA)	X	X	
Design and PreConstruction Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	

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Name of Credential	Issuing Organization	Student Selected Verified Credit	Career and Technical Education Seal	Advanced Mathematics and Technology Seal
Diesel Engine Mechanics Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Drafter Certification	American Design Drafting Association	X	X	
Electrical Construction Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Electrical Occupations Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Electrical, National Construction Career Test	National Center For Construction Education & Research (NCCER)	X	X	
Electronics Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Electronics Module: DC (EM1)	Electronics Technicians Association, International (ETA)	X	X	
Electronics Module: AC (EM2)	Electronics Technicians Association, International (ETA)	X	X	
Electronics Module: Analog (EM3)	Electronics Technicians Association, International (ETA)	X	X	
Electronics Module: DC (EM4)	Electronics Technicians Association, International (ETA)	X	X	
Electronics Module: Comprehensive (EMS)	Electronics Technicians Association, International (ETA)	X	X	
EPA Technician Certification (Levels I, II, or III)	Environmental Protection Agency (Authorized Entity)	X	X	
Fiber Optic Network Cabling Certification	RBT Systems, Inc.	X	X	
Fiber Optics Installer Certification	Electronics Technicians Association, International (ETA)	X	X	
Firefighter I Certification	Virginia Department of Fire Programs	X	X	
Firefighter II Certification	Virginia Department of Fire Programs	X	X	
General Drafting and Design Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Graphic Communications Examination	PrintED Co-brand, SkillsUSA	X	X	
Graphic Communication Technology Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Graymark Cabling Installation Certification	Graymark International	X	X	
Heating, Electrical, Air Conditioning Technology (HEAT) Examination (Pass any one exam)	HVAC Excellence	X	X	

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
January 13, 2011 (Proposed)				
		Meets Board of Education Criteria		
Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Heating, Ventilation, Air Conditioning (HVAC) Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Heating, Ventilation, Air Conditioning & Refrigeration (HVAC/R) Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Heavy Equipment Operations Level One	National Center For Construction Education & Research (NCCER)	X	X	
HVAC, National Construction Career Test	National Center For Construction Education & Research (NCCER)	X	X	
HVAC Excellence Certification Program (Pass any one exam in this program)	HVAC Excellence	X	X	
Industrial Maintenance Mechanic Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Industrial Electronics Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Installer (or Service) Core Certification (HVAC)	North American Technician Excellence, Inc. (NATE)	X	X	
Internetworking Examination	**SkillsUSA**	**X**	**X**	
IT Essentials 1 Examination (PC Hardware and Software)	Cisco Systems	X	X	X
MSSC Certified Production Technician (CPT) Program (Pass any one CPT examination)	Manufacturing Skill Standards Council (MSSC)	X	X	
Machining Skills--Level I (Pass any one Machining (Level 1) examination with performance component)	National Institute for Metalworking Skills (NIMS)	X	X	
Major Appliance Repair Examination	**SkillsUSA**	**X**	**X**	
Marine Service Technology Examination	**SkillsUSA**	**X**	**X**	
Masonry Examination	**SkillsUSA**	**X**	**X**	
Maintenance Operations Assessment	**National Occupational Competency Testing Institute (NOCTI)**	**X**	**X**	
Masonry Level One, National Construction Career Test	National Center For Construction Education & Research (NCCER)	X	X	
Motorcycle Service Technology Examination	**SkillsUSA**	**X**	**X**	
National Automotive Student Skills Standards Assessments (Pass any one exam from automotive service, automotive refinishing, collision repair, or diesel engine areas)	ASE-AYES-SkillsUSA Co-brand, SkillsUSA	X	X	
Nail Care Examination	**SkillsUSA**	**X**	**X**	

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
January 13, 2011 (Proposed)				
		Meets Board of Education Criteria		
Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Performing Arts Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Photography Examination	SkillsUSA	X	X	
Plumbing Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Plumbing Examination	**SkillsUSA**	**X**	**X**	
Precision Machining Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Protective Services Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
PrintED Certification Program (Pass any one exam)	Graphic Arts Education and Research Foundation	X	X	
Residential Wiring Examination	**SkillsUSA**	**X**	**X**	
Residential Air-Conditioning and Heating Certification	Air Conditioning and Refrigeration Institute	X	X	
Residential Construction Academy Examination (Pass any one test from available examinations)	Home Builders Institute (Examinations are administered by National Occupational Competency Testing Institute (NOCTI)	X	X	
SENSE Training Program Certification (Level 1, Entry-Level Welder)	American Welding Society (AWS)	X	X	
Screen Printing Examination	PrintED Co-brand, SkillsUSA	X	X	
SkillsUSA Workforce Ready System (Pass any one test from available examinations)	SkillsUSA	X	X	
Student Electronics Technician Certification (SET)	Electronics Technicians Association, International (ETA)	X	X	
Telecommunications Electronics Technician Certification	Electronics Technicians Association, International (ETA)	X	X	
Television Broadcasting Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Television Video Production Examination	**SkillsUSA**	**X**	**X**	
Technical Drafting Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Visual Arts Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Visual Communications Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Welding Examination	**SkillsUSA**	**X**	**X**	

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
January 13, 2011 (Proposed)				
		Meets Board of Education Criteria		
Name of Credential	**Issuing Organization**	**Student Selected Verified Credit**	**Career and Technical Education Seal**	**Advanced Mathematics and Technology Seal**
Welding Assessment	National Occupational Competency Testing Institute (NOCTI)	X	X	
Welding, National Construction Career Test	National Center For Construction Education & Research (NCCER)	X	X	
LICENSE				
Barbers	Board of Barbers and Cosmetology (Virginia Department of Professional and Occupational Regulation)	X	X	
Cosmetology	Board of Barbers and Cosmetology (Virginia Department of Professional and Occupational Regulation)	X	X	
Licensed Practical Nurse	Virginia Board of Nursing	X	X	
Nail Technician	Board of Barbers and Cosmetology (Virginia Department of Professional and Occupational Regulation)	X	X	
Pilot's License-Airplane Single Engine Land	Federal Aviation Administration	X	X	
Real Estate Salesperson	Virginia Real Estate Board (Dept. of Professional & Occupational Regulation)	X	X	
EXAMINATION				
Advanced Placement Computer Science A	The College Board	Passing Score = 3		Passing Score = 3
College Level Examination Program (CLEP): Information Systems and Computer Applications	The College Board	Passing Score = 52		Passing Score = 52
International Baccalaureate Computer Science (Standard Level)	The International Baccalaureate Organization	Passing Score = 3		Passing Score = 3
International Baccalaureate Computer Science (Higher Level)	The International Baccalaureate Organization	Passing Score = 3		Passing Score = 3
International Baccalaureate Information Technology in a Global Society (IB6613) (Standard Level)	The International Baccalaureate Organization	Passing Score = 3		Passing Score = 3
Deletions				
Fundamentals of Wireless LANs Examination	**Cisco Systems**			
Java Programming Examination	**Cisco Systems**			

Board of Education Approved Industry Certifications, Occupational Competency Assessments, and Licensure				
January 13, 2011 (Proposed)				
		Meets Board of Education Criteria		
Name of Credential	Issuing Organization	Student Selected Verified Credit	Career and Technical Education Seal	Advanced Mathematics and Technology Seal
Microsoft Certified Application Specialist (MCAS)- (Pass any one MCAS exam)	Microsoft			
Fundamentals of Unix Examination	Cisco Systems			
A+ Certification (Pass any one exam from 2006 certification program)	CompTIA			
Basic Principles of Construction: Residential Construction Academy Examination	Delmar Thomson Learning/Home Builders Institute			
Carpentry: Residential Construction Academy Examination	Delmar Thomson Learning/Home Builders Institute			
Electrical Principles: Residential Construction Academy Examination	Delmar Thomson Learning/Home Builders Institute			
House Wiring: Residential Construction Academy Examination	Delmar Thomson Learning/Home Builders Institute			
HVAC: Residential Construction Academy Examination	Delmar Thomson Learning/Home Builders Institute			
IT Essentials 2 Examination (Network Operating Systems)	Cisco Systems			
Plumbing: Residential Construction Academy Examination	Delmar Thomson Learning/Home Builders Institute			
Advanced Placement Computer Science AB	The College Board			
NOTE: New industry certification credentials and occupational competency assessments are printed in bold.				

Board of Education Agenda Item

Item: O. **Date:** January 13, 2011

Topic: First Review of Revisions to Criteria for the *Virginia Index of Performance*, Virginia's Incentive Program to Encourage and Recognize Outstanding Achievement (HB 1172/SB 145)

Presenter: Dr. Deborah L. Jonas, Executive Director for Research and Strategic Planning

Telephone Number: 804-225-2067 **E-Mail Address:** deborah.jonas@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

_X_ Board review required by
- _X_ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

___ Action requested at this meeting

_X_ Action requested at future meeting: February 17, 2011

Previous Review/Action:

_X_ No previous board review/action

____ Previous review/action

Background Information:
The *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8VAC 20-131-325) authorize the Board of Education to establish guidelines for recognizing and rewarding school accountability performance.

In July 2007, the Board of Education established the *Virginia Index of Performance (VIP)* incentive program to recognize and reward fully accredited schools and school divisions that make significant progress toward achieving specific measurable goals and objectives established by the Board of Education and supported by the Governor.

The Virginia Standards of Accreditation (SOA) recognize student achievement as a fundamental component in determining the accreditation status of Virginia's public schools. For more than a decade in Virginia, student performance has been measured by achievement on the Standards of Learning (SOL) tests or additional assessments approved by the Board of Education. Schools achieve fully accredited status primarily by meeting pass rates established for all students in four core academic content areas. Beginning in 2011-2012, schools with a graduating class must also meet certain graduation benchmarks in order to be fully accredited.

From its inception, the VIP program was intended to provide schools and divisions with incentives to strive for higher levels of achievement for all children. VIP was designed to measure the extent to which students are progressing towards advanced proficiency levels in reading, mathematics, science, and history and social science, recognize achievement of other key indicators of school success, and to encourage schools' and divisions' efforts to provide Virginia's students with excellent educational opportunities. Schools and school divisions become eligible for VIP awards by meeting applicable state and federal achievement benchmarks (school accreditation and adequate yearly progress or AYP) for two consecutive years.

Summary of Major Elements

In 2010, HB 1172 and SB 145 were passed and enrolled into the *Code of Virginia*. The bill codified provisions in the Standards of Accreditation § 22.1-253.13:9 that established the VIP program. Additionally, the legislation directed the Board to include in its guidelines for the VIP incentive program performance objectives and measures that promote student achievement in science, technology, engineering, and mathematics (STEM).

The current VIP award requirements encourage school divisions to increase the percent of students earning advanced proficiency on state mathematics and science assessments, and provide incentives for schools to meet additional Virginia performance objectives.

The proposed revisions were developed to retain the previously established program objectives while adding components that provide additional incentives for school divisions and schools to promote student achievement in the STEM areas and college and career readiness in general. The proposed revisions also make changes to the awards. Specifically, the proposed revisions would rename the VIP Competence to Excellence Award as the Distinguished Achievement Award, and eliminate the Rising Star award.

The proposed revisions would retain the approach to determining VIP awards adopted by the Board in 2009. Based on the approach adopted in 2009, the VIP program currently uses a weighted index to calculate a VIP achievement index based on SOL test results in each content area (English, mathematics, science, and history and social science), and provides opportunities for schools and school divisions to apply additional or "bonus" points to the content area indices by meeting additional VIP indicators.

The VIP Base Index weights the proficiency levels on statewide assessments using the following weights:

- Advanced proficient: 100
- Proficient: 75
- Basic: 25
- Fail: 0

The weighted index is applied to all assessments taken in the school or division. Separate base scores are calculated for each content area—English, mathematics, science, and history and social science—using the following formula:

$$\frac{(\#\text{ Advanced Proficient scores} \times 100) + (\#\text{ Proficient scores} \times 75) + (\#\text{ Basic scores} \times 25)}{\text{Total tests administered}}$$

Schools and divisions may earn additional VIP bonus points based on criteria established by the Board. When earned, they can be added to a school or division's VIP index points in one or more content areas to meet award criteria.

Table 1 shows the proposed criteria, additional indicators for the revised VIP program, and defines the proposed requirements for earning each proposed VIP award. Items marked with an asterisk (*) are STEM indicators that are part of the VIP program; modified indicators are shown in italics; new indicators are identified with italics and underlined.

Table 1: Proposed Criteria, Indicators, and Award Requirements, Virginia Index of Performance

VIP Criteria	VIP Awards		
	Board of Education Distinguished Achievement Award	**Board of Education Excellence Award**	**Governor's Award for Educational Excellence**
Eligibility and VIP Index			
A. Eligibility – Schools must have met accreditation and AYP benchmarks for two consecutive years; School divisions must have made AYP for two consecutive years	All Schools and School Divisions	All Schools and School Divisions	All Schools and School Divisions
B. Number of index points on the weighted VIP index, using the established weightings in each of the following content areas: a) English/reading (combined reading and writing); b) mathematics*; c) science*; and d) history and social science.	At least 75 in each content area, including additional index points where applicable	At least 80 in each content area, including additional index points where applicable	At least 80 in each content area
C. <u>No significant testing irregularities were verified during the applicable school year</u>	*<u>All Schools and School Divisions</u>*	*<u>All Schools and School Divisions</u>*	*<u>All Schools and School Divisions</u>*
Additional index points available, and award threshold if applicable			
For Elementary Schools			
D. Students passing the Grade 3 state reading assessment (percent passing increases annually, state goal 95%)	3	3	At least 95%
E. Students passing the Grade 5 state reading and writing assessments (percent passing increases annually, state goal 95%)	1	1	Increases annually or is at least 95%
F. School offers foreign language instruction in the elementary grades	1	1	*<u>Yes</u>*
For Middle Schools			
G. Students enrolled in Algebra I by Grade 8* (percent participating increases annually, state goal 50%)	2	2	*At least 50%*

VIP Criteria	VIP Awards		
	Board of Education Distinguished Achievement Award	**Board of Education Excellence Award**	**Governor's Award for Educational Excellence**
Additional index points available, and award threshold if applicable			
H. Students passing the Grade 8 state reading and writing assessments (percent passing increases annually, state goal 95%)	1	1	Increases annually or is at least 95%
For High Schools			
I. High school students enrolled in one or more AP, IB, or dual enrollment courses (increases annually, state goal 30%)	1	1	*At least 30%*
J. High school students earning career and technical industry certifications, state licenses, or successful national occupational assessment credentials (number or percent increases annually) *OR* *Students who participate in advanced coursework in the STEM areas, including Advanced Placement courses, International Baccalaureate courses, and dual enrollment courses* (Percent increases annually).*	1	1	Number or percent of CTE credentials increases annually *OR* *The percent of students participating in advanced coursework in STEM areas increases annually*
K. Students who graduate high school in four, five, or six years with a standard or advanced studies diploma (based on the federal graduation indicator; percent increases annually, state goal 85%)	*At least 85% or increases annually*	*At least 85%*	*At least 85%*
L. High school graduates earning an Advanced Studies Diploma out of the total number of Board of Education-approved diplomas awarded (increases annually, state goal 60%)	1	1	*At least 60%*
M. Students in each subgroup who graduate from high school with a Standard or Advanced Studies Diploma (increases annually, state goal 85%)	1	1	*Increases annually, or is at least 85%*
N. Students who graduate from high school having taken Calculus, Chemistry, and Physics (increases annually)*	1	1	*Increases annually*

VIP Criteria	VIP Awards		
	Board of Education Distinguished Achievement Award	**Board of Education Excellence Award**	**Governor's Award for Educational Excellence**
Additional index points available, and award threshold if applicable			
O. <u>Students who graduate from high school having earned advanced proficient scores on each of the state end-of-course assessments in English reading, English writing, and Algebra II (increases annually)</u>*	1	1	*<u>Increases annually</u>*
P. Students who drop out of high school (10% or less, based on the four-year dropout rate)	10% or less	10% or less	10% or less
For All Schools and School Divisions			
Q. Increase participation in the Governor's Nutrition and Physical Activity Scorecard Awards program (schools must earn an award; divisions increase program participation)	1	1	1
R. Increase the percentage of students in each subgroup earning higher levels of proficiency on state assessments (increase required for subgroups used to make federal accountability determinations in mathematics and reading)	1	1	1
For School Divisions Only			
S. Eligible schools participate in the Virginia Preschool Initiative for at-risk four-year-olds.	1	1	Yes
T. *<u>Students in the division enroll in Board of Education-approved Governor's STEM Academies or a Regional Academic Year Governor's School with a focus on STEM</u>**	1	1	*<u>Yes</u>*
U. Schools offer foreign language instruction in the elementary grades (number increases annually, state goal 100%	1	1	*Increases annually or equals 100%*
V. Increase the percentage of schools that are fully accredited and making Adequate Yearly Progress (annual increase, state goal 100%)	1	1	1

*Indicates STEM components of the VIP program

NOTE: Items listed in *italics* are proposed modifications from the current VIP program; items listed in *<u>italics and underlined</u>* are proposed changes that are new to the VIP program.

Superintendent's Recommendation:
The Superintendent of Public Instruction recommends that the Board of Education accept for first review the proposed revisions to the criteria to earn VIP awards.

Impact on Resources:
The Department can absorb the costs to adjust the awards criteria for the VIP program.

Timetable for Further Review/Action:
The Department intends to return to the Board with final recommendations in February 2011.

Board of Education Agenda Item

Item: P. **Date:** January 13, 2011

Topic: First Review of a Recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to Approve the Criteria for Identifying Alternative Routes to Teacher Licensure as "Low Performing" or "At Risk of Becoming Low Performing" Required by Title II of the Higher Education Act (HEA)

Presenter: Mrs. Patty S. Pitts, Assistant Superintendent for Teacher Education and Licensure

Telephone Number: (804) 371-2522 **E-Mail Address:** Patty.Pitts@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

_X_ Board review required by
- _X_ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

___ Action requested at this meeting _X_ Action requested at future meeting: February 17, 2011

Previous Review/Action:

____ No previous board review/action

____ Previous review/action
- date _____
- action _____

Background Information:

In October 1998, the U.S. Congress enacted Title II provisions to the Higher Education Act (HEA) authorizing federal grant programs to improve the recruitment, retention, preparation, and support of new teachers. Title II also included accountability measures in the form of reporting requirements for institutions and states on teacher preparation and licensing. Section 207 of Title II reporting requirements mandates that the U.S. Secretary of Education collect data on standards for teacher certification and licensure, as well as data on the performance of teacher preparation programs. The law requires the Secretary to use these data in submitting its annual report on the quality of teacher preparation to Congress. In addition, states were required to develop criteria, procedures, and processes from which institutions would be identified as "low performing" or "at-risk of becoming low-

performing." The following statement is an excerpt from the Title II "Reference and Reporting Guide for Preparing State and Institutional Reports on the Quality of Teacher Preparation," April 19, 2000:

> *To receive funds under this act, a state, not later than two years after the date of Enactment of the Higher Education Amendments of 1998, shall have in place a procedure to identify, and assist, through the provision of technical assistance, low-performing programs of teacher preparation within institutions of higher education. Such state shall provide the U.S. Secretary an annual list of such low-performing institutions that includes an identification of those institutions at-risk of being placed on such list. Such levels of performance shall be determined solely by the state and may include criteria based upon information collected pursuant to this title. Such assessment shall be described in the report under section 207(b).*

On September 26, 2001, the Board of Education approved Virginia's definitions for "low-performing" and "at-risk of becoming low-performing" institutions of higher education with teacher preparation programs, beginning with approved program reviews on July 1, 2003. The *Regulations Governing the Review and Approval of Education Programs in Virginia*, effective September 21, 2007, separated the accreditation and program approval processes; therefore, revisions were needed in Virginia's definitions for "low-performing" and "at-risk of becoming low-performing institutions." On November 20, 2008, the Board of Education approved revisions to the definitions to align with the accrediting bodies' designations.

Title II HEA, was reauthorized on August 14, 2008. Section 205 of Title II of the *Higher Education Opportunity Act* mandates that the Department of Education collect data on state assessments, other requirements, and standards for teacher certification and licensure, as well as data on the performance of teacher preparation programs. The law requires the Secretary to use these data in submitting an annual report on the quality of teacher preparation to the Congress.

New reporting mandates subsequently approved require states to report criteria identifying alternative routes to teacher licensure as "low performing" or "at risk of becoming low performing," beginning in October 2011. The Career Switcher Alternate Route to Licensure Program is defined as the alternative route to licensure for Virginia.

The approval process requires that Career Switcher Programs must be certified by the Virginia Department of Education, verifying that the program meets all requirements set forth in the *Licensure Regulations for School Personnel.* Approved education programs offered at Virginia colleges and universities must have national accreditation or be accredited by a process approved by the Board of Education as stipulated in the *Regulations Governing the Review and Approval of Education Programs in Virginia*. The criteria to identify programs as "at risk of becoming low-performing" or "low-performing" have been developed to address the specific requirements and the approval processes of the programs.

Career Switcher Alternate Route to Licensure Program

The Career Switcher Alternate Route to Licensure Program was created in response to a resolution of the 1999 General Assembly. The General Assembly requested the Board of Education to study alternative licensure programs and models in other states and develop an alternative pathway to teaching for individuals who have not completed a teacher preparation curriculum but have considerable life experiences, career achievements, and academic backgrounds that are relevant for teaching in pre-K through grade 12. During the 2000 session of the General Assembly, funds were appropriated to develop and pilot the first Career Switcher Program. In the summer of 2000, the Board of Education implemented the first Career Switcher Program for military personnel who were interested in becoming teachers. The program was later expanded to individuals in other professions interested in pursuing a career in education.

Currently, there are six Career Switcher Programs offered by the following program providers: George Mason University, Old Dominion University, Regent University, Shenandoah University, Virginia Community College System, and the Western Virginia Public Education Consortium.

The requirements for the alternate Career Switcher Program are set forth in the *Licensure Regulations for School Personnel*. This alternate route does not apply to individuals seeking a license with endorsements in special education. Programs are required to meet the requirements outlined in the regulations to be certified by the Department of Education. Prerequisites to applying for the program include: an application process; a baccalaureate degree from a regionally accredited college or university; the completion of requirements for an endorsement in a teaching area or the equivalent through verifiable experience or academic study; at least five years of full-time work experience or its equivalent; and Virginia qualifying scores on the professional teacher's assessments as prescribed by the Board of Education.

The programs, including partnerships and matrices to ensure alignment with regulations, were reviewed and certified by the Department of Education in 2008. The programs have a 100 percent pass rate on licensure assessments as individuals are required to meet these qualifying scores before admission into the program.

Summary of Major Elements

In order to comply with the new Title II reporting requirements, Virginia must define criteria to identify alternative routes to teacher licensure as "low performing" or "at risk of becoming low performing." On November 15, 2010, the Advisory Board on Teacher Education and Licensure approved a recommendation to the Board of Education to approve the following criteria for identifying alternative routes to teacher licensure as "low performing" or "at risk of becoming low performing" required by Title II of the Higher Education Act.

- Programs shall be reviewed for compliance with Board of Education regulations and certified every seven years. [If regulations are revised within the seven-year period, the program must align the program with the new regulations.] For program certification, the following requirements must be documented:
    - alignment of program requirements and competencies with the regulations;

  - capacity to offer each of the components of the program; and
  - structured and integrated field experiences in diverse school settings as specified in the regulations.

- Programs shall be required to submit the accountability measurement of partnership and collaborations based on PreK-12 school needs for review by the Department of Education biennially.

- Programs must submit candidate progress and performance on prescribed Board of Education licensure assessments. [All candidates must meet all prescribed licensure assessments prior to admission into the program; therefore, the requirement is that 100 percent of program candidates pass licensure assessments prior to admission to the program.]

- Programs must submit evidence of employer job satisfaction with candidates completing the program. The indicator of achievement of this standard shall include documentation that the Career Switcher Program has two years of evidence regarding candidate performance based on employer surveys.

An alternative route program (Career Switcher Program) shall be designated "at risk of becoming low performing" if the program is reviewed and found to meet certification requirements but has weaknesses, excluding the mandatory program entry requirements. The program provider must submit evidence of compliance within one year of notification of this finding.

An alternative route program that does not correct the weaknesses within one year of receiving the designation of "at risk of becoming low performing" will be designated as "low performing." If a program fails to maintain certification, enrolled candidates shall be permitted to complete their programs of study. The Career Switcher Program shall not be allowed to admit new candidates. Candidates shall be notified of program approval status.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education accept for first review the recommendation from the Advisory Board on Teacher Education and Licensure to approve the criteria for identifying alternative routes to teacher licensure as "low performing" or "at risk of becoming low performing" required by Title II of the Higher Education Act.

Impact on Resources:

There is a minimal impact on resources.

Timetable for Further Review/Action:

This item will be presented to the Board of Education for final review on February 17, 2011.

Board of Education Agenda Item

Item: Q. **Date:** January 13, 2011

Topic: First Review of Proposed Revisions to *Virginia School Bus Specifications*

Presenter: Mr. Kent Dickey, Deputy Superintendent for Finance and Operations

Telephone Number: (804) 225-2025 **E-Mail Address: Kent.Dickey@doe.virginia.gov**

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by
- __X__ State or federal law or regulation
- ____ Board of Education regulation
- ____ Other: _____

___ Action requested at this meeting __X__ Action requested at future meeting: March 24, 2011

Previous Review/Action:

__X__ No previous board review/action

____ Previous review/action
- date _____
- action _____

Background Information:

The *Regulations Governing Pupil Transportation*, as approved in January 2004, deleted the sections that detailed the technical specifications for school buses and made them a separate document (*Virginia School Bus Specifications*) that requires periodic approval by the Board of Education. This permits the Department of Education to revise and update the bus specifications more efficiently than would be permitted under the process for revising regulations. It also permits the specifications to be updated more frequently to recognize new or emerging practices and technology. The *Virginia School Bus Specifications* are presented to the Board of Education for approval as necessary. The last revisions to the specifications were approved by the Board on September 17, 2009. The design and manufacture of school buses and school activity buses must conform to the specifications in effect on the date of procurement by school divisions.

Summary of Major Elements:

The proposed changes to the specifications were developed in consultation with the Department's Specifications Committee, which is comprised of pupil transportation representatives from school divisions across the state, and are intended to improve safety and operational effectiveness. Attachment A is a summary listing of the proposed changes. The full specifications (Attachment B) have been

updated and revised to increase the safety and efficiency of various bus components and equipment, to incorporate various recommendations from the latest national specifications document, and for clarification.

None of the proposed changes represent significant deviations from standard industry practices. All of the recommended specifications comply with the safety requirements of the National Highway Traffic Safety Administration. Various changes incorporate key elements from the *2010 National School Transportation Specifications and Procedures*, a national specifications document released last year. Other changes are made for consistency with requirements in the *Regulations Governing Pupil Transportation* and the *Code of Virginia*.

Proposed additions to the specifications are underlined and proposed deletions are indicated by strikethroughs. The proposed revisions to the specifications will be posted on the Department's Web site for 30 days to provide school divisions and other interested parties with the opportunity to review them and offer comments. The comments will be compiled and presented to the Board at its meeting on March 24, 2011, and will be considered in the final version of the specifications presented to the Board for approval at the March meeting.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education accept the proposed *Virginia School Bus Specifications* for first review.

Impact on Resources:

There is no impact on Department resources to initiate these specifications. It is not anticipated that the proposed changes to the specifications will impose significant costs or administrative burdens on school divisions.

Timetable for Further Review/Action:

The proposed revisions to the specifications will be posted on the Department's Web site for 30 days to provide school divisions and other interested parties with the opportunity to review them and offer comments. The comments will be compiled and presented to the Board at its meeting on March 24, 2011, and will be considered in the final version of the specifications presented to the Board for approval at the March meeting.

Attachment A

Proposed Changes to Virginia School Bus Specifications, January 2011		
Current Item	Proposed change	Rationale
Page 1 Section 1	Add "body and"	Consistency with pg. 2, General Information
Page 2 Section 1 add Item 4	Certification	addition
Page 4 Section 1 "identification"	Strike word "identification"	Activity buses are to have identification per regulation
Page 1 Section 2 Alternator Item 2	Add "gear"	Adopt National Specifications (see footnote)
Page 2 Section 2 Item 4 A	Strike "24" add "25"	Adopt National Specifications
Page 2 Section 2 Item 4 B, batteries	Add language	Adopt National Specifications
Page 3 Section 2 Front bumper	Change wording	Adopt National Specifications
Page 3-4 Section 2, Item 6A-C	Strike language	Adopt National Specifications
Page 6 Section 2, Item 12 B	Change wording	Adopt National Specifications
Page 6 Section 2, Item 13 A	Change wording	Clarifications/National Standards
Page 6 Section 2, Item 13 B and F-H	Strike item	Language including 13F/Adopt National Specifications
Page 6 Section 2 Item 13 F	Strike item	Conflicts with items E-H
Page 6 Section 2 Items 13 F-H	Additions	Adopt National Specifications
Page 7 Section 2 New Item 15 Fire Suppression Systems	Add System language	Adopt National Specifications
Page 8 Section 2 Item 18 A	Strike "SBMI" and change to "SBMTC"	Adopt National Specifications
Page 9 Section 2 Item 20 A7	Strike "Upper" change to "High"	Adopt National Specifications
Page 10 Section 2 Item 24C	Delete	Adopt National Specifications
Page 12 Section 2 Item 30 A and C Towing attachment points	Add words "Front and/or"; Add additional language from National Standards	Adopt National Specifications
Page 13 Section 2 Item 31 Transmission	Add item 31 C	Adopt National Specifications
Page 13 Section 2 Item 35B	Delete	Adopt National Specifications
Page 15 Section 2 Item 39G 1 and G 3 "Retro Reflective tape"	Strike "1 3/4 inch" and change to "1 to 2 inches"	Adopt National Specifications
Page 20 Section 2 Item 44 A8 "Doors"	Add language	Clarification
Page 21 Section 2 Item 44 B4 "Doors"	Strike "240" add "350"	Adopt National Specifications
Page 22 Section 2 Item 44 B10 "emergency door"	Add language	Adopt National Specifications
Page 26 Section 2 Item 46 A 3 d "emergency exits"	Add item 3 d	Adopt National Specifications
Page 27 Section 2 Item 49	Change title	Adopt National Specifications
Page 27 Section 2 Item 49 F	Add language	Adopt National Specifications

Attachment A

Proposed Changes to Virginia School Bus Specifications, January 2011		
Current Item	Proposed change	Rationale
Page 28 – Section 2 after Item 49K	Add language on Passenger Compartment A/C	Adopt National Specifications
Page 32 Item 52 "Inside Height"	Add language, Delete B	Adopt National Specifications
Page 37 Section 2 Item 10g	Strike "64" change to "65"	Consistency w/bus size
Page 37-38 Section 2 Item 56 # 11	Strike Items a-d and change language items b-i	Adopt National Specifications
Page 41 Section 2 Item 65 A	Strike "14" and change to "15"; Add "cushion"	Adopt National Specifications
Page 42 Section 2 Item 65 D	Add language	Adopt National Specifications
Page 42 Section 2 Item 65 I	Delete/Add language	Adopt National Specifications
Page 43 Section 2 Item 66 C	Add language	Adopt National Specifications
Page 45 Section 2 Item 70	Delete item	Included on page 6 item 13
Page 45 Section 2 Item 71	Add word "optional"	Adopt National Specifications
Page 45 Section 2 Item 72 "Undercoating"	Deletions and additions	Adopt National Specifications
Page 46 Section 2 Item 73 C	Strike item C	Included in item 49
Page 47 Section 2 Item 76 C	Strike "or have full tinted glass"	Conflicts with state vehicle code
Page 47 Section 2 Item 76 C and E	Add language	Code of Virginia
Page 51, Section 2, Item 80 F	Remove "shall"; replace with "may only"; Add Note: "Cruise control option is for activity buses only; not permitted to be on yellow school buses."	Option
Page 55 Section 2 Item 88 C	Delete	Same as Item 89
Page 59 Diagram 1 Item N	Change item N location	Accuracy
Page 59 Diagram 1 Item M	Add to diagram	Accuracy
Page 60 Diagram 2 Item N	Add language	Clarity
Page 61 Addendum	Strike all content	Included in item 49
Page 62 Type A chart Items 1 and 3	Delete "extinguisher" add "suppression"	Consistency with language with item 12B page 6

NOTE: "National Specifications" refers to the *2010 National School Transportation Specifications and Procedures*.

Virginia School Bus Specifications

Section 1
Notice/General Information

These Specifications define certain, but not all, components required on a school bus (body and chassis) purchased by Virginia public school divisions.

Any variation from the Specifications, in the form of additional equipment or changes in style of equipment, without prior approval of the Pupil Transportation Service, Department of Education, is prohibited.

The responsibility for compliance with these school bus Specifications rests with dealers and manufacturers. If any dealers or manufacturers sell school bus vehicles that do not conform to any or all of these Specifications, a general notice will be sent to all school divisions advising that equipment supplied by such dealer or manufacturer will be disapproved for school transportation until further notice. A copy of the notice will be sent to the dealer or manufacturer and will remain in effect until full compliance by the dealer or manufacturer is assured.

Virginia School Bus Specifications
Proposed Revisions, January 2011

General Information

1. All public school buses (bodies and chassis) and school activity buses used to transport children to and from school or school-related events purchased, leased or contracted for by any public school board in Virginia, *on or after the effective* date of this document, as specified in 8VAC20-70-460, shall:

   a. Meet or exceed the minimum requirements of these Specifications;

   b. Meet all applicable Federal Motor Vehicle Safety Standards; and,

   c. Meet or exceed the current National School Transportation Specifications and Procedures (also referred to herein as the National Specifications) except when in conflict with the requirements herein. In such cases, the requirements specified in this document shall prevail.

2. The requirements specified herein are the minimum requirements for school buses in Virginia. The date used to determine the applicability of these Specifications shall be defined as the date the vendor receives the purchase order or signs a valid sales contract with the purchaser.

3. Any variation from the Specifications, in the form of additional equipment or changes in style of equipment, without prior approval of the Department of Education (DOE), is prohibited.

4. DOE may request the school bus (body and chassis) manufacturer to certify that its product meets these minimum standards on items which are not covered by FMVSS certification requirements of *49 CFR, Part 567, Certification.*

Virginia School Bus Specifications
Proposed Revisions, January 2011

SCHOOL BUS DEFINITIONS

TYPE A:

Type "A" school bus is a conversion bus constructed utilizing a cutaway front-section vehicle with a left side driver's door. This definition includes two classifications: Type A1, with Gross Vehicle Weight Rating (GVWR) 14,500 pounds or less; and Type A2 with a GVWR greater than 14,500 pounds and less than or equal to 21,500 pounds.

TYPE B:

Type "B" school bus is constructed utilizing a body on a stripped chassis. The entrance door is behind the front wheels. This definition includes two classifications: Type B1, with a GVWR of 10,000 pounds or less, designed for carrying more than 10 persons and Type B2, with a GVWR greater than 10,000 pounds.

TYPE C:

Type "C"("Conventional") school bus is a body installed upon a flat-back cowl chassis with a hood and fenders. This definition includes two classifications: Type C1, with a GVWR range of 17,500 pounds and a design seating capacity range from 16 to 30 persons; and Type C2 with a GVWR of more than 21,500 pounds, designed for carrying more than 30 persons. The engine is in front of the windshield and the entrance door is behind the front wheels. Both Type C1 and Type C2 must be equipped with dual rear tires.

TYPE D:

Type "D" ("Transit") school bus means a bus with a body constructed using a stripped chassis. The entrance door is ahead of the front wheels. The bus is also known as a rear engine or front engine transit style school bus.

Virginia School Bus Specifications
Proposed Revisions, January 2011

School Activity Bus

"Multifunction School Activity Bus (MFSAB)"(school activity bus) means a school bus whose purposes do not include transporting students to and from home or school bus stops, as defined in 49 CFR 571.3. This subcategory of school bus meets all FMVSS for school buses except the traffic control devices, ~~identification~~, color, use of cruise control, and seating requirements (see item 80).

Section 2

Virginia School Bus Specifications

SPECIFICATIONS FOR SCHOOL BUSES

THE BUS CHASSIS

1. Air Cleaner.

A. The engine intake air cleaner system shall be furnished and properly installed by the chassis manufacturer to meet the engine manufacturer's specifications.

B. An air cleaner restriction indicator shall be furnished and installed by chassis manufacturer.

2. Alternator.

A. All buses shall be equipped with a heavy duty truck or bus type alternator having a minimum output rating of 130 amperes for Type A buses, and 160 amperes for Type B and above**,** alternator shall be capable of producing a minimum of 50 percent of its maximum rated output at the engine manufacturer's recommended idle speed.

B. Buses equipped with electrically powered wheelchair lift, air conditioning or other accessories may be equipped with a device that monitors the electrical system voltage and advances the engine idle speed when the voltage drops to, or below, a pre-set level.

C. Belt drive shall be capable of handling the rated capacity of the alternator with no detrimental effect on other driven components. Direct/gear-drive alternator is permissible in lieu of belt drive.

3. Axles.

A. The front and rear axle and suspension systems shall have a gross axle weight rating at ground commensurate with the respective front and rear weight loads that will be imposed by the bus.

B. Rear axle shall be single speed, full-floating type.

4. Battery.

A. The storage batteries shall have minimum cold cranking capacity rating (cold cranking amps) equal to the cranking current required for 30 seconds at 0 degrees Fahrenheit and a minimum reserve capacity rating of 120

minutes at ~~24~~ 25 amps. Higher capacities may be required, depending upon optional equipment and local environmental conditions.

B. Batteries shall be mounted in a slide out tray on the left side of the body in a compartment designed for storage batteries. When in the stored position, the tray shall be retained by a securing mechanism capable of holding the tray [with battery(ies)] in position when subjected to a 5g load from any direction. The battery compartment door or cover if separate from the tray shall be hinged at the front or top. It shall be secured by a positive operated latching system or other type fastener. The door may be an integral part of the battery slide tray. The door or cover must fit tightly to the body, and not present sharp edges or snagging points. Battery cables shall meet SAE requirements. Battery cables shall be of sufficient length to allow the battery tray to fully extend.

C. Exception: Type A units – Batteries may be located in standard manufacturer's position.

D. Buses may be equipped with a battery shut-off switch. The switch is to be placed in a location not readily accessible to the driver or passengers.

5. Brakes.

A. Four-wheel brakes, adequate at all times to control bus when fully loaded, shall be provided in accordance with Federal Motor Vehicle Safety Standards.

B. The chassis brake system shall conform to the provisions of Federal Motor Vehicle Safety Standards (FMVSS) 105 (*Hydraulic and Electric Brake Systems)*, 106 (*Brake Hoses)*, and 121 (*Air Brake Systems*) as applicable.

C. Chassis shall be equipped with auxiliary brakes capable of holding vehicle on any grade on which it is operated under any conditions of loading on a surface free from snow or ice. Operating controls of such auxiliary brakes shall be independent of operating controls of service brakes.

D. Buses having full compressed air systems shall be equipped with a minimum 13.2 cfm engine oil-fed air compressor.

1. Air supply for air compressor shall be taken from the clean side of engine air cleaner system.

2. A desiccant type air dryer with automatic purge and drain cycle and a heating element shall be installed on all air brake buses.

3. Air brake systems shall include system for anti-compounding of the service and parking brakes.

E. Buses using hydraulic brakes shall have power assist brakes. Hydraulic line pressure shall not exceed recommendation of chassis or brake manufacturer.

6. Bumper, Front.

A. The front bumper on buses of Type A-2 (with GVWR greater than 14,500 pounds), Type B, Type C, and Type D shall be pressed steel channel painted black at least 3/16 inches thick and not less than 8 inches wide (high). It shall extend beyond the forward-most part of the body, grille, hood and fenders and shall extend to the outer edges of the fenders at the bumper's top line. Type A buses having a GVWR of 14,500 pounds or less may be equipped with an OEM-supplied front bumper. The front bumper shall be of sufficient strength to permit being pushed by another vehicle on a smooth surface with a 5 degree (8.7 percent) grade, without permanent distortion. The contact point on the front bumper is intended to be between the frame rails, with as wide a contact area as possible. If the front bumper is used for lifting, the contact points shall be under the bumper attachments to the frame rail brackets unless the manufacturer specifies different lifting points in the owner's manual. Contact and lifting pressures should be applied simultaneously at both lifting points.

B. The front bumper shall be of sufficient strength to permit pushing a vehicle of equal gross vehicle weight, per Section B, without permanent distortion to the bumper, chassis or body.

C. The bumper shall be designed or reinforced so that it will not deform when the bus is lifted by a chain that is passed under the bumper (or through the bumper if holes are provided for this purpose) and attached to both tow hooks/eyes. For the purpose of meeting this specification, the bus shall be empty and positioned on a level, hard surface and both tow hooks/eyes shall share the load equally.

~~A. Front bumper shall be heavy-duty, channel steel at least eight inches in height with 3/16- inch thickness, painted black, and shall be furnished by chassis manufacturer as part of chassis.~~

~~B. Front bumper shall extend to outer edges of fenders at bumper top line (to assure maximum fender protection) and be of sufficient strength to permit pushing, lifting or towing without permanent distortion to bumper, chassis, or body.~~

~~C. Exceptions:~~

~~1. Type A vehicles having a Gross Vehicle Weight Rating (GVWR) of 14,500 pounds or less – bumper shall be manufacturer's standard painted black.~~

~~2. Type D vehicles – same as above, except that the front bumper shall be furnished by body manufacturer~~

~~3. Activity vehicles – may be painted a different color other than black. (See Item 80.)~~

7. Clutch.

A. Torque capacity shall be equal to or greater than the engine torque output. Clutch facing shall be non-asbestos.

B. A starter interlock shall be installed to prevent actuation of the starter if the clutch pedal is not depressed.

8. Color.

A. Chassis, including wheels, front bumper, rails and lettering shall be black. Backs of mirrors should be non-gloss black. The balance of the bus should be yellow.

B. Hood, cowl, and fenders shall be National School Bus Yellow (NSBY).

C. All paint shall meet the lead-free standards.

D. Exception: Activity ~~vehicles~~ buses shall not be painted NSBY. (See Item 80.)

9. Drive Shaft.

A. Drive shaft shall be protected by metal guard or guards to prevent it from whipping through floor or dropping to ground if broken.

10. Electrical System.

A. Battery. See Item 4.

B. Alternator. See Item 2.

C. Lights and signals. See Item ~~20~~ 21.

D. Wiring. See Item 79.

E. Power terminal. Chassis manufacturer shall provide an electric power source terminal for bus body power connection. Wiring from the power source in wiring terminal shall have a current carrying capacity of 125 amperes continuous (minimum 4 gauge wire). If the bus is to be equipped with Air Conditioning or Wheelchair Lift, current carrying capacity shall be increased to 150 amperes continuous.

This conductor shall be routed to cover the least distance practicable between points of termination. It should be of continuous size protected by fusible links, fuses, circuit breakers, or a resettable electronic circuit protection device, no more than 24 inches from the battery. The terminal shall be of the single post-type, minimum of one-fourth inch (1/4") stud and located in an accessible location for service, subject to approval of the Department of Education.

F. Light terminal. The chassis manufacturer shall provide a wire terminal adjacent to or in the under dash area of the left side panel accessible to the body company for connection of rear brake lights, tail lights, turn signal lights, and back-up lights. A terminal strip consisting of individual terminals with each terminal properly identified shall be provided to meet this requirement.

G. Fuse. All fuses shall be located in fuse block and properly identified for the circuit protected.

H. Each chassis circuit shall be color-coded and a diagram of the circuits shall be included with the chassis.

I. Wiring harness. All conductors from the alternator to the battery shall be continuous in length. The conductors shall be sized to provide at least a 25 percent greater current carrying capacity than the design output of the alternator (minimum 4 gauge wire). The conductor between the alternator and the battery shall be routed in a manner that will provide the least distance between points of termination. A separate ground conductor from alternator to engine shall be provided (minimum four-gauge).

J. Buses using multiplexed electrical systems may meet the intent of these specifications without the use of specified equipment, subject to the approval of the Department of Education.

11. Electronic Engine Speed Limiter.

A. An electronic engine speed limiter shall be provided and set to limit engine speed not to exceed the maximum revolutions per minute as recommended by the engine manufacturer. Bus road speed shall not exceed a maximum of 60 miles per hour.

12. Engine.

A. The engine shall be of the internal-combustion, four-stroke cycle type.

B. All gasoline-powered buses shall have an automatic fire ~~extinguisher~~ suppression system in the engine compartment. (See item 15. Fire Suppression Systems.)

13. Exhaust System.

A. Exhaust pipe, muffler, after treatment system, and tail pipe shall be outside the bus body and attached to the chassis so that any other chassis component is not damaged.

~~B. Tail pipe shall be constructed of seamless or electrically welded tubing of 16-gauge steel or equivalent.~~

~~C.~~B. Size of tail pipe shall not be reduced after it leaves muffler.

~~D.~~C. Exhaust system shall be properly insulated from fuel tank and tank connections by securely attached metal shield at any point where it is 12 inches or less from tank or tank connections.

~~E.~~D. Muffler shall be constructed of corrosion-resistant material.

~~F. Types A and B chassis may be furnished with the manufacturer's standard tail pipe configuration.~~

~~G.~~E. Exhaust shall exit to the rear and opposite side of vehicles with special service entrances. The exhaust on Type A shall exit behind the rear wheel and to the opposite side of the special service entrance.

~~H.~~F. The tail pipe and after treatment system shall be constructed of 16-gauge steel tubing of equal diameter.

~~I.~~G. The tail pipe may be flush with, or shall not extend more than 2 inches beyond, the perimeter of the body for side-exit pipe or the bumper for rear-exit pipe. The exhaust system shall be designed such that exhaust gas will not be trapped under the body of the bus.

~~J.~~H. The tail pipe shall exit to the left or right of the emergency exit door in the rear of the vehicle or to the left side of the bus in front of or behind the rear drive axle. The tail pipe shall not exit beneath any fuel filler location, emergency door or lift door.

14. Fenders, Front.

A. Total spread of outer edges of front fenders, measured at fender line, shall exceed total spread of front tires when front wheels are in straight-ahead position.

B. Front fenders shall be properly braced and free from any body attachment.

15. Fire Suppression Systems

A. All gasoline-powered school buses shall have an automatic fire suppression system in the engine compartment. The manufacturer may provide an automatic fire extinguisher system in the engine compartment.

B. Fire suppression system nozzles shall be located in the engine compartment, under the bus, in the electrical panel or under the dash, but they shall not be located in the passenger compartment. The system must include a lamp or buzzer to alert the driver that the system has been activated.

C. All non gasoline-powered school buses may be equipped with a fire suppression system as an option.

~~15~~.16. Frame.

A. Frame lengths shall be established in accordance with the design criteria for the complete vehicle.

B. Making holes in top or bottom flanges or side units of the frame and welding to the frame shall not be permitted except as provided or accepted by the chassis manufacturer.

C. Frames shall not be modified for the purpose of extending the wheel base.

D. Any secondary manufacturer that modifies the original chassis frame shall provide a warranty at least equal to the warranty offered by the original equipment manufacturer (OEM), and shall certify that the modification and other parts or equipment affected by the modification shall be free from defects in material and workmanship under normal use and service intended by the OEM.

~~16~~.17. Fuel Tank.

A. Fuel tank shall be rated for the appropriate passenger capacity of the vehicle, per manufacture and FMVSS, but shall not be less than 30 gallons. The tank shall be filled and vented to the outside of the body and

the fuel filler should be placed on the right side in a location where accidental fuel spillage will not drop or drain on any part of the exhaust system.

B. Fuel lines shall be mounted to the chassis frame in such a manner that the frame provides the maximum possible protection from damage.

C. Fuel tank may be mounted between the frame rails or outboard on the right side of the vehicle.

D. The actual draw capacity of each fuel tank shall be a minimum of 83 percent of the tank capacity.

E. Exception: Type A Vehicles – fuel tank shall be manufacturer's standard, mounted, filled, and vented outside of body. Special needs buses will allow for left side fuel filler.

F. Installation of alternative fuel tanks and fuel systems shall comply with all applicable Federal Motor Vehicles Safety Standards (FMVSS), CFR's, all applicable fire codes, and standards of the National Fire Protection Association.

~~17.~~18. Heating System, provision for.

A. The chassis engine shall have plugged openings for the purpose of supplying hot water for the bus heating system. The opening shall be suitable for attaching ¾ inch pipe thread/hose connector. The engine shall be capable of supplying water having a temperature of at least 170° F at a flow rate of 50 pounds per minute at the return end of 30 feet of one-inch inside diameter automotive hot water heater hose. (~~SBMI~~ School Bus Manufacturers Technical Council (SBMTC) -001~~Standards No. 001~~ Standard Code for Testing and Rating Automotive Bus Hot Water Heating and Ventilating Equipment.)

B. Exception: Type A buses shall be manufacturer's standard.

~~18.~~19. Horn.

A. The bus shall be equipped with a horn(s) of standard make with the horn(s) capable of producing a complex sound in bands of audio frequencies between 250 and 2,000 cycles per second, and tested in accordance with SAE J377, *Horn – Forward Warning – Electric – Performance, Test, and Application.*

~~19.~~20. Instrument and Instrument Panel.

A. Chassis shall be equipped with the following instruments and gauges:

1. Speedometer which will show speed;

2. Odometer which will show accrued mileage, including tenths of miles, tenths of miles can be accrued with trip odometer;

3. Ammeter or voltmeter with graduated scale;

4. Oil pressure gauge;

5. Water temperature gauge;

6. Fuel gauge;

7. ~~Upper-~~ High beam headlamp indicator; and

8. Tachometer.

B. All instruments or gauges shall be mounted on instrument panel in such manner that each is clearly visible to driver in normal seated position. Lights in lieu of gauges are not acceptable.

C. Exception: Type A vehicles – the ammeter, or voltmeter and its wiring are to be compatible with generating capacity. Tachometer is not required.

D. Multi-function gauges must have prior approval of the Department of Education.

~~20.~~21. Lights and Signals.

A. Each chassis shall be equipped with not less than two headlights – beam controlled, and stop and tail lights, and two front turn signal lamps mounted on front fenders. Front turn signal lamps on Type D bodies shall be the same as the rear turn signals unless the turn signals are incorporated as a part of the headlight assemblies or otherwise incorporated into the front end design as approved by the Department of Education.

B. Lights shall be protected by fuse or circuit breakers.

C. Self-canceling directional signal switch shall be installed by the chassis manufacturer. The directional signals shall activate only when ignition is in "on" position.

D. Daytime Running Lights (DRL) are required.

E. Brake air pressure gauge (air brakes), brake indicator lamp (vacuum/hydraulic brakes), or brake indicator lamp (hydraulic/hydraulic) are required.

F. Turn signal indicator is required.

G. Glow-plug indicator lamp is required, where appropriate.

H. Instruments and controls must be illuminated as required by FMVSS 101 (C*ontrols and Displays)*.

~~21.~~22. Oil Filter.

A. An oil filter with a replaceable element shall be provided and connected by flexible oil lines if it is not a built-in or an engine-mounted design. The oil filter shall have a capacity in accordance with the engine manufacturer's recommendation.

~~22.~~23. Openings.

A. All openings in floorboard or firewall between chassis and passenger-carrying compartment, such as for gearshift lever and auxiliary brake lever, shall be sealed.

~~23.~~24. Passenger Load.

A. Gross vehicle weight (GVW) (i.e., wet weight, plus body weight, plus driver's weight of 150 pounds, plus weight of maximum seated pupil load based on not less than 120 pounds per pupil) shall not exceed maximum gross vehicle weight rating as established by manufacturer.

B. Actual GVW shall not exceed the chassis manufacturer's GVWR for the chassis, nor shall the actual weight carried on any axle exceed the chassis manufacturer's Gross Axle Weight Rating (GAWR).

~~C. The manufacturer's GVWR for a particular school bus shall be furnished by manufacturers in duplicate (unless more copies are requested) to the state agency having student transportation jurisdiction. The state agency shall, in turn, transmit such ratings to other state agencies responsible for development or enforcement of state standards for school buses.~~

~~24.~~25. Retarder System (Optional).

A. A retarder system, if used, shall limit the speed of a fully loaded school bus to 19.0 mph on a 7 percent grade for 3.6 miles.

~~25.~~26. Shock Absorbers.

A. Bus shall be equipped with front and rear double-acting shock absorbers compatible with manufacturer's rated axle capacity.

~~26.~~27. Springs.

A. Springs or suspension assemblies shall be of ample resiliency under all load conditions and of adequate strength to sustain loaded bus without evidence of overload.

B. Springs or suspension assemblies shall be designed to carry their proportional share of gross vehicle weight.

C. Rear springs shall be of progressive, variable, parabolic or air ride type.

D. Stationary eye of the front spring shall be protected by full wrapper leaf in addition to main leaf.

E. The capacity of springs or suspension assemblies shall be commensurate with the chassis manufacturer's GVWR and chassis specification minimums.

F. Exception: Type A vehicles – springs that are regular equipment on vehicle to be purchased may be used.

~~27.~~28. Steering Gear.

A. Steering gear shall be approved by chassis manufacturer and designed to assure safe and accurate performance when vehicle is operated with maximum load and maximum speed.

B. No changes shall be made in steering apparatus that are not approved by chassis manufacturer.

C. There shall be clearance of at least two inches between steering wheel and cowl instrument panel, windshield, or any other surface.

D. Power steering is required and shall be of the integral type with integral valves.

E. The steering system shall be designed to provide a means for lubrication of all wear-points that are not permanently lubricated.

~~28.~~29. Tires and Rims.

A. Tire and rim sizes, based upon current standards of the Tire and Rim Association of America, Inc. (TRA), shall be required.

B. Total weight imposed on any tire shall not be above the current standard of the TRA.

C. Dual rear tires shall be provided on all vehicles.

D. All tires on given vehicles shall be of the same size and shall meet or exceed the load range rating of the TRA for required GAWR.

E. Spare tire, if required, shall be suitably mounted in accessible location outside passenger compartment.

~~29.~~30. Towing Attachment Points.

A. Front and /or ~~R~~ rear towing devices (i.e., tow hooks, tow eyes, or other designated towing attachment points) shall be furnished to assist in the retrieval of buses that are stuck and/or for towing buses when a wrecker with a "wheel lift" or an "axle lift" is not available or cannot be applied to the towed vehicle.

B. Towing devices shall be attached to the chassis frame either by the chassis manufacturer or in accordance with the chassis manufacturer's specifications.

C. Each ~~rear~~ towing device shall have a strength rating of 13,500 pounds each for a combined rating of 27,000 pounds with the force applied in the rearward direction, parallel to the ground, and parallel to the longitudinal axis of the chassis frame rail.

D. The towing devices shall be mounted such that they do not project forward of the front bumper or rearward of the rear bumper.

Note: Type A buses are exempt from this requirement for front tow hooks or eyes due to built-in crush zones. Tow eyes or hooks shall be furnished and attached so they do not project beyond the front bumper.

~~30.~~31. Transmission.

A. Mechanical type transmission shall be synchromesh except first and reverse gears. Its design shall provide not less than four forward and one reverse speeds. With five-speed transmission, fifth gear shall be direct.

B. Automatic transmissions are permissible when equipped with a parking pawl or approved parking brake system.

C. Automatic transmissions incorporating a parking pawl shall have a transmission shifter interlock controlled by the application of the service brake to prohibit accidental engagement of the transmission. All non-parking pawl transmissions shall incorporate a park brake interlock that requires the service brake to be applied to allow release of the parking brake.

~~31.~~32. Turning Radius.

A. Chassis with a wheel base of 264 inches or less shall have a right and left turning radius of not more than 42 ½ feet, curb to curb measurement.
B. Chassis with a wheel base over 264 inches shall have a right and left turning radius of not more than 44 ½ feet curb to curb measurement.

~~32.~~33. Weight Distribution.

A. Shall be established by chassis manufacturers' engineering department.

~~33.~~34. Wheels.

A. Disc wheels are required.

THE BUS BODY

~~34.~~35. Aisle.

A. Minimum clearance of all aisles, including aisle (or passageway between seats) leading to emergency door shall be 12 inches. Aisles shall be unobstructed at all times.

~~B. Aisle supports of seat backs shall meet FMVSS 222.~~

~~35.~~36. Back-up Alarm.

A. An automatic audible alarm shall be installed behind the rear axle and shall comply with the published Backup Alarm Standards (SAE J994b), providing a minimum of 112 dBA, or shall have a variable volume feature

that allows the alarm to vary from 87 dBA to 112 dBA sound level, staying at least 5 dBA above the ambient noise level.

~~36.~~37. Body Sizes.

A. Sizes are based on knee-room clearance between rows of forward-facing seats, overall width, center aisle width, and average rump width.

~~37.~~38. Bumper, Rear.

A. Rear bumper shall be of pressed steel channel at least 3/16 inch by 9 ½ inches.

B. It shall be wrapped around back corners of bus. It shall extend forward at least 12 inches, measured from rear-most point of body at floor line.

C. Bumper shall be attached to chassis frame in such manner that it may be easily removed, shall be so braced as to develop full strength of bumper section from rear or side impact, and shall be so attached as to prevent hitching of rides.

D. Rear bumper shall extend beyond rear-most part of body surface at least one inch, measured at floor line.

E. Exception: Type A vehicles – Rear bumper shall be standard type furnished by chassis manufacturer as part of chassis on conversions. Body manufacturer will furnish bumper on cutaway chassis.

~~38.~~39. Color.

A. School bus body including hood, cowl, external speakers and fenders shall be painted uniform color – National School Bus Yellow (NSBY). Prior to the application of the finish coats to the bus body, hood and cowl, external speakers and fenders, all surfaces shall be cleaned of grease, foreign matter, excessive body caulking, sealing material and treated as per paint manufacturer's recommendation for proper adhesion and painted NSBY.

B. Grill shall be NSBY, silver, or gray, if painted; otherwise it shall be chrome or anodized aluminum.

C. Rear bumper, body trim, and rub rails shall be painted black. Must meet color requirements specific to bus. (See "Bus Chassis" Item 8 for specific specifications.)

D. The roof of the bus may be painted white extending down to the drip rails on the sides of the body except that front and rear roof caps shall remain NSBY.

E. All paint shall meet the lead-free standards.

F. Paint shall be applied for a total dry thickness of at least 1.8 mils over all painted surfaces.

Exception: Activity ~~vehicle~~ bus – Activity ~~vehicle~~ bus shall not be painted NSBY. Bumpers, body trim and rub rails may be painted a different color other than black. (See Item 80.)

G. Retro-reflective tape. Material shall be Type V or better, as determined by the American Society of Testing Materials (ASTM: D4956-90). "Standard specifications for reflective sheeting for traffic control."

1. The rear of the bus body shall be marked with strips of retro-reflective NSBY material to outline the perimeter of the back of the bus using material which conforms with the requirements of FMVSS 131 (*School Bus Pedestrian Safety Devices, Table 1).* The perimeter marking of rear emergency exits per FMVSS 217 (*Bus Emergency Exits and Window Retention and Release),* and/or the use of retro reflective "SCHOOL BUS" signs partially accomplishes the objective of this requirement. To complete the perimeter marking of the back of the bus, strips of ~~at least 1 ¾ inch~~ retro-reflective NSBY material a minimum of 1" and a maximum of 2" in width, shall be applied horizontally above the rear windows and above the rear bumper, extending from the rear emergency exit perimeter, marking outward to the left and right rear corners of the bus. Vertical strips shall be applied at the corners connecting these horizontal strips.

2. "SCHOOL BUS" signs shall be marked with retro reflective NSBY material comprising background for lettering of the front and/or rear "SCHOOL BUS" signs.

3. Sides of the bus body shall be marked with ~~at least 1 ¾ inch~~ a minimum of 1" and a maximum of 2" in width retro reflective NSBY material, extending the length of the bus body and located (vertically) between the floor line and the beltline.

~~39.~~40. Communication System – Optional Equipment.

A. Communication systems. If communication systems are used on school buses, the systems shall be subject to written policies adopted by the local

school board. Installation shall be subject to the Department of Education fleet assessment.

1. The radio mounting shall be in the driver's compartment in a safe, secure location, so as not to interfere with normal bus operation.

2. Mounting shall be permanent. Temporary mountings will not be acceptable.

3. Wiring shall be protected by a proper fuse or circuit breaker and permanently connected to an accessory circuit shut off by ignition switch. Plug-in type connections are not acceptable.

4. Antenna shall be permanently mounted so as not to interfere with driver's vision of roadway. Antenna lead-in cable shall be permanently secured with the proper clamps, grommets, and sealant. Antenna cable may not pass through window opening.

B. Public address system. For use by driver, the system contains an inside speaker and/or an external speaker that is of special use when driver needs to caution pupils about surrounding dangers at school bus stops. Inside speakers shall be recessed type.

C. AM/FM radios**,** cassette players or CD players. If AM/FM radios**,** cassette players, or CD players are installed, they shall be properly mounted by the body manufacturer or local shop personnel. All wiring shall be properly connected and concealed and any speakers shall be of recessed type.

No internal speakers, other than the driver's communication systems, may be installed within 4 feet of the driver's seat back in its rearmost upright position.

D. Camera. Both equipment and installation shall be subject to the Department of Education fleet assessment.

1. The equipment must be installed in an area at the front of the bus.

2. The equipment is outside the federal head impact zone, FMVSS 222 (*School Bus Passenger Seating and Crash Protection*).

3. The equipment is located in an area not likely to cause student injury.

4. The equipment will have no sharp edges or projections.

~~40.~~41. Construction, Type B, C, and D Vehicles.

A. Construction of body shall meet all requirements of FMVSS 220 (*School Bus Rollover Protection*), 49 CFR § 571.220, FMVSS 221 (*School Bus Joint Strength*), 49 CFR § 571.221, and all other applicable federal standards.

B. Construction shall be of prime commercial quality steel or other material with strength at least equivalent to all steel as certified by bus body manufacturer. All such construction materials shall be fire resistant.

C. Construction shall provide reasonable dust proof and watertight unit.

D. Bus body (including roof bows, body posts, strainers, stringers, floor, inner and outer linings, rub rails and other reinforcements) shall be of sufficient strength to support entire weight of fully loaded vehicle on its top or side if overturned. Bus body as unit shall be designed and built to provide impact and penetration resistance.

E. Side posts and roof bows. There shall be a body side post and roof bow fore and aft of each window opening. This may be a continuous bow or two separate pieces effectively joined.

F. Floor shall be of prime commercial quality steel of at least 14-gauge or other metal or other material at least equal in strength to 14-gauge steel. Floor shall be level from front to back and from side to side except in wheel housing, toe board, and driver's seat platform areas. When plywood is used, it shall be of ½-inch exterior B.B. Grade or equivalent and securely fastened to the existing steel floor.

G. Roof strainers. Two or more roof strainers or longitudinal members shall be provided to connect roof bows, to reinforce flattest portion of roof skin, and to space roof bows. These strainers may be installed between roof bows or applied externally. They shall extend from windshield header and, when combined with rear emergency doorpost, are to function as longitudinal members extending from windshield header to rear floor body cross member. At all points of contact between strainers or longitudinal members and other structural material, attachment shall be made by means of welding, riveting or bolting.

H. Floor sills. There shall be one main body sill at each side post and two intermediate body sills on approximately 10-inch centers. All sills shall be of equal height, not to exceed three inches. All sills shall extend width of body floor except where structural members or features restrict area.

Main body sill shall be equivalent to or heavier than 10-gauge and each intermediate body sill shall be equivalent to or heavier than 16-gauge, or each of all sills shall be equivalent to or greater than 14-gauge. All sills shall be permanently attached to floor.

Connections between sides and floor system shall be capable of distributing loads from vertical posts to all floor sills.

I. All openings between chassis and passenger-carrying compartment made due to alternations of body manufacturer shall be sealed. (See Item ~~59~~ 60).

J. A cover shall be provided for the opening to the fuel tank fill pipe.

K. A moisture and rustproof removable panel shall be provided in the floor for access to the fuel tank sender gauge. It shall be designed for prolonged use and adequate fastening to the floor.

~~41.~~42. Construction, Type A Vehicles.

A. Construction of body shall meet all requirements of FMVSS 220 (*School Bus Rollover Protection*), 49 CFR § 571.220, and all other applicable federal standards.

B. Body joints created by body manufacturer shall meet the 60 percent joint strength provision required in FMVSS 221 (*School Bus Body Joint Strength*), 49 CFR § 571.221, for Type B, C, and D buses.

C. Construction shall be of prime commercial quality steel or other material with strength at least equivalent to all steel as certified by bus body manufacturer. All such construction materials shall be fire resistant.

D. Construction shall provide reasonably dustproof and watertight unit.

E. Bus body (including roof bows, body posts, strainers, stringers, floor, inner and outer linings, rub rails and other reinforcements) shall be of sufficient strength to support entire weight of fully loaded vehicle on its top or side if overturned. Bus body as unit shall be designed and built to provide impact and penetration resistance.

F. Floor. Plywood of ½ inch exterior B.B. Grade or equivalent shall be applied over the existing steel floor and securely fastened. Floor shall be level from front to back and from side to side except in wheel housing, toe board, and driver seat platform areas.

G. Roof strainers. Two or more roof strainers or longitudinal members shall be provided to connect roof bows to reinforce flattest portion of roof skin, and to space roof bows. These strainers may be installed between roof bows or applied externally. They shall extend from windshield header to rear body header over the emergency door. At all points of contact between strainers of longitudinal members and other structural material, attachment shall be made by means of welding, riveting, or bolting.

After load as called for in Static Load Test Code has been removed, none of the following defects shall be evident:

1. Failure or separation at joints where strainers are fastened to roof bows;

2. Appreciable difference in deflection between adjacent strainers and roof bows; or

3. Twisting, buckling, or deformation of strainer cross-section.

H. Area between floor and window line shall be restructured inside to include at least four vertical formed reinforcement members extending from floor to window line rail. They shall be securely attached at both ends.

I. Rear corner reinforcements. Rear corner framing of the bus body between floor and window sill and between emergency door post and last side post shall consist of at least one structural member applied horizontally to provide additional impact and penetration resistance equal to that provided by frame members in areas of sides of body. Such member shall be securely attached at each end.

J. All openings between chassis and passenger carrying compartment made due to alterations by body manufacturers shall be sealed. (See Item ~~59~~ 60.)

~~42.~~43. Defrosters.

A. Defrosting and defogging equipment shall direct a sufficient flow of heated air onto the windshield, the window to the left of the driver and the glass in the viewing area directly to the right of the driver to eliminate frost, fog and snow. (Exception: The requirements of this standard do not apply to the exterior surfaces of double pane storm windows.)

B. The defrosting system shall conform to SAE J381, *Windshield Defrosting Systems Test Procedure and Performance Requirements – Trucks, Buses, and Multipurpose Vehicles.*

C. The defroster and defogging system shall be capable of furnishing heated, outside ambient air, except that the part of the system furnishing additional air to the windshield, entrance door and step well may be the recirculating air type.

D. Exception: Type A vehicle, auxiliary fan is not required.

~~43.~~44. Doors.

A. Service Door.

1. Service door shall be manually or power-operated, under control of driver, and so designed as to afford easy release and prevent accidental opening. No parts shall come together so as to shear or crush fingers.

2. Service door shall be located on right side of bus opposite driver and within his direct view.

3. Service door shall have minimum horizontal opening of 24 inches and minimum vertical opening of 68 inches.

4. Service door shall be of split-type, outward opening type.

5. All door glass shall be approved safety glass. Bottom of lower glass panel shall not be more than 10 inches from the bottom of the door. Top of upper glass panel shall not be more than three inches from top of door opening.

6. Vertical closing edges shall be equipped with flexible material to protect children's fingers.

7. All doors shall be equipped with padding at the top of each door opening. Pad shall be at least three inches wide and one inch thick and extend the full width of the door opening.

8. For power-operated entrance doors, the emergency release valve, switch or device to release the service door must be placed above, to the immediate left, or to the immediate right of the entrance door and must be clearly labeled in a color contrast with the background of the label. <u>The emergency release valve, switch or device shall work in the absence of power.</u>

B. Rear Emergency Door Type B, C, and D vehicles.

1. Emergency door shall be located in center of rear end of bus.

2. Rear emergency door shall have minimum horizontal opening of 24 inches and minimum vertical opening of 45 inches measured from floor level.

3. Rear emergency door shall be hinged on right side and shall open outward and be equipped with an adequate strap or stop to prevent door from striking lamps or right rear of body. Such strap or stop shall allow door to open at least at a 90-degree angle from closed position.

   Exception: Type D vehicles with rear engines – Emergency door shall be located on the left side, shall be hinged on the front side and open outward. Door shall meet all requirements of FMVSS 217 (*Bus Emergency Exits and Window Retention and Release*), 49 CFR § 571.217.

4. The upper portion of the emergency door shall be equipped with approved safety glazing, the exposed area of which shall be at least 400 square inches. The lower portion of the rear emergency door on Types A, B, C and D vehicles shall be equipped with a minimum of ~~240~~ 350 square inches of approved safety glazing. This glass shall be protected by a metal guard on the inside. This guard shall be free of any sharp edges that may cause injury to passengers.

5. There shall be no steps leading to emergency door.

6. When not fully latched, emergency door shall actuate signal audible to driver by means of mechanism actuated by latch.

7. Words "EMERGENCY DOOR," both inside and outside in black letters two inches high, painted or vinyl, shall be in compliance with FMVSS 217 (*Bus Emergency Exits and Window Retention and Release*).

8. The emergency door shall be designed to open from inside and outside bus. It shall be equipped with a slide bar and cam-operated lock located on left side of door and fastened to the door framing.

   The slide bar shall be approximately 1 ¼ inches wide and 3/8 inch thick and shall have a minimum stroke of 1 ¼ inches. The slide bar shall have a bearing surface of a minimum of 3/4 inch with the door lock in a closed position. Control from driver's seat shall not be permitted. Provision for opening from outside shall consist of non-detachable device so designed as to prevent hitching to, but to

permit opening when necessary. Door lock shall be equipped with interior handle and guard that extend approximately to center of door. It shall lift up to release lock.

9. All doors shall be equipped with padding at the top edge of each door opening. Pad shall be at least three inches wide and one inch thick and extend the full width of the door opening.

10. There shall be no obstruction higher than ¼ inch across the bottom of any emergency door opening. Fasteners used within the emergency exit opening shall be free of sharp edges or burrs.

C. Rear emergency door, Type A vehicles.

1. Emergency door shall be located in center of rear end of bus and shall be equipped with fastening device for opening from inside and outside body, which may be quickly released but is designed to offer protection against accidental release. Control from driver's seat shall not be permitted. Provision for opening from outside shall consist of device designed to prevent hitching to but to permit opening when necessary.

2. No seat or other object shall be placed in bus which restricts passageway to emergency door to less than 12 inches.

D. Security locking system.

1. A locking system to lock the emergency door(s) or roof hatch(es) exists and the entrance door may be installed.

2. The system shall meet requirements of FMVSS 217 (*Bus Emergency Exits and Window Retention and Release*) and be equipped with an interlock in the chassis starting circuit and an audible alarm to indicate when an emergency exit is locked while the ignition switch is in the "on" position.

3. A cutoff switch on the interlock circuit or any exit equipped with a lock and hasp shall not be allowed.

4. The entrance door lock system shall not permit hooking or snagging during passenger egress/ingress.

~~44.~~45. Emergency Equipment.

A. Fire Extinguisher.

1. The bus shall be equipped with one dry-chemical fire extinguisher of at least five-pound capacity with pressure indicator, mounted in extinguisher manufacturer's bracket of automotive type, and located in full view and in an accessible place in the front of the bus.

2. The fire extinguisher shall bear label of Underwriters' Laboratories, Inc., showing a rating of 2A 10BC, or greater.

3. Fire extinguisher shall have aluminum, brass, or steel valves, heads, check stems, siphon tubes, levers, safety pins, chain, handles and metal hanging brackets. Plastic shall not be used for those named parts.

B. First Aid Kit.

1. Bus shall carry Grade A metal first-aid kit, unit-type, mounted in full view and in an accessible place in the front of the bus and identified as a first-aid kit.

2. The first-aid kit shall contain the following items:

Item	Unit
Bandage compress (sterile gauze pads) 4-inch	3
Bandage compress (sterile gauze pads) 2-inch	2
Adhesive absorbent bandage (nonadhering pad) 1 x 3 inch	2
Triangular bandage, 40-inch	2
Gauze bandage, 4 inch	2
Absorbent-gauze compress	1
Antiseptic applicator (swab type) 10 per unit (Zephiran Chloride/Green Soap type)	2
Bee sting applicator (swab type) 10 per unit	1
Pair medical non-latex examination gloves	1
Mouth-to-mouth airway	1

C. Warning Devices.

1. Bus shall be equipped with a kit containing three reflectorized triangular warning devices meeting requirements of FMVSS 125 (*Warning Devices*), 49 CFR § 571.125.

2. Kit shall be securely mounted.

D. Body Fluid Clean-up Kit.

1. Each bus shall carry a Grade A metal or rigid plastic kit, mounted in an accessible place and identified as a body fluid clean-up kit with a directions for use sheet attached to the inside cover.

2. The kit shall be moisture proof and properly mounted or secured in a storage compartment.

3. Contents shall include, but not be limited to, the following items:

a. One pair non-latex gloves

b. One pick-up spatula or scoop

c. One face mask

d. Infectious liquid spill control powder

e. Anti-microbial hand wipes – individually wrapped

f. Germicidal disinfectant wipes – tuberculocidal

g. Plastic disposal bag with tie

E. Seat Belt Cutter.

1. Each bus shall be equipped with a durable webbing cutter having a full width handgrip and a protected, replaceable or non-corrodible blade. The required belt cutter shall be mounted in a location accessible to the seated driver in an easily detachable manner.

~~45.~~46. Emergency Exits.

A. Each emergency exit shall comply with FMVSS 217 (*Bus Emergency Exits and Window Retention and Release*), 49 CFR § 571.217, regarding the number of exits, types of exits and location of exits based on the capacity of the vehicle.

1. Side Emergency Exit Doors.

a. A dedicated aisle of at least 12 inches in width, referenced to the rear of the emergency exit door is required.

b. Side emergency exit doors shall be hinged on the forward edge.

c. When not fully latched, side emergency exit door shall actuate a signal audible to the driver by means of a mechanism actuated by the latch when the ignition switch is on.

d. A security locking system designed to prevent vandalism may be installed provided it meets all specifications of Item ~~43~~ 44 D.

2. Roof Exits/Vents.

a. All vehicles shall be equipped with a minimum of one emergency roof exit/vent approved by the Department of Education.

b. When not fully latched, this exit shall actuate a signal audible to the driver by means of a mechanism actuated by the latch when the ignition switch is on.

c. A roof exit/vent security locking system designed to prevent vandalism may be installed provided it meets all specifications of Item ~~43~~ 44 D.

d. When a single roof exit is installed, it shall be located as near as practicable to the longitudinal midpoint of the passenger compartment, and shall be installed such that the centerline of the hatch is on the longitudinal centerline of the bus.

e. If two roof exits are utilized, they shall be located as near as practicable to the points equidistant between the longitudinal midpoint of the passenger compartment and the front and the rear of the passenger compartment.

NOTE: No removal or cutting of any roof structural component shall occur during installation. If the installation required by subdivisions 2 d and 2 e of this section cannot be accomplished as described, then prior approval by the Department of Education will be required through a written request from the local school division.

f. Roof exits/vents shall have rustproof hardware.

g. Roof exits/vents shall be hinged in the front and be equipped with an outside release handle.

3. Emergency exit windows.

a. Push-out emergency windows are permissible, if required by FMVSS 217 (*Bus Emergency Exits and Window Retention and Release*), 49 CFR § 571.217.

b. When not fully latched, the emergency exit window shall actuate a signal audible to the driver by means of a mechanism actuated by the latch.

c. No emergency exit window shall be located directly in front of a side emergency exit door.

d. The rear emergency window shall have a lifting assistance device that will aid in lifting and holding the rear emergency window open.

~~46.~~47. Floor Covering.

A. Floor in under seat area, including tops of wheel housings, driver's compartment and toe board shall be covered with fire-resistant rubber floor covering or an approved equivalent, having minimum overall thickness of .125 inch. Driver's compartment and toe board area shall be trimmed with molding strips behind the cowl face line.

B. Floor covering in aisle shall be of aisle-type fire resistant rubber or an approved equivalent, nonskid, wear-resistant and ribbed. Minimum overall thickness shall be .1875 inch measured from tops of ribs and have a calculated burn rate of 0.1 or less, using the test methods, procedures and formulas listed in FMVSS 302 (*Flammability of Interior Materials*). Rubber floor covering shall meet federal specifications ZZ-M71d.

C. Floor covering shall be permanently bonded to floor, and shall not crack when subjected to sudden changes in temperature. Bonding or adhesive material shall be waterproof and shall be of the type recommended by manufacturer of floor-covering material. All seams shall be sealed with waterproof sealer.

D. All floor covering seams shall be covered with trim and fastened with screws.

E. On Types B, C, and D buses, a flush-mounted, screw-down plate that is secured and sealed shall be provided to access the fuel tank sending

unit and/or fuel pump. This plate shall not be installed under flooring material.

~~47.~~48. Handrails.

A. At least 1 handrail shall be installed. The handrail(s) shall assist passengers during entry or exit, and shall be designed to prevent entanglement, as evidenced by the passing of the NHTSA string and nut test.

~~48.~~49. ~~Heaters.~~ Heating and Air Conditioning Systems

A. Hot water heaters of fresh air or combination fresh air and recirculating type, with power defrosters, are required.

B. Heaters shall bear nameplate rating affixed by heater manufacturer on top of heater shell.

C. Heaters shall be capable of maintaining inside temperature of 50^{o} F, with an outside temperature of 20^{o} F when the bus is loaded to one-half capacity.

D. The heater wiring shall be connected to the cold side of the ignition switch through a continuous duty solenoid relay.

E. The power defroster shall deliver a sufficient amount of heated air distributed through a windshield duct, nozzle or nozzles to defog and de-ice the entire windshield, and to defog the driver's window. The duct, nozzle, or nozzles shall be designed to prevent objects from being placed in any manner that would obstruct the flow of air.

F. Water circulation cut-off valves in the supply and return lines, a minimum of ¾ inch diameter, shall be at or near the engine. A water flow-regulating valve in the pressure line for convenient operation by the driver is also required. All valves shall be ¼ turn ball type. The driver and passenger heaters may operate independently of each other for maximum comfort.

G. Heater hoses, including those in engine compartment, shall be supported in such manner that hose chafing against other objects will not occur nor shall suspended water lines interfere with routine vehicle maintenance.

H. All water hoses in driver or passenger area shall be shielded.

I. An auxiliary heater of recirculating type, having a minimum capacity of 60,000 BTU output, shall be installed under the second seat behind the

wheel housing. There shall be a grille or guard over exposed heater cores to prevent damage by pupils' feet.

J. Exception: Type A and D vehicles.

1. Front heater with high output and defroster shall be furnished by the chassis manufacturer.

2. The body manufacturer shall provide an additional under seat heater near the rear of the bus.

K. All heater cores shall be the coiled tubing fin type approved by the Department of Education.

Passenger Compartment Air Conditioning (Optional)

The following specifications are applicable to all types of school buses that may be equipped with air conditioning. This section is divided into two parts. Part 1 covers performance specifications and Part 2 covers other requirements applicable to all buses.

1. Performance Specifications

Standard Performance: The installed air conditioning system should cool the interior of the bus from 100 degrees to 80 degrees Fahrenheit, measured at three points (minimum) located four feet above the floor on the longitudinal centerline of the bus. The three required points shall be: (1) three feet above the center point of the horizontal driver seat surface, (2) at the longitudinal midpoint of the body, and (3) three feet forward of the rear emergency door or, for Type D rear-engine buses, three feet forward of the end of the aisle. Note for the Type A vehicles placement of the rear thermocouple should be centered in the bus over the rear axle. The independent temperature reading of each temperature probe inside the bus shall be within a range of +/- 3 degrees Fahrenheit of the average temperature at the conclusion of the test.

High Performance: The installed air conditioning system should cool the interior of the bus from 100 degrees Fahrenheit to 70 degrees Fahrenheit, measured at three points (minimum) located four feet above the floor on the longitudinal centerline of the bus. The three required points shall be: (1) three feet above the center point of the horizontal driver seat surface, (2) at the longitudinal midpoint of the body, and (3) three feet forward of the emergency door or, for Type D rear-engine buses, three feet forward of the end of the aisle. The independent temperature reading of each temperature probe inside the bus shall be within a range of +/- 3 degrees Fahrenheit of the average temperature at the conclusion of the test.

The test conditions under which the above performance standards must be achieved shall consist of (1) placing the bus in a room (such as a paint booth) where ambient temperature can be maintained at 100 degrees Fahrenheit; (2) heat-soaking the bus at 100 degrees Fahrenheit at a point measured 2 feet horizontally from the top of the windows on both sides of the bus, with windows open for two hours; and (3) closing windows, turning on the air conditioner with the engine running at 1250 +/- 50 RPM, and cooling the interior of the bus to 80 degrees Fahrenheit, (standard performance) or 70 degrees Fahrenheit (high performance), within 30 minutes while maintaining 100 degrees Fahrenheit outside temperature.

The manufacturer shall provide facilities for the user or user's representative to confirm that a pilot model of each bus design meets the above performance requirements.

2. Other Requirements

a. Evaporator cases, lines and ducting (as equipped) shall be designed in such a manner that all condensation is effectively drained to the exterior of the bus below the floor level under all conditions of vehicle movement and without leakage on any interior portion of the bus;

b. Evaporators and ducting systems shall be designed and installed to be free of projections or sharp edges. Ductwork shall be installed so that exposed edges face the front of the bus and do not present sharp edges;

c. On school buses equipped with Type-2 seatbelts having anchorages above the windows, the ducting (if used) shall be placed at a height sufficient to not obstruct occupant securement anchorages. This clearance shall be provided along the entire length (except at evaporator locations) of the passenger area on both sides of the bus interior;

d. The body may be equipped with additional insulation, including sidewalls, roof, firewall, rear, inside body bows and plywood or composite floor insulation to reduce thermal transfer;

e. All glass (windshield, service and emergency doors, side and rear windows) may be equipped with maximum integral tinting allowed by the Code of Virginia for the respective locations, except that windows rear of the driver's compartment, if tinted, shall have approximately 28% light transmission;

f. Electrical generating capacity shall be provided to accommodate the additional electrical demands imposed by the air conditioning system.

g. Air intake for any evaporator assembly(ies), except for front evaporator of Type A-1, shall be equipped with replaceable air filter(s) accessible without disassembly of evaporator case.

h. For all buses (except Type D rear engine transit) equipped with a rear evaporator assembly, evaporator shall not encroach upon head impact zone, but may occupy an area of less than 26.5 inches from the rear wall and 14 inches from the ceiling.

i. For Type D rear engine transit buses equipped with a rear evaporator over the davenport, the evaporator assembly may not interfere with rear exit window and may not extend above the rear seating row.

~~49.~~50. Hinges.

A. All exterior metal door hinges shall be designed to allow lubrication to be channeled to the center 75 percent of each hinge loop without disassembly, unless they are constructed of stainless steel, brass or non-metallic hinge pins or other designs that prevent corrosion.

~~50.~~51. Identification of School Buses.

A. All lettering shall be of black paint or vinyl decal and conform to "Series B" for Standard Alphabets for Highway Signs. The words "SCHOOL BUS" shall be on reflective yellow background. See Diagrams 1 and 2. For purposes of identification, school buses shall be lettered as follows:

1. Both the front and rear of the body shall bear the words, "SCHOOL BUS" in black letters eight inches in height.

2. The bus number shall be placed just back of the front warning sign on the left side, just behind the entrance door on the right side and be 4 inches high. The number is required on the left side of the front bumper (driver's side). The number shall be placed on the rear body of the bus and shall be 4 inches high.

3. (Name of) County Public Schools or (Name of) City Public Schools shall be placed on each side of the bus body at the beltline and be 4 inches high.

4. Type of Fuel – Identification of fuel type shall be in 2 inch lettering adjacent to the fuel filler opening.

   a. A sign with black letters on clear or school bus yellow background, indicating the type of alternative fuel being used, may be placed on the side of the bus near the entrance door. No sign shall be more than 4-3/4 inches long or more than 3-1/4 inches high.

5. Options - The following lettering and signs are options, but if equipped, they must conform to these specifications:

   a. The bus number may be placed in the center of the bus roof with black (12-inch minimum) numbers.

   b. The bus number (4 inches minimum) shall be placed on the inside rear header with black paint or vinyl decals. It shall not interfere with the Emergency Door letterings.

   c. Battery - The location of the battery identified by the word "Battery" or "Batteries" on the battery compartment door in 2 inch lettering.

   d. Traffic Warning Lights Sign – Shall be placed in between the top and bottom glass on the rear emergency door, and lettered "STOP WHEN RED LIGHTS FLASH." The sign shall be marked with retro-reflective NSBY material comprising background for black letters, 4 inches in height. On a rear-engine Type D bus, the sign shall be placed in the center of the engine door.
   Exception: The sign shall not be mounted on any activity vehicle.

   e. Stop for Railroad Crossing Sign – The sign shall be placed on the rear of the bus.

   f. Identification Sign for Students – A sign with symbols and/or numbers displaying identification information for the students of the bus or route served shall be mounted on the right side of the bus near the entrance door. The sign shall be no larger than 121 square inches.

   g. American Flag Decals – Non-reflective, American Flag decals, no larger than 6 inches by 10 inches shall be placed on the exterior of the bus, on both sides and/or at the rear of the bus. The decals shall be centered between the top two

rub rails and mounted so that the right edge of the decal is no closer than 3 inches from the bus number or so that the left edge of the decal is no further than 12 inches from the bus number. A rear decal shall be centered in the rear of the bus.

Exception: Type A buses shall mount the decals below the second rub rail and centered below the bus number on both sides.

h. Bus Safety Hotline Sign – A sign with yellow lettering on black background may be mounted in the center of the rear bumper with the letters "School Bus Safety Hotline Call (area) xxx-xxxx. The sign is not to exceed 3 ¼ inches high x 10 inches wide.

6. No manufacturer or vendor logos, signs or other items not approved in the Specifications shall be displayed.

~~51.~~52. Inside Height.

A. Inside body height shall be 72 inches or more, measured metal to metal, at any point on longitudinal center line from front vertical bow to rear vertical bow. Exception: Type A conversion van – Inside body height shall be 62 inches minimum. Does not apply to air conditioning equipment.

~~B. Exception: Type A conversion van – Inside body height shall be 62 inches minimum.~~

~~52.~~53. Insulation.

A. Ceilings and walls shall be coated with proper materials to deaden sounds and to reduce vibrations to a minimum. Thermal insulation (minimum R-value of 5.5) shall be used to insulate walls and roof between inner and outer panels.

~~53.~~54. Interior.

A. Interior of bus shall be free of all unnecessary projections likely to cause injury. This standard requires inner lining on ceilings and walls. Ceiling panels shall be constructed so as to contain lapped joints with all exposed edges hemmed to minimize sharpness. If lateral panels are used, forward panels shall be lapped by rear panels.

54.55. License Plates.

A. All vehicles shall be constructed so that mounting and securing of license plates will be compliant with FMVSS and the *Code of Virginia*, Section 46.2-716.

~~55.~~56. Lights and Signals.

A. No lights or signals other than specified here shall be installed on school buses, except those required by federal regulations. All lights and reflectors shall be approved by the Superintendent of the Virginia State Police.

1. Clearance lights. Body shall be equipped with two red clearance lamps at rear, two amber clearance lamps at front, and intermediate side marker lamps on buses 30 feet or more in length controlled by headlight switch. They may be of armour type.

2. Identification lamps. Three amber lamps shall be mounted on front and three red lamps on rear of body controlled by the headlight switch.

3. Stop and tail lamps. Bus shall be equipped with two matched stop and tail lamps of heavy duty type, which shall be in combination, emitting red light plainly visible from a distance of at least 500 feet to rear, and mounted on rear end with their centers not less than 12 nor more than 24 inches from plane side of body, and not less than six or more than 18 inches below D-glass in rear of body. They shall be approximately seven inches in diameter or, if a shape other than round, a minimum 38 square inches of illuminated area and shall meet SAE specifications. These lights shall be on the same horizontal line with the turn signal units and shall not flash.

4. Back-up lamps. The bus body shall be equipped with 2 white rear back-up lamps that are at least 4 inches in diameter or, if a shape other than round, a minimum of 12 square inches of illuminated area and shall meet FMVSS 108 (*Lamps, Reflective Devices, and Associated Equipment*). If back-up lamps are placed on the same horizontal line as the brake lamps and turn signal lamps, they shall be to the inside.

5. Interior lamps. Interior lamps shall be provided which adequately illuminate aisles and step well.

6. Turn signal units. Bus shall be equipped with Class A, flashing turn signal units of heavy-duty type. These signals shall be

independent units equipped with amber lenses on all faces. The turn signals/directional signal units shall activate only when ignition is in "on" position. A pilot light or lights shall indicate when these lights are activated. The front lights shall be mounted near the front corners of chassis on each side. The rear lights shall be seven inches in diameter, or if a shape other than round, the lights must be 38 square inches in area and mounted not less than six nor more than 18 inches from plane of the side of the body and not less than six nor more than 18 inches below D-glass in rear of body. They shall be on the same horizontal line with the stop and tail lights required in 3 above.

a. In addition to the turn signals described above, two amber lenses metal turn signal lamps of armour-type with a minimum of four candlepower each shall be mounted on the body side at approximate seat level height and located just to the rear of the entrance door on the right side of the body and approximately the same location on the left side. They are to be connected to and function with the regular turn signal lamps. Such lamps shall provide 180^{o} angle vision and if painted, they shall be black.

b. Exception: Type A – Turn signals shall be chassis manufacturer's standard.

7. Hazard warning signal. The turn signal units shall also function as the hazard warning system. The system shall operate independently of the ignition switch and, when energized, shall cause all turn signal lamps to flash simultaneously.

8. Reflex reflectors. (Class A) Two amber lights and two amber reflectors (they may be combined) shall be mounted, one on each side, near the front of the chassis. Two three-inch red reflectors shall be mounted, one on each side near the rear of the body and two three-inch red reflectors shall be mounted on the rear above the bumper. Two intermediate amber three-inch reflectors, one on each side near the middle of the bus, shall be mounted on buses 30 feet or more in length. They shall be mounted in accordance with FMVSS 108 (*Lamps, Reflective Devices, and Associated Equipment*).

9. School bus traffic warning lights.

a. A non-sequential system for the traffic warning lights shall be installed that allow the red traffic warning lights to

activate when the door opens. When doors close all lights shall immediately deactivate.

b. Buses shall be equipped with four red lights and four amber lights. One amber light shall be located near each red light, at the same level, but closer to the vertical centerline of the bus. All lights shall comply with SAE standards for school bus warning lamps.

c. The traffic warning light system shall be wired so that the amber lights are activated manually by a hand operated switch. When door is opened, amber lights will automatically deactivate and red traffic warning lights, warning sign with flashing lights and crossing control arm shall be activated. When door is closed, all lights shall be deactivated. There shall be a rocker style momentary switch that when depressed and released deactivates the red traffic warning lights, crossing arm and stop arm. The driver need not depress or reactivate the switch in any way for the continued operation of the non-sequential system. This feature will allow for railroad crossing operations and momentary deactivation in the case that the lights are activated and no stops need to be made. There shall also be a control switch that would allow for deactivation of this feature during maintenance operation. These switches shall be labeled according to their functions and shall meet standards of FMVSS 101 (*Controls and Displays).*

d. The control circuit shall be connected to the cold side of the ignition switch with the master push button cancel switch mounted on the accessory console, clearly distinguished, visible and accessible to the driver.

e. The flasher and the relay shall be fastened in a compartment in the driver area and be easily accessible for servicing. The location of the flasher shall be approved by the Department of Education.

f. System shall contain an amber pilot light for amber lamps and a red pilot light for red lamps, clearly visible to the driver, to indicate when system is activated.

g. A black border 1 ¼ to 3 inches wide shall be painted around the lights and must be equipped with a black painted hooded housing.

h. All electrical connections shall be soldered or connected by an acceptable SAE method.

i. All switches and pilot lights shall be properly identified by labels.

j. There shall be an interrupt feature in the system to interrupt the traffic warning sign and the crossing control arm when their use is not desired. This feature shall consist of a double throw relay and a momentary switch.

k. Manual switch, cancel switch and interrupt switch shall be momentary switches.

l. There shall be no controls and/or switches located in the steering wheel for operation of any system except controls and/or switches of the horn or optional cruise control. All controls and/or switches shall be labeled according to their function and shall meet the standards of FMVSS 101 (*Controls and Displays).*

NOTE: Cruise control option is for activity buses only.

m. Option: Additional side-mounting warning lights for school divisions approved for participation in the Board of Education's approved pilot program. Additional warning lights may be mounted on the front sides of the school bus above the entrance door and the driver's window. Lights shall work in conjunction with the standard warning light system and shall meet FMVSS and SAE standards or must be of a type approved by the Virginia State Police.

Optional Equipment

a. Fog lights – Must be mounted by the manufacturer, meet FMVSS requirements and comply with Virginia Code.

10. School bus traffic warning sign must conform to FMVSS 131 (*School Bus Pedestrian Safety Devices*).

a. Warning sign shall be mounted on the left side near the front of the bus immediately below the window line.

b. Sign shall be of the octagon series, 18 inches in diameter, and be equipped with wind guard. The sign shall have a red background with a ½ inch white border, and the word

"STOP" on both sides in white letters, six inches high and one inch wide. The sign shall be reflective.

c. Sign shall have double-faced alternately flashing red lights, four inches in diameter, located at the top and bottom most portions of the sign, one above the other.

d. The sign shall be connected and energized through the red traffic warning lamps.

e. Air operated signs require air pressure regulator in addition to control valve. Source of supply shall be the main air tank with a pressure protection valve at the tank.

f. Sign and components shall comply with all provisions of SAEJ 1133.

g. A second school bus traffic warning sign on the left side near the rear of the bus, may be mounted on all ~~64~~ 65, or larger sized passenger Type C and D school buses.

11. School Bus Crossing Control Arm.

~~a. An approved crossing control arm shall be mounted on the right end of the front bumper with mounting brackets appropriate for the bumper configuration.~~

~~b. The arm shall be activated in conjunction with the traffic warning sign.~~

~~c. The arm when in the stored position shall have a magnetic or other suitable latch to secure the arm against the bumper.~~

~~d. Source of supply for air-operated arms shall be the main air supply tank with pressure protection valve at tank.~~

~~e~~ a. Appropriate grommets or a loom shall be used where wires or tubes go through holes in bumper and firewall.

~~f~~ b. School buses shall be equipped with a crossing control arm mounted on the right side of the front bumper. When opened, this arm shall extend in a line parallel to the body side and aligned with the right front wheel.

~~g~~ c. All components of the crossing control arm and all connections shall be weatherproofed.

~~h~~d. The crossing control arm shall incorporate system connectors (electrical, vacuum or air) at the gate and shall be easily removable to allow for towing of the bus. Source of supply for air-operated arms shall be the main air supply tank with pressure protection valve at tank.

~~i~~ e. The crossing control arm shall be constructed of non-corrodible or nonferrous material.

~~j~~ f. There shall be no sharp edges or projections that could cause injury or be a hazard to students. The end of the arm shall be rounded.

~~k~~ g. The crossing control arm shall extend a minimum of 70 inches (measured from the bumper at the arm assembly attachment point) when in the extended position. The crossing control arm shall not extend past the end of the bumper when in the stowed position.

~~i~~ h. The crossing control arm shall extend simultaneously with the traffic warning sign(s) and shall be connected and energized through the traffic warning lamps.

~~a. An automatic recycling interrupt switch may be installed for temporarily disabling the crossing control arm.~~

~~j~~ i. The assembly shall include a device attached to the bumper near the end of the arm to automatically retain the arm while in the stowed position. That device shall not interfere with normal operations of the crossing control arm.

12. Strobe Warning Light.

Each bus shall be equipped with a white flashing strobe light meeting the following requirements:

1. Shall have self-contained power supply.

2. Construction: Base shall be Lexan™ or other polycarbonate or corrosion resistant metallic material. Lens shall be clear Lexan™ or other polycarbonate material or equal or better strength, resilience, and durability. Unit shall be sealed to protect against intrusion of dust and moisture. All external fasteners including mounting screws shall

be stainless steel. Unit shall have mounting gasket to isolate the light assembly from vibration.

3. Electrical characteristics: Shall have a flash energy of minimum 8 joules. Shall have 80 (plus or minus 10) single or double flashes per minute. Shall have integral fuse or circuit breaker protection and reverse polarity protection. Maximum current draw shall be 2 amperes at 12 volts.

4. Dimensions and location: Overall height of unit shall be approximately 4 inches to 6 inches, with lens diameter approximately 4 inches to 6 inches. Mounting location is to be centered (laterally) on roof of bus, approximately 48 inches (longitudinally) from rear edge of rear roof cap.

5. SAE specifications: Shall meet SAE J575 and J1318.

6. Body circuitry: Shall include a separate, clearly labeled driver's panel mounted switch, with a clearly labeled pilot light.

~~56.~~57. Metal Treatment.

A. All metal parts that will be painted shall be chemically cleaned, etched, zinc-phosphate-coated, and zinc-chromate or epoxy-primed or conditioned by equivalent process.

~~57.~~58. Mirrors.

A. Interior rear view mirror at least 6 x 30 inches, metal encased safety glass of at least 1/8 inch thickness, which will afford good view of pupils and roadway to rear and shall be installed in such a way that vibration will be reduced to a minimum. It shall have rounded corners and protected edges.

B. Exception: Type A - Interior mirror to be 6 x 16 inches.

C. All buses shall have a mirror system that conforms to FMVSS 111 (*Rearview Mirrors*), 49 CFR § 271.111 as amended.

D. Thermostatically controlled heated exterior mirrors are permissible.

E. Motorized exterior mirrors may be used.

~~58.~~59. Mounting.

A. Chassis frame shall extend to rear edge of rear body cross member. Bus body shall be attached to chassis frame in such manner as to prevent shifting or separation of body from chassis under severe operating conditions.

B. Body front shall be attached and sealed to chassis cowl in such manner as to prevent entry of water, dust, and fumes through joint between chassis cowl and body.

C. Insulating material shall be placed at all contact points between body and chassis frame on Types A, B, C and D buses. Insulating material shall be approximately ¼ inch thick and shall be so attached to chassis frame or body member that it will not move under severe operating conditions.

~~59.~~60. Openings.

A. Any openings in body or front fenders of chassis resulting from change necessary to furnish required components shall be sealed. (See Item ~~22~~ 23 and Item ~~40~~ 41 i and Item ~~41~~ 42j.)

~~60.~~61. Overall Length.

A. Overall length of bus shall not exceed 40 feet when measured from bumper to bumper.

~~61.~~62. Overall Width.

A. Overall width of bus shall not exceed 100 inches, including traffic-warning sign in closed position. Outside rearview mirrors are excluded.

~~62.~~63. Rub Rails.

A. There shall be one rub rail located on each side of the bus at seat cushion level which extends from the rear side of the entrance door completely around the bus body (except the emergency door or any maintenance access door) to the point of curvature near the outside cowl on the left side, or to the front corner of the bus body.

B. There shall be one additional rub rail located on each side at, or no more than 10 inches above, the floor line. The rub rail shall cover the same longitudinal area as the upper rub rail, except at the wheel housings, and it shall extend only to the radii of the right and left rear corners.

C. Both rub rails shall be attached at each body post and at all other upright structural members.

D. Each rub rail shall be four inches or more in width in their finished form, shall be constructed of 16-gauge steel or suitable material of equivalent strength and shall be constructed in corrugated or ribbed fashion.

E. Both rub rails shall be applied outside the body or outside body posts. (Pressed-in or snap-on rub rails do not satisfy this requirement.) For Type A-1 vehicles using the body provided by the chassis manufacturer or for types A-2, B, C and D using the rear engine compartment, rub rails need not extend around the rear corners.

F. There shall be a rub rail or equivalent bracing located horizontally at the bottom edge of the body side skirts.

~~63.~~64. Seat Belt for Driver.

A. A locking retractor type 2-lap belt/shoulder harness seat belt shall be provided for the driver. Each belt section shall be booted so as to keep the buckle and button-type latch off the floor and within easy reach of the driver. Belt shall be anchored in such a manner or guided at the seat frame so as to prevent the driver from sliding sideways from under the belt.

~~64.~~65. Seats.

A. All seats shall have minimum cushion depth of ~~14~~ 15 inches.

B. In determining seating capacity of bus, allowable average rump width shall be 13 inches. (See Item 36.)

~~C. All seats shall conform to FMVSS 222 (*School Bus Passenger Seating and Crash Protection*).~~

~~D.~~C. Seating plans for buses with wheelchair positions - see Item 92A. All school bus seating shall be of a three-to-three arrangement with the exception of the last row seat to the left of any rear emergency door. This seat shall meet the standards set forth in FMVSS 222 for last row seating and ingress and egress of standards of FMVSS 217 for emergency door and aisle clearance at that position. There shall be provided a full width barrier in front of each seating position. Type D, Rear engine buses shall be exempt from the last row requirements.

Exception – Type A – 16 passenger may have two-to-two seating arrangement, with 30 inch seats.

~~E.~~D. Floor track seat securement may be used and the manufacturer shall supply minimum and maximum seat spacing dimensions (applicable to the bus) which comply with FMVSS No 222. This information shall be on a label permanently affixed to the bus.

~~F.~~E. Passenger seat cushion retention system shall meet FMVSS 222.

~~G.~~F. No bus shall be equipped with jump seats or portable seats.

~~H.~~G. Seat spacing shall meet FMVSS 222 (*School Bus Passenger Seating and Crash Protection*).

~~I.~~H. Seat and back cushions of all seats shall be designed to safely support designated number of passengers under normal road conditions encountered in school bus service. Covering of seat cushions shall be of material having 42 ounce finished weight, 54-inch width, and finished vinyl coating of 1.06 broken twill. Material on polyester drill and polyester cotton twill knit backing with equal vinyl coating which meets or exceeds the laboratory test results for the 42 ounce 1.06 covering may be used. Padding and veering on all seats shall comply with provisions of FMVSS 302 (*Flammability of Interior Materials*), 49 CFR § 571.302.

~~J.~~I. Minimum distance between steering wheel and backrest of driver's seat shall be 11 inches. ~~Driver's seat shall have fore-and-aft adjustment of not less than four inches and up and down adjustment of three inches. It shall be manually adjustable and strongly attached to floor.~~

The driver's seat supplied by the body manufacturer shall be a high back seat. The seat back shall be adjustable to 15 degrees minimum, without requiring the use of tools. The seat shall be equipped with a head restraint to accommodate a 5th percentile female to a 95th percentile adult male, as defined in FMVSS No. 208, Occupant Crash Protection.

Type A buses may utilize the standard driver's seat provided by the chassis manufacturer.

~~K.~~J. Minimum of 36-inch headroom for sitting position above top of undepressed cushion line of all seats shall be provided. Measurement shall be made vertically not more than seven inches from sidewall at cushion height and at fore-and-aft center of cushion.

~~L.~~K. Backs of all seats of similar size shall be of same width at top and of same height from floor and shall slant at same angle with floor.

~~M.~~L. Seat back heights shall be between 24 and 27 inches measured from seating reference point.

Exception: Seats with optional child safety restraining systems shall comply with FMVSS 222 (*School Bus Passenger Seating and Crash Protection*).

~~65.~~66. Barrier.

A. A padded barrier shall be installed at rear of driver's seat in such a position as not to interfere with adjustment of driver's seat.

B. A padded barrier shall be installed at rear of entrance step well. Barrier to coincide with length of the right front seat cushion with minimum width of 26 inches and shall have a modesty panel to extend from bottom of barrier to floor.

C. All restraining barriers and passenger seats shall be constructed with materials that enable them to meet the criteria of the School Bus Seat Upholstery Fire Block Test. Padding and veering shall comply with provisions of FMVSS 302 (*Flammability of Interior Materials*), 49 CFR § 571.302.

~~66.~~67. Steps.

A. First step at service door shall be not less than 10 inches and not more than 16 inches from ground, based on standard chassis specifications.

B. Service door entrance may be equipped with two-step or three-step step well. Risers in each case shall be approximately equal.

C. Steps shall be enclosed to prevent accumulation of ice and snow.

D. Steps shall not protrude beyond side bodyline.

E. Grab handle not less than 20 inches in length shall be provided in unobstructed location inside doorway, but shall not be attached so that it will interfere with the opening of the glove compartment door. This handle shall be designed to eliminate exposed ends that would catch passenger clothing and shall be so placed in a position to aid small children entering the bus.

F. Step covering. All steps, including the floor line platform area, shall be covered with an elastomer floor covering having a minimum overall thickness of 0.187 inch.

1. The step covering shall be permanently bonded to a durable backing material that is resistant to corrosion.

2. Steps, including the floor line platform area, shall have a 1 ½ inch nosing that contrasts in color by at least 70 percent measured in accordance with the contrasting color specification in 36 CFR, Part 1192, ADA, *Accessibility Guidelines for Transportation Vehicles.*

3. Step treads shall have the following characteristics:

   a. Abrasion resistance: Step tread material weight loss shall not exceed 0.40 percent, as tested under ASTM D-4060, *Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser,* (CS-17 Wheel, 1,000 gram, 1,000 cycle)

   b. Weathering resistance: Step treads shall not break, crack, or check after ozone exposure (7 days at 50 phm at 40 degrees C) and Weatherometer exposure (ASTEM D-750, Standard Test method for Rubber Deterioration in Carbon-Arc Weathering Apparatus, 7 days)

   c. Flame resistance: Step treads shall have a calculated burn rate of .01 or less using the test methods, procedures and formulas listed in FMVSS No. 302 (*Flammability of Interior Materials).*

G. There shall be a "no-smoking" sign placed on the top step riser of the entrance step well. The letters shall be red in color with a white background and a length of 9 ½ inches and lettering height of 1 ¼ inches.

~~67.~~68. Stirrup Steps.

A. If the windshield and lamps are not easily accessible from the ground, there may be at least 1 folding stirrup step or recessed foothold installed on each side of the front of the body for easy accessibility for cleaning. There also may be a grab handle installed in conjunction with the step. Steps are permitted in or on the front bumper in lieu of the stirrup steps if the windshield and lamps are easily accessible for cleaning from that position.

~~68.~~69. Storage and Luggage Compartments.

A. Vehicles may be equipped with luggage compartments or tool compartments in the body skirt provided they do not reduce ground clearance to less than 14 ½ inches from bottom of compartment and that the addition of the compartments does not exceed the vehicles' GVWR.

B. Optional: Drivers storage compartment may be above the driver's area and must not impede ingress and egress. It shall not violate any federal safety standard or the *Code of Virginia*.

~~69.~~70. Sun Shield.

A. Interior adjustable transparent sun shield, darkest shade available, not less than 6 x 30 inches shall be installed in position convenient for use by driver.

B. Exception: Type A vehicles – Manufacturer's standard is acceptable.

~~**70. Tail Pipe.**~~

~~A. Tail pipe shall extend to but not more than 2 inches beyond outer edge of rear bumper. (See Item 13 B.)~~

71. Trash Container and Hold Device. (Optional)

A. When requested or used, the trash container shall be secured by a holding device that is designed to prevent movement and to allow easy removal and replacement. It shall be soft, pliable, and installed in an accessible location in the driver's compartment, not obstructing passenger access to the entrance door.

72. Undercoating.

A. Entire underside of bus body, including floor sections, cross members, and below floor line side panels, shall be coated with rust-proofing compound for which compound manufacturer has issued notarized certification of compliance to bus body building that compounds meet or exceed all performance requirements of SAE J1959. ~~Federal Specification TT-C-520 b using modified test procedures for following requirements:~~

~~1. Salt spray resistance – pass test modified to 5.0 percent salt and 1,000 hours.~~

~~2.~~ Abra~~sion resistance – pass.~~

~~3.~~ Fire ~~resistance – pass~~.

B. Undercoating compound shall be applied with suitable airless or conventional spray equipment to the undercoating manufacturer recommend film thickness and shall show no evidence of voids in cured film. Undercoating is expected to prevent rust under all bus service conditions for minimum of five years.

C. The undercoating material shall not cover any exhaust components of the chassis.

73. Ventilation ~~and Air Conditioning~~.

A. Body shall be equipped with suitable, controlled ventilating system of sufficient capacity to maintain proper quantity of air under operating conditions without opening of windows except in extremely warm weather.

B. Static-type, non-closable, exhaust roof ventilators shall be installed in low-pressure area of roof panel.

~~C. Air conditioning units may be installed on an optional basis. Application requires heavier electrical components and assessment by the Department of Education, on an individual unit basis.~~

~~D~~.C. Auxiliary fans shall meet the following requirements:

1. Fans for left and right sides of the windshield shall be placed in a location where they can be adjusted for maximum effectiveness and where they do not obstruct vision to any mirror. Note: Type A buses may be equipped with one fan;

2. Fans shall have 6-inch (nominal) diameter; and

3. Fan blades shall be enclosed in a protective cage. Each fan shall be controlled by a separate switch.

74. Water Test.

A. Each and every school bus body, after it is mounted on chassis ready for delivery, shall be subjected to a thorough water test in which water under pressure equal to a driving rain is forced against the entire bus body from various directions. Any leaks detected are to be repaired before the bus is declared ready for delivery.

75. Wheel Housings.

A. Wheel housings shall be of full open type.

B. Wheel housings shall be designed to support seat and passenger loads and shall be attached to floor sheets in such manner as to prevent any dust or water from entering the body. Wheel housings shall be constructed of 16-gauge (or thicker) steel.

C. Inside height of wheel housings above floor line shall not exceed 12 inches.

D. No part of a raised wheel housing shall extend into the emergency door opening.

E. Wheel housings shall provide clearance for dual wheels as established by National Association of Chain Manufacturers. Mounting of housings in the wheel area must be free of protruding screws and bolts.

F. Exception: Type A vehicles – Standard does not apply to conversion vans.

76. Windshield and Windows.

A. All glass in windshield, windows, and doors shall be of approved safety glass, so mounted that permanent mark is visible, and of sufficient quality to prevent distortion of view in any direction. Windshield shall be AS1 and all other glass shall be AS2.

B. Plastic glazing material of a thickness comparable to AS2 glass, meeting ANSI Standard Z 26.1 and FMVSS 205 (*Glazing Materials*), 49 CFR § 571.205, may be used in side windows behind the driver's compartment.

C. Windshield shall have horizontal shade band consistent with SAE J-100 ~~or have full tinted glass~~ and Code of Virginia.

D. Each full side window shall provide unobstructed emergency opening at least nine inches high and 22 inches wide, obtained either by lowering of window or by use of knock-out type split-sash windows.

E. Approved tinted glass or plastic glazing material may be used consistent with the Code of Virginia.

F. Windshield shall comply with all federal and state regulations.

77. Windshield Washers.

A. Windshield washers meeting federal requirements shall be provided and shall be controlled by a switch accessible to the driver. Reservoir shall be mounted outside passenger compartment.

78. Windshield Wipers.

A. Bus shall be equipped with variable-speed windshield wipers of air or electric-type powered by a motor or motors of sufficient power to operate wipers.

B. Blades and arms shall be of such size that minimum blade length will be 12 inches with longer blades being used whenever possible.

C. The wipers shall meet the requirements of FMVSS 104 (*Windshield Wiping and Washing Systems*).

79. Wiring.

A. All wiring shall conform to current standards of Society of Automotive Engineers.

B. Circuits

1. Wiring shall be arranged in at least 12 regular circuits as follows:

a. Head, tail, stop (brake) and instrument panel lamps

b. Clearance lamps

c. Dome and step well lamps

d. Starter motor

e. Ignition

f. Turn-signal units

g. Alternately flashing red signal lamps

h. Horns

i. Heater and defroster

j. Emergency door buzzer

k. Auxiliary fan

l. Booster pump

2. Any of the above combination circuits may be subdivided into additional independent circuits.

3. Whenever possible, all other electrical functions (such as electric-type windshield wipers) shall be provided with independent and properly protected circuits.

4. Each body circuit shall be color coded or numbered and a diagram of the circuits shall be attached to the body in a readily accessible location.

C. A circuit breaker shall be provided for each circuit except starter motor and ignition circuits.

D. A continuous duty solenoid relay operated by the ignition switch, for Circuits i, j, k, and l.

E. All wires within body shall be insulated and protected by covering of fibrous loom (or equivalent) that will protect them from external damage and minimize dangers from short circuits. Whenever wires pass through body member, additional protection in form of appropriate type of insert shall be provided.

F. All light circuits shall be such as to provide, as nearly as possible, bulb design voltage at light bulb terminals.

G. Buses using multiplexed electrical systems may meet the intent of these specifications without the use of specified equipment, subject to the approval of the Department of Education.

H. There shall be a manual noise suppression switch installed in the control panel. The switch shall be labeled and alternately colored. This switch shall be an on/off type that deactivates body equipment that produces noise, including, at least, the AM/FM radio, heaters, air conditioners, fans and defrosters. This switch shall not deactivate safety systems, such as windshield wipers or lighting systems.

SPECIFICATIONS FOR ACTIVITY BUSES

80. Activity Buses.

A. Activity buses shall meet all Federal Motor Vehicle Safety Standards for school buses except as noted in Items 80.B through 80.F.
(NOTE: Any variation from the specifications, in the form of additional equipment or changes in style of equipment, without prior approval of the DOE, is prohibited.)

B. Identificatio n.

1. The activity bus body shall be identified "Activity Bus", lettered 8 inches in height in the front and rear of the vehicle.

2. The name of the school division or individual school shall be lettered in at least 4 inch height in the beltline area.

3. All lettering and numbering shall be painted or be vinyl decals of a contrasting color of the body and conform to FMVSS and Virginia School Bus Specifications, and shall meet all reflectivity standards.

4. No manufacturer or vendor logos, signs or other items not approved in the Virginia School Bus Specifications shall be displayed.

C. Color.

1. The activity bus shall not be painted NSBY. The local school division may determine the color of the body of the vehicle and the color scheme may utilize up to 2 colors. This combination may be in addition to a white painted roof. It is recommended that light colors be used for the body color to enhance visibility by other vehicles. Markings shall be contrasted against selected colors for ease of identification during periods of reduced visibility other than darkness. NOTE: The NSBY color shall not be used as a part of any color scheme.

D. Lights and Warning Devices.

1. All activity buses shall meet all state and FMVSS for school bus lighting and warning device requirements with the following exceptions:

   a. The 8 lamp, traffic warning light system shall not be equipped.

   b. The flashing lighted stop arm and the crossing control arm shall not be equipped.

E. Seats.

1. Other types of seats and increased spacing, which meet all regulations of FMVSS 222 (*School Bus Passenger Seating and*

Crash Protection) and 302 (*Flammability of Interior Materials*) may be used in lieu of regular school bus seats.

2. Seating on activity buses: Other types of seats and increased spacing may be used provided all provisions of FMVSS 222 (*School Bus Passenger Seating and Crash Protection*), 49 CFR §571.222, are met.

F. Cruise Control.

1. Optional equipment and ~~shall~~ may only be ~~used~~ on activity ~~trips~~ buses and ~~be~~ operated in accordance with regulation speeds.

NOTE: Cruise control option is for activity buses only; not permitted to be on yellow school buses.

SPECIFICATIONS FOR WHEELCHAIR LIFT SCHOOL BUSES

81. General Requirements.

A. School buses or school vehicles designed for transporting children with special transportation needs shall comply with Virginia's standards applicable to school buses and Federal Motor Vehicle Safety Standards as applicable to their GVWR category.

B. Any school bus that is used for the transportation of children, who are confined to a wheelchair or other restraining devices that prohibit use of the regular service entrance, shall be equipped with a power lift, unless a ramp is needed for unusual circumstances.

C. Lift shall be located on the right side of the body, in no way attached to the exterior sides of the bus but confined within the perimeter of the school bus body when not extended.

82. Aisles.

A. All aisles leading to the emergency door from wheelchair area shall be a minimum of 30 inches in width. A wheelchair securement position shall never be located directly in front of (blocking) a power lift door location.

83. Communications.

A. Special education buses shall be equipped with a two-way communication system. (See Item ~~39~~ 40 A.)

84. Fastening Devices.

A. Unless otherwise specified below, fastening devices shall conform to FMVSS 222 (*School Bus Passenger Seating and Crash Protection*), 49 CFR § 571.222, as amended.

1. Wheelchair fastening devices shall be provided and attached to the floor or walls or both to enable securement of wheelchairs in the vehicle. The devices shall be of the type that requires human intervention to unlatch or disengage. The fastening devices shall be designed to withstand forces up to 3,000 pounds per tie down leg or clamping mechanism or 12,000 pounds total for each wheelchair.

2. Additional fastening devices may be needed to assist the student due to the many different configurations of chairs and exceptionalities.

85. Heaters.

A. An additional heater shall be installed in the rear portion of the bus behind wheel wells as required in Item 48 I, except a 50,000 minimum BTU heater may be used in bodies originally designed for 31-66 passenger capacity and 34,000 minimum BTU heaters may be used in bodies of 30 passengers or less. Hose to rear heater, when under body shall be encased in metal tube.

86. Identification.

A. Buses with wheelchair lifts used for transporting children with physical disabilities shall display universal handicapped symbols located on the front and rear of the vehicle below the window line. Such emblems shall be white on blue, shall be a minimum of nine inches and a maximum of 12 inches in size, and shall be of a high-intensity retro reflective material meeting the requirements of Federal Highway Administration (FHWA) FP-85, *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects.* They shall be placed so as not to cover lettering, lamps or glass.

87. Passenger Capacity Rating.

A. In determining the passenger capacity of a school bus for purposes other than actual passenger load (e.g., vehicle classification or various billing/reimbursement models), any location in a school bus intended for securement of a wheelchair during vehicle operation shall be regarded as

four designated seating positions, and each lift area shall count as four designated seating positions.

88. Wheelchair Lift.

A. The wheelchair lift shall be located on the right side of the bus body. Exception: The lift may be located on the left side of the bus if, and only if, the bus is only used to deliver students to the left side of one-way streets.

1. A ramp device may be used in lieu of a mechanical lift if the ramp meets all the requirements of the Americans with Disabilities Act (ADA) as found in 36 CFR §1192.23, *Vehicle ramp*.

2. A ramp device that does not meet the specifications of ADA, but does meet the specifications of paragraph C of this section, may be installed and used, when, and only when, a power lift system is not adequate to load and unload students having special and unique needs. A readily accessible ramp may be installed for emergency exit use. If stowed in the passenger compartment, the ramp must be properly secured and placed away from general passenger contact. It must not obstruct or restrict any aisle or exit while in its stowed or deployed position.

3. All specially equipped school buses shall provide a level-change mechanism or boarding device (e.g., lift or ramp), complying with paragraph B or C of this section, with sufficient clearances to permit a wheelchair user to reach a securement location.

B. Vehicle lift and installation.

1. General: Vehicle lifts and installations shall comply with the requirements set forth in FMVSS 403 (*Platform Lift Systems for Motor Vehicles)*, and FMVSS 404 (*Platform Lift Installations in Motor Vehicles).*

2. Design loads: The design load of the lift shall be at least 800 pounds. Working parts, such as cables, pulleys and shafts, which can be expected to wear, and upon which the lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Non-working parts, such as platform, frame and attachment hardware that would not be expected to wear, shall have a safety factor of at least three, based on the ultimate strength of the material.

3. Lift capacity: The lifting mechanism and platform shall be capable of operating effectively with a wheelchair and occupant mass of at least 800 pounds.

4. Controls: (See 49 CFR 571.403, S6.7, *Control systems.*)

5. Emergency operations: (See 49 CFR 571.403, S6.9, *Backup operation*.)

6. Power or equipment failures: (See 49 CFR 571.403, S6.2.2, *Maximum platform velocity*.)

7. Platform barriers: (See 49 CFR 571.403, S6.4.7, *Wheelchair retention*.)

8. Platform surface: (See 49 CFR 571.403, S6.4.2, S6.4.3, *Platform requirements*.)

9. Platform gaps and entrance ramps: (See 49 CFR 571.403, S6.4.4, *Gaps, transitions and openings*.)

10. Platform deflection: (See 49 CFR 571.403, S6.4.5, *Platform deflection*.)

11. Platform movement: (See 49 CFR 571.403, S6.2.3, *Maximum platform acceleration*.)

12. Boarding direction: The lift shall permit both inboard and outboard facing of wheelchair and mobility aid users.

13. Use by standees: Lifts shall accommodate persons who are using walkers, crutches, canes or braces, or who otherwise have difficulty using steps. The platform may be marked to indicate a preferred standing position.

14. Handrails: (See 49 CFR 571.403, S6.4.9, *Handrails*.)

15. Circuit breaker: A resettable circuit breaker shall be installed between the power source and the lift motor if electrical power is used. It shall be located as close to the power source as possible, but not within the passenger/driver compartment.

16. Excessive pressure: (See 49 CFR 571.403, S6.8, *Jacking prevention*.)

17. Documentation: The following information shall be provided with each vehicle equipped with a lift:

    a. A phone number where information can be obtained about installation, repair and parts. (Detailed written instructions and parts list shall be available upon request.)

    b. Detailed instructions regarding use of the lift shall be readily visible when the lift door is open, including a diagram showing the proper placement and positions of wheelchair/mobility aids on the lift.

18. Training materials: The lift manufacturer shall make training materials available to ensure the proper use and maintenance of the lift. These may include instructional videos, classroom curriculum, system test results or other related materials.

19. Identification and certification: Each lift shall be permanently and legibly marked or shall incorporate a non-removable label or tag that states it conforms to all applicable requirements of the current National School Transportation Specifications and Procedures. In addition and upon request of the original titled purchaser, the lift manufacturer or an authorized representative shall provide a notarized Certificate of Conformance, either original or photocopied, which states that the lift system meets all the applicable requirements of the current National School Transportation Specifications and Procedures.

~~C. Vehicle ramp~~

~~1. If a ramp is used, it shall be of sufficient strength and rigidity to support the special device, occupant and attendant(s). It shall be equipped with a protective flange on each longitudinal side to keep the special device on the ramp.~~

~~2. The surface of the ramp shall be constructed of nonskid material.~~

~~3. The ramp shall be equipped with handles and shall be of weight and design to permit one person to put the ramp in place and return it to its storage place.~~

~~4. Ramps used for emergency evacuation purposes may be installed in raised floor buses by manufacturers. They shall not be installed as a substitute for a lift when a lift is capable of serving the need.~~

89. Ramps.

A. When a power lift system is not adequate to load and unload students having special and unique needs, a ramp device may be installed.

1. If a ramp is used, it shall be of sufficient strength and rigidity to support the special device, occupant, and attendants. It shall be equipped with a protective flange on each longitudinal side to keep special device on the ramp.

2. Floor of ramp shall be of nonskid construction.

3. Ramp shall be of weight and design, and equipped with handles, to permit one person to put ramp in place and return it to its storage place.

90. Regular Service Entrance.

A. In Type D vehicles, there shall be three step risers, of equal height, in the entrance well.

B. An additional foldout step may be provided which will provide for the step level to be no more than six inches from the ground level.

C. Three step risers in Type C vehicles are optional.

91. Restraining Devices.

A. Seat frames may be equipped with attachments or devices to which restraining harnesses or other devices may be attached. Attachment framework or anchorage devices, if installed, shall conform to FMVSS 210 (*Seat Belt Assembly Anchorages*), 49 CFR § 571.210, and FMVSS No. 213 (*Child Restraint Systems*).

92. Seating Arrangements.

A. Flexibility in seat arrangements to accommodate special devices shall be permitted due to the constant changing of passenger requirements. All seating shall meet the requirements of FMVSS 222 (*School Bus Passenger Seating and Crash Protection).*

B. There shall be a padded barrier forward of any standard seating position and between lift-gate and first seat to rear of lift-gate. A wheelchair position immediately forward of lift-gate shall have a barrier between lift and wheelchair. (See Item ~~65~~ 66.)

93. Special Light.

A. Lights shall be placed inside the bus to sufficiently illuminate lift area and shall be activated from door area. An outside light to be activated when lift door is open and deactivated when lift door is closed is permissible.

94. Special Service Entrance.

A. Bus bodies may have a special service entrance constructed in the body to accommodate a wheelchair lift for the loading and unloading of passengers.

B. The opening to accommodate the special service entrance shall be at any convenient point on the right (curb side) of the bus and far enough to the rear to prevent the doors, when open, from obstructing the right front regular service door (excluding a regular front service door lift).

C. The opening shall not extend below the floor level. Outboard type lifts shall be used.

D. The opening, with doors open, shall be of sufficient width to allow the passage of wheelchairs. The minimum clear opening through the door and the lift mechanism shall be 30 inches in width.

E. A drip molding shall be installed above the opening to effectively divert water from entrance.

F. Entrance shall be of sufficient width and depth to accommodate various mechanical lifts and related accessories as well as the lifting platform.

G. Doorposts and headers from entrance shall be reinforced sufficiently to provide support and strength equivalent to the areas of the side of the bus not used for service doors.

H. Special service entrance doors shall be equipped with padding at the top edge of the door opening. Pad shall be at least three inches wide and one inch thick and extend the full width of the door opening.

95. Special Service Entrance Doors.

A. A single door of a minimum 43 inches may be used.

B. All doors shall open outwardly.

C. All doors shall have positive fastening devices approved by Pupil Transportation Services to hold doors in the open position.

D. All doors shall be weather sealed and on buses with double doors, they shall be so constructed that a flange on the forward door overlaps the edge of the rear door when closed.

E. When dual doors are provided, the rear door shall have at least a one-point fastening device to the header. The forward mounted door shall have at least three-point fastening devices. One shall be to the header, one to the floor line of the body, and the other shall be into the rear door. These locking devices shall afford maximum safety when the doors are in the closed position. The door and hinge mechanism shall be of a strength that will provide for the same type of use as that of a standard entrance door.

F. Door materials, panels, and structural strength shall be equivalent to the conventional service and emergency doors. Color, rub rail extensions, lettering and other exterior features shall match adjacent sections of the body.

G. Each door shall have windows set in a waterproof manner compatible within one inch of the lower line of adjacent sash.

H. Doors shall be equipped with a device that will actuate a flashing visible signal located in the driver's compartment when doors are not securely closed and ignition is in "on" position. A cluster light "LIFT" is allowed.

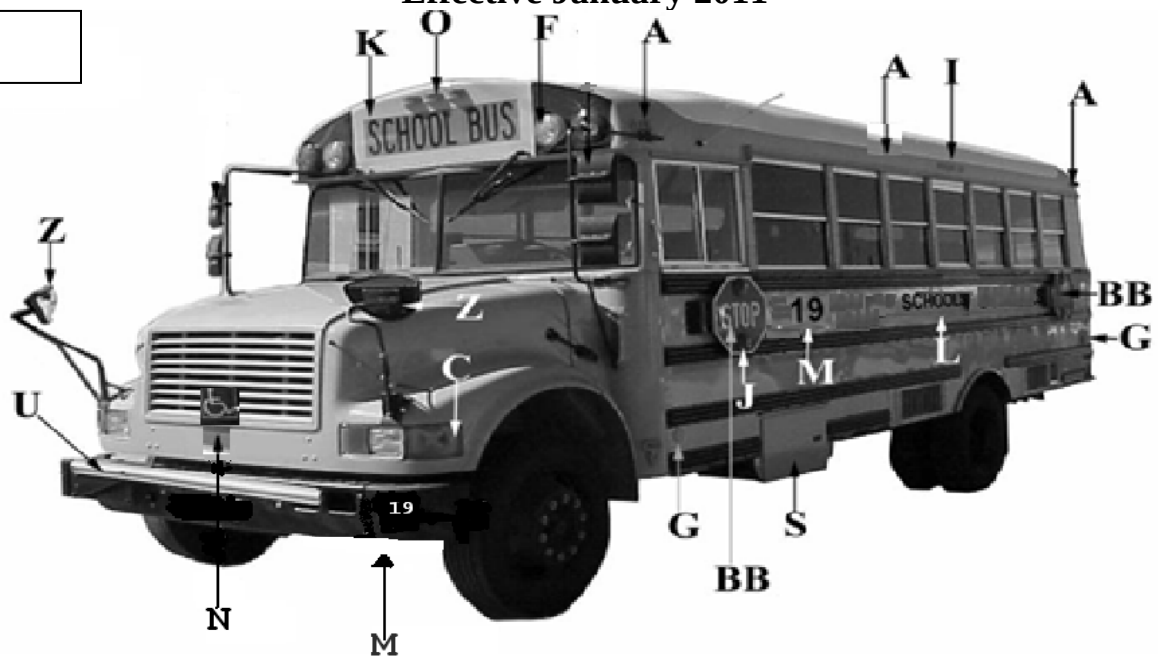
I. A switch shall be installed so that the lifting mechanism will not operate when the lift platform doors are closed.

96. Special Optional Equipment.

A. Special seats for attendants may be installed on an optional basis. The location, restraints, and so forth shall be assessed and approved on an individual unit basis. All equipment shall be secured properly.

Virginia School Bus Specifications
Effective January 2011

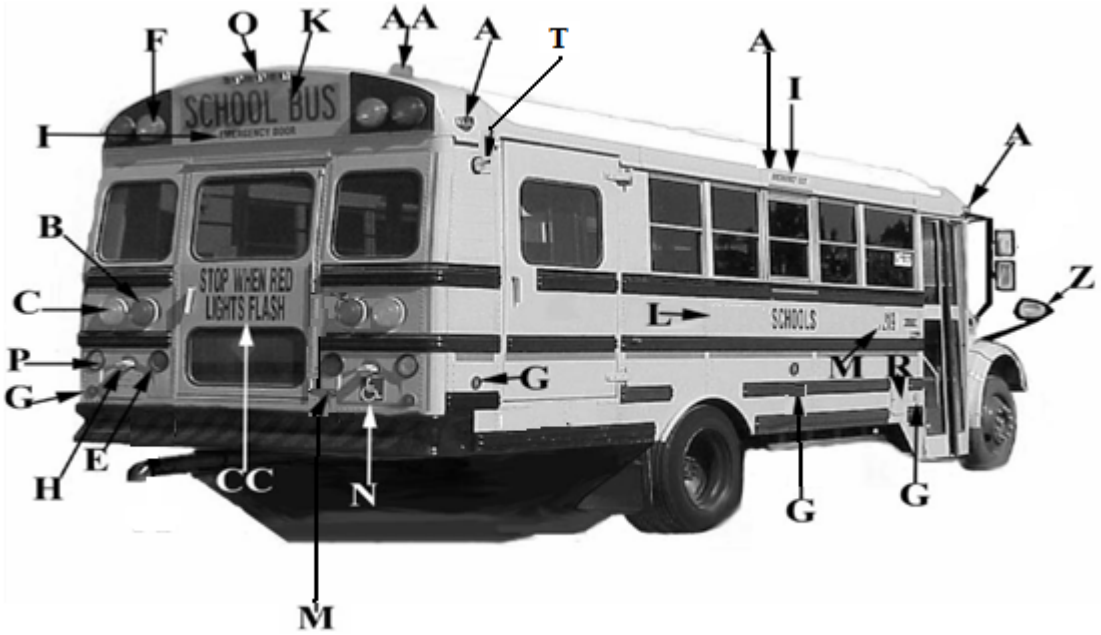
Diagram 1



MINIMUM LETTERING AND LIGHTING REQUIREMENTS

A	Clearance lights (see item 56 A(1))	L	Name of Division (see item 51 A(3))
BB	Octagonal Stop Arm (2nd optional-see item 56-10(g))	M	Bus Numbers (see item 51 A(2))
C	Front Turn Signals, (amber lenses)	N	Universal Handicapped Symbol, Wheelchair Lift Equipped Buses (see item 86)
F	Pupil Warning Lights, Side By Side Amber and Red, Flat Back Design Quartz Halogen Bulb	O	Identification Lamps
G	Reflectors (see item 56 A(8))	S	Battery Box (see item 51 A (5c))
I	Emergency Exit	U	Pupil Crossing Arm
J	Double Faced Flashing Red Lights	Z	Cross/Side View Mirror System
K	SCHOOL BUS, Front And Rear, 8 inch letters on retroflective yellow background		

Diagram 2



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MINIMUM LETTERING AND LIGHTING REQUIREMENTS

A	Clearance lights (see item 56 A(1))	M	Bus Numbers (see item 51 A(2))
B	Seven inch Tail Lights	N	Universal Handicapped Symbol, Wheelchair Lift Equipped Buses (see item 86 *for exact size and location*)
C	Seven Inch Turn Signals (amber lenses)	O	Identification Lamps
E	4 inch Stop / Tail Lights	P	Back-up Lights
F	Pupil Warning Lights, Side By Side Amber and Red, Flat Back Design Quartz Halogen Bulb	R	Fuel Door (see item 51 A(4))
G	Reflectors (see item 56 A(8))	T	Wheelchair Lift Landing Light (see item 93(A))
H	License Plate Lamp	Z	Cross/Side View Mirror System
I	Emergency Exit Signs	AA	Roof-mounted White Flashing Strobe Light
K	SCHOOL BUS, Front And Rear, 8 inch letters on retroflective yellow background	CC	Rear Door Lettering (optional see item 51 A 5 (e))
L	Name of Division (see item 51 A(3))		

Addendum

~~Air Conditioning (Optional).~~

~~The following specifications are applicable to all types of school buses that may be equipped with air conditioning.~~

~~1. Performance Specifications.~~

~~The installed air conditioning system should cool the interior of the bus from 100 degrees to 80 degrees Fahrenheit, measured at three points (minimum) located four feet above the floor on the longitudinal centerline of the bus. The three required points shall be: (1) near the driver's location, (2) at the longitudinal midpoint of the body, and (3) two feet forward of the emergency door, or for Type D rear-engine buses, 2 feet forward of the end of the aisle.~~

~~The test conditions under which the above performance must be achieved shall consist of (1) placing the bus in a room (such as a paint booth) where ambient temperature can be maintained at 100 degrees Fahrenheit; (2) soaking the bus at 100 degrees Fahrenheit with windows open for at least one hour; and (3) closing windows, turning on the air conditioner with the engine running at the chassis manufacturer's recommended low idle speed, and cooling the interior of the bus to 80 degrees Fahrenheit, or lower, within 30 minutes while maintaining 100 degrees Fahrenheit outside temperature.~~

~~Alternately, and at the user's discretion, this test may be performed under actual summer conditions, which consist of temperatures above 85 degrees Fahrenheit, humidity above 50 percent with normal sun loading of the bus and the engine running at the engine manufacturer's recommended low idle speed. After a minimum of one hour of heat-soaking, the system shall be turned on and must provide a minimum of a 20 degree temperature drop in the 30 minute time limit.~~

~~The manufacturer shall provide facilities for the user or user's representative to confirm that a pilot model of each bus design meets the above performance requirements.~~

MINIMUM SPECIFICATIONS FOR SCHOOL BUS CHASSIS TO MEET REQUIREMENTS OF VIRGINIA BOARD OF EDUCATION

Minimum Chassis Specification Chart Type A Bus			
Maximum Design (Passenger) Capacity		16	24
GVWR (Pounds) (Minimum)		10,000 lbs	10,000 lbs
Minimum engine size Electronic speed limiter set to maximum of 60 MPH	**diesel engines**	6.0 Liter	6.0 Liter
	gasoline engines	5.4 Liter	5.4 Liter
Wheelbase (inches)		139 139	
Minimum fuel tank, gallons		30 gallons	30 gallons
Minimum	**Tires***	See Item 28	See Item 28
	Rims	Disc 6.0 X 16	Disc 6.0 X 16
Minimum Transmission Specifications		4 speed automatic	4 speed automatic
Alternators amps		130	130
Frame		Per standards for severe duty	Per standards for severe duty
Steering		Power-meeting Virginia Specification	Power-meeting Virginia Specification
Front Bumper		Heavy duty painted black	Heavy duty painted black
Brakes		Power, with anti-lock brakes system	Power, with anti-lock brakes system
Suspension		Per standards for severe duty	Per standards for severe duty
Drive Shaft		Grease fittings on all shafts, guards on all shafts	Grease fittings on all shafts, guards on all shafts
Fuel Tank		30 gallons (see item 16)	30 gallons (see item 16)
Air Cleaner		Per engine manufacturer specifications w/restrictor indicator	Per engine manufacturer specifications w/restrictor indicator
Oil Filter		Replaceable, 1 quart	Replaceable, 1 quart
Battery		600 CCA	600 CCA
Horn		Dual Electric	Dual Electric
Lights		Per FMVSS and daytime running lights	Per FMVSS and daytime running lights
Gauges		Speedometer, tachometer, fuel, oil pressure, coolant temp, and voltmeter	Speedometer, tachometer, fuel, oil pressure, coolant temp, and voltmeter

Minimum Chassis Specification Chart Type A Bus		
Maximum Design (Passenger) Capacity	16	24
Color	Frame, wheels, bumper, rails and letterings-black; balance yellow	Frame, wheels, bumper, rails and letterings-black; balance yellow

1. 16 Passenger Base Bus (Gasoline Engine – must have automatic fire ~~extinguisher~~ suppression system – V8 – Min)

2. 16 Passenger Base Bus (Diesel Engine)

3. 24 Passenger Base Bus (Gasoline Engine – must have automatic fire ~~extinguisher~~ suppression system – V8 – Min)

4. 24 Passenger Base Bus (Diesel Engine)

Maximum Design (Passenger) Capacity	Type C1 Bus 30	35	53	65	71	77
GVWR (lbs.)	17,500 21,000		25,000	27,500	29,000	31,000
Wheels	8-STUD DISC 19.5" X 6.75"	8-STUD DISC 22.5" X 6.75"	8-STUD DISC 22.5" X 6.75"	10-Stud Disc 22.5" X 7.75"	10-Stud Disc 22.5" X 7.75"	10-Stud Disc 22.5" X 8.25"
Tires	9R22.5 (1)	9R22.5 (1)	9R22.5 (1)	10R22.5(1)	10R22.5(1)	11R22.5(1)
Frame	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS
Steering	Power (2)	Power (2)	Power (2)	Power (2)	Power (2)	Power (2)
Front Bumper	3/16 Steel	3/16 Steel	3/16 Steel	3/16 Steel	3/16 Steel	3/16 Steel
Front Axle	7,000 lbs	6,000 lbs	8,000 lbs	10,000 lbs	10,000 lbs	10,000 lbs
Rear Axle	10,500 lbs	15,000 lbs	17,000 lbs	17,500 lbs	19,000 lbs	21,000 lbs
Service brake:						
Hydraulic	Hydraulic Disc w/abs	Hydraulic Disc w/abs(3)	Hydraulic Disc w/abs(3)			
Air	13.2	CMF Compressor/Air dryer(3)	13.2 CMF Compressor/Air dryer(3)	13.2 CMF Compressor/Air dryer	13.2 CMF Compressor/Air dryer	13.2 CMF Compressor/Air dryer

(1) Load range meeting TRA standards for required gawr.

(2) Power – Meeting Virginia specification

(3) Hydraulic (w/ Allison 2200 pts only) Full Air (5 speed direct or Allison 2100 pts only)

Maximum Design (Passenger) Capacity	Type C1 Bus 30	35	53	65	71	77
Suspension	Frt. Springs 7,000 lbs. Ea @ grd. Rear Springs 10,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 3,000 lbs. Ea @ grd. Rear Springs 7,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 7,000 lbs. Ea @ grd. Rear Springs 10,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 5,000 lbs. Ea @ grd. Rear Springs 8,750 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 5,000 lbs. Ea @ grd. Rear Springs 9,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 5,000 lbs. Ea @ grd. Rear Springs 10,500 lbs. Ea @ grd Frt. and rear shock absorbers
Engine	175 H.P.*	175 H.P.*	175 H.P.*	175 H.P.*	190 H.P*	210 H.P*
Transmission (Allison)	5 Speed Direct, 1,000 PTS	5 Speed Direct, 2,200 or 2,100 pts**	5 Speed Direct, 2,100 or 2,200 pts**	5 Speed Direct or 2,500 pts	2,500 PTS	2,500 PTS
Drive Shaft	Guards on all shafts	Guards on all shafts	Guards on all shafts	Guards on all shafts	Guards on all shafts	Guards on all shafts
Fuel tank (min size)	30	30	30	30	30	30
Air cleaner	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge
Alternator	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits
Horn	Per FMVSS	Per FMVSS	Per FMVSS	Per FMVSS	Per FMVSS	Per FMVSS

*** (ENGINE) Electronic speed limiter set to maximum of 60 mph.**
**** See Brake Item 5.**

Maximum Design (Passenger) Capacity	Type C1 Bus 30	35	53	65	71	77
Lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights
Gauges	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure as required	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure as required	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure
Color	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non gloss black. The balance yellow
Oil Filter	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer
Battery	750 cca	750 cca	750 cca	750 cca	750 cca	750 cca

Minimum Chassis Specification Chart

TYPE D Front Engine Transit Bus

Maximum Design (Passenger) Capacity	42 & 53	65	71	77	83
GVWR (lbs.)	27,800	29,000 29,000		32,000	32,000
Wheels	10-Stud Disc 22.5" X 7.5"	10-Stud Disc 22.5" X 7.5"	10-Stud Disc 22.5" X 7.5"	10-Stud Disc 22.5" X 8.25"	10-Stud Disc 22.5" X 8.25"
Tires	11R22.5(1)	11R22.5(1)	11R22.5(1)	11R22.5(1)	11R22.5(1)
Frame	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS
Steering	Power (2)	Power (2)	Power (2)	Power (2)	Power (2)
Front Bumper	3/16 Steel	3/16 Steel	3/16 Steel	3/16 Steel	3/16 Steel
Front Axle	10,800 lbs	12,000 lbs	12,000 lbs	13,000 lbs	13,000 lbs
Rear Axle	17,000 lbs	17,000 lbs	17,000 lbs	19,000 lbs	19,000 lbs
Service brakes:					
Air	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear
Suspension	Frt. Springs 5,400 lbs. Ea @ grd. Rear Springs 8,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 6,000 lbs. Ea @ grd. Rear Springs 8,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 6,500 lbs. Ea @ grd. Rear Springs 9,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 6,500 lbs. Ea @ grd. Rear Springs 9,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 6,500 lbs. Ea @ grd. Rear Springs 9,500 lbs. Ea @ grd Frt. and rear shock absorbers
Engine	190 H.P*	190 H.P*	190* 210*		210*
Transmission (Allison)	2,500 PTS	2,500 PTS	2,500 PTS	2,500 PTS	3,000 PTS
Drive Shaft	Guards on all shafts	Guards on all shafts	Guards on all shafts	Guards on all shafts	Guards on all shafts
Fuel tank (min size)	30	30	30	30	30
Air cleaner	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge
Alternator	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits
Horn	Per FMVSS	Per FMVSS	Per FMVSS	Per FMVSS	Per FMVSS

(1) Load range meeting TRA standards for required gawr.
(2) Power – Meeting Virginia specification.

*** (ENGINE) Electronic speed limiter set to maximum of 60 mph.**

Minimum Chassis Specification Chart

TYPE D Front Engine Transit Bus

Maximum Design (Passenger) Capacity	42 & 53	65	71	77	83
Lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights
Gauges	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure
Color	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow
Oil Filter	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer
Battery	750 cca	750 cca	750 cca	750 cca	750 cca

Minimum Chassis Specification Chart

TYPE D Rear Engine Transit Bus

Maximum Design (Passenger) Capacity	66	72	78	84
GVWR (lbs.)	29,800 2	9,800	33,000	33,000
Wheels	10-Stud Disc 22.5" X 7.5"	10-Stud Disc 22.5" X 7.5"	10-Stud Disc 22.5" X 7.5"	10-Stud Disc 22.5" X 7.5"
Tires	11R22.5(1)	11R22.5(1)	11R22.5(1)	11R22.5(1)
Frame	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS	ONE PIECE SIDE MEMBER – FRONT TOW HOOKS
Steering	Power (2)	Power (2)	Power (2)	Power (2)
Front Bumper	3/16 Steel	3/16 Steel	3/16 Steel	3/16 Steel
Front Axle	10,800 lbs	10,800 lbs	12,000 lbs	12,000 lbs
Rear Axle	19,000 lbs	19,000 lbs	21,000 lbs	21,000 lbs
Service brakes:				
Air	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear	13.2 CMF Comp/Air dryer 16.5" x 5" Frt 16.5 x 7" Rear
Suspension	Frt. Springs 5,400 lbs. Ea @ grd. Rear Springs 9,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 5,400 lbs. Ea @ grd. Rear Springs 9,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 6,000 lbs. Ea @ grd. Rear Springs 10,500 lbs. Ea @ grd Frt. and rear shock absorbers	Frt. Springs 6,000 lbs. Ea @ grd. Rear Springs 10,500 lbs. Ea @ grd Frt. and rear shock absorbers
Engine	190 H.P*	190 H.P*	210 H.P*	210 H.P*
Transmission (Allison)	2,500 PTS	2,500 PTS	3,000 PTS	3,000 PTS
Drive Shaft	Guards on all shafts	Guards on all shafts	Guards on all shafts	Guards on all shafts
Fuel tank (min size)	30	30	30	30
Air cleaner	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge	Dry element type w/restriction gauge
Alternator	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits	160 amp 4 ga. charging and ground circuits
Horn	Per FMVSS	Per FMVSS	Per FMVSS	Per FMVSS
Lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights	Per FMVSS and daytime running lights

(1) Load range meeting TRA standards for required gawr.
(2) Power – Meeting Virginia specification.

*** (ENGINE) Electronic speed limiter set to maximum of 60 mph.**

Minimum Chassis Specification Chart

TYPE D Rear Engine Transit Bus

Maximum Design (Passenger) Capacity	66	72	78	84
Gauges	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure	Speedometer, tachometer, fuel, oil pressure, coolant temp & voltmeter, air pressure
Color	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow	Frame, wheels, bumper, rails and lettering-black. Back of mirrors – non-gloss black. The balance yellow
Oil Filter	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer	1 Qt. Per manufacturer
Battery	750 cca	750 cca	750 cca	750 cca

Board of Education Agenda Item

Item: R. **Date:** January 13, 2011

Topic: First Review of Revised Proposed Annual Measurable Objectives in Reading and Mathematics for 2010-2011 through 2013-2014

Presenter: Mrs. Shelley Loving-Ryder, Assistant Superintendent for Student Assessment and School Improvement

Telephone Number: (804) 225-2102 **E-Mail Address:** Shelley.Loving-Ryder@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by

__X__ State or federal law or regulation

____ Board of Education regulation

____ Other: _____

____ Action requested at this meeting __X_ Action requested at future meeting: February 17, 2011

Previous Review/Action:

____ No previous board review/action

__X__ Previous review/action

Date: November 17, 2009
Action: First review of proposed amendments submitted to USED.

Date: January 14, 2010
Action: Final review of proposed amendments submitted to USED.

Date: May 27, 2010
Action: First review of revised proposed amendments.

Date: June 24, 2010
Action: Final review of revised proposed amendments.

Date: September 23, 2010
Action: First review of the annual proficiency targets (Annual Measurable Objectives) in reading and mathematics

Date: October 28, 2010
Action: Final review of the annual proficiency targets (Annual Measurable Objectives) in reading and mathematics

Background Information:

Virginia received final approval on July 29, 2010, from the United States Department of Education (USED) for the revisions to its accountability workbook submitted by the Board of Education on June 24, 2010. Approval of the revised workbook allowed Virginia to maintain its Annual Measurable Objectives (AMOs) for reading and mathematics at 81 percent for reading and 79 percent for mathematics for the 2010-2011 school year based on tests administered in 2009-2010.

On August 23, 2010, USED informed the Virginia Department of Education (VDOE) that while USED maintained its approval for holding the targets for the AYP ratings based on tests administered in 2009-2010, a "To Be Determined" (TBD) status stated in the workbook was not acceptable for the remaining years through 2013-2014. USED requested that Virginia set intermediate targets and a final target in 2013-2014 of 100 percent for both subjects.

As background, Virginia's AMOs for 2001-2002 to 2009-2010 are shown below.

Year	Reading	Mathematics
	Approved July 2010	Approved July 2010
2001-2002	60.7	58.4
2002-2003	61	59
2003-2004	61	59
2004-2005	65	63
2005-2006	69	67
2006-2007	73	71
2007-2008	77	75
2008-2009	81	79
2009-2010	81	79

After careful consideration of the fact that new mathematics assessments would be implemented in 2011-2012 and new reading assessments would be implemented in 2012-2013, the Board of Education approved the proposed revised Annual Measurable Objectives of 82% in reading and 80% in mathematics for 2010-2011 through 2012-2013 and 100% for both reading and mathematics for 2013-2014, and they were submitted to USED on November 2, 2010.

Summary of Major Elements:

On December 13, 2010, USED notified VDOE that it would not approve the proposed AMOs. While Section 1111 (H) of Public Law 107-110 of the *No Child Left Behind Act of 2001* states that intermediate targets for annual yearly progress can be maintained for up to three years without an increase in the targets, it also states that targets must increase in equal increments as the state moves toward 100 percent.

Public Law 107-110 – *No Child Left Behind Act of 2001*

Section 1111(H) INTERMEDIATE GOALS FOR ANNUAL YEARLY PROGRESS.—Each State shall establish intermediate goals for meeting the requirements, including the measurable objectives in subparagraph (G), of this paragraph and that shall—
(i) increase in equal increments over the period covered by the State's timeline under subparagraph (F);
(ii) provide for the first increase to occur in not more than 2 years; and
(iii) provide for each following increase to occur in not more than 3 years.

The following tables show the approval history of Virginia's proposed Annual Measurable Objectives in reading and mathematics, as well as the revised proposed intermediate targets that comply with the statute.

Approval History of Virginia's Annual Measurable Objectives for Reading

	Approved in 2005	Approved July 2010	Rejected December 2010	Proposed Revision January 2011
2007-2008	77	77	77	77
2008-2009	81	81	81	81
2009-2010	85	**81**	81	81
2010-2011	89	**TBD***	**82**	**81**
2011-2012	93	**TBD***	**82**	**87**
2012-2013‡	97	**TBD***	**82**	**93**
2013-2014	100	**100**	100	100

‡New tests *Rejected August 2010

Approval History of Virginia's Annual Measurable Objectives for Mathematics

	Approved in 2005	Approved July 2010	Rejected December 2010	Proposed Revision January 2011
2007-2008	75	75	75	75
2008-2009	79	79	79	79
2009-2010	83	**79**	79	79
2010-2011	87	**TBD***	**80**	**79**
2011-2012‡	91	**TBD***	**80**	**86**
2012-2013	95	**TBD***	**80**	**93**
2013-2014	100	**100**	100	100

‡New tests *Rejected August 2010

In discussions with USED, VDOE staff expressed concerns that the implementation of new and more rigorous mathematics tests in 2011-2012 and new reading tests in 2012-2013 might interfere with the ability of schools, school divisions, and the state to maintain a consistent trajectory toward the 100 percent goal in 2013-2014. USED reiterated that Virginia could submit a request in any year to change the established intermediate targets, including revised AMOs to ensure a smooth transition when changes in the test program occur, but that such requests should be made after implementation of the tests, not before.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education accept for first review the proposed revisions to Virginia's Consolidated State Application Accountability Plan under the *No Child Left Behind Act of 2001* to establish annual proficiency targets (Annual Measurable Objectives) of 81, 87, and 93 percent in reading and 79, 86, and 93 percent in mathematics for 2010-2011 through 2012-2013. Annual proficiency targets for both reading and mathematics would be 100 percent for 2013-2014.

Impact on Resources:

The provisions of the Elementary and Secondary Education Act (ESEA) require the Department of Education to collect and analyze data related to determining Adequate Yearly Progress (AYP) for all schools and school divisions in the state. These requirements will continue to have an impact on the agency's resources.

Timetable for Further Review/Action:

This item will be presented to the Board of Education for final review at the February 17, 2011, meeting.

Board of Education Agenda Item

Item: S. **Date:** January 13, 2011

Topic: First Review of the Proposed Addition of Asian Students as a Subgroup for the Purposes of Calculating Adequate Yearly Progress (AYP) in Virginia's Consolidated State Application Accountability Plan under the *No Child Left Behind Act of 2001*

Presenter: Mrs. Shelley Loving-Ryder, Assistant Superintendent for Student Assessment and School Improvement

Telephone Number: (804) 225-2102 **E-Mail Address:** Shelley.Loving-Ryder@doe.virginia.gov

Origin:

____ Topic presented for information only (no board action required)

__X__ Board review required by

__X__ State or federal law or regulation

____ Board of Education regulation

____ Other: _____

____ Action requested at this meeting __X_ Action requested at future meeting: February 17, 2011

Previous Review/Action:

__ No previous board review/action

__X_ Previous review/action: Initial approval of Virginia's Accountability Workbook on January 28, 2003

Background Information:

The Elementary and Secondary Education Act (ESEA) as amended by the *No Child Left Behind Act of 2001* (NCLB) requires state educational agencies (SEA) to submit individual or consolidated state applications to the United States Department of Education (USED) for approval. In 2002, the Virginia Board of Education submitted and received USED approval for its initial Consolidated State Application under NCLB. A major component of the consolidated application is Virginia's Consolidated State Application Accountability Workbook. Virginia received USED approval for its accountability workbook in June 2003. Additional amendments have been made to Virginia's workbook each year since then.

Virginia's Consolidated State Accountability Workbook states that Virginia's major racial and ethnic categories represent groups in which the number of students exceeds five percent of the student population. When the workbook was initially written, those groups were Black, White, and Hispanic. Since that time, the Asian student population has grown to exceed five percent of the student population on a consistent basis. While the Asian student population has exceeded five percent of the total student population since 2008-2009, the request to include Asians as a subgroup for the purposes of calculating Adequate Yearly Progress (AYP) has been delayed pending the implementation of new federally mandated race and ethnicity categories in 2010-2011.

The new federally mandated categories allow individuals to identify with one or more races and also to indicate if they are Hispanic. Students indicating they are Hispanic are counted in the Hispanic group regardless of their race and are not counted in any of the other race categories. The table below shows the distribution of students in Fall Membership in each category for several years. Of particular note is that the number of Asian students, as a percentage of the school population, has exceeded five percent for several years even with the implementation of the new federal race/ethnicity codes.

Virginia's School Population Disaggregated by Race/Ethnicity

School Year	% White	% Black	% Hispanic	% Asian	% American Indian	% Hawaiian	% Other/ Two+	Total Student Enrollment
2008-2009	56.53	25.71	8.96	5.60	0.30	0.11	2.80	1,236,109
2009-2010	56.38	25.15	9.29	5.88	0.32	0.12	2.86	1,214,786
2010-2011	54.51	23.73	11.28	5.91	0.34	0.14	4.09	1,220,845

Note: "Other" in 2008-2009 and 2009-2010 means "unspecified". "Two+" refers to "two or more races" in 2010-2011.

Summary of Major Elements:

Given that the Asian subgroup has exceeded five percent of Virginia's student population over a period of years, the Board is asked to consider adding the Asian subgroup to those groups included in AYP calculations for schools, school divisions, and the state. The Asian subgroup would be included in AYP calculations for the first time for the 2012-2013 school year based on assessments administered in 2011-2012. Action by the Board in early 2011 will notify school divisions of the additional category for AYP calculations in time to prepare for the change and will not complicate the major changes and releases planned for summer and fall 2011. AYP calculations for the 2012-2013 school year will use the most recent three years of data available for Asian students.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education accept for first review a proposed amendment to Virginia's Consolidated State Application Accountability Plan to add Asian students as a subgroup to be used in AYP calculations for the first time in the 2012-2013 school year, based on assessments administered in 2011-2012.

Impact on Resources:

The provisions of the Elementary and Secondary Education Act (ESEA) require the Department of Education to collect and analyze data related to determining Adequate Yearly Progress (AYP) for all schools and school divisions in the state. These requirements will continue to have an impact on the agency's resources.

Timetable for Further Review/Action:

This item will be presented to the Board of Education for final review at the February 17, 2011, meeting.

Board of Education Agenda Item

Item: T. **Date:** January 13, 2011

Topic: Report on the Review of Virginia's Textbook Adoption Process, the Virginia Studies Textbook *Our Virginia: Past and Present*, and Other Selected United States History Textbooks

Presenter: Dr. Linda Wallinger, Assistant Superintendent for Instruction

Telephone Number: (804) 225-2034 **E-Mail Address:** linda.wallinger@doe.virginia.gov

Origin:

_X_ Topic presented for information only (no board action required)

____ Board review required by

____ State or federal law or regulation

____ Board of Education regulation

____ Other: _____

___ Action requested at this meeting ____ Action requested at future meeting: _____ (date)

Previous Review/Action:

____ No previous board review/action

____ Previous review/action

date _____

action _____

Background Information:

The Board of Education's authority for approving textbooks and other instructional materials is prescribed in the Virginia Constitution and in the *Code of Virginia*.

Virginia Constitution, Article VIII, § 5 (d)
It [the Board of Education] shall have authority to approve textbooks and instructional aids and materials for use in courses in the public schools of the Commonwealth.

Code of Virginia, § 22.1-238

A. The Board of Education shall have the authority to approve textbooks suitable for use in the public schools and shall have authority to approve instructional aids and materials for use in the public schools. The Board shall publish a list of all approved textbooks on its website and shall list the publisher and the current lowest wholesale price of such textbooks.
B. Any school board may use textbooks not approved by the Board provided the school board selects such books in accordance with regulations promulgated by the Board.
C. For the purposes of this chapter, the term "textbooks" means print or electronic media for student use that serve as the primary curriculum basis for a grade-level subject or course.

The Board of Education's regulations specify the types of materials that may be adopted.

> *Regulations Governing Textbook Adoption*, 8 VAC 20-220-30
> Only those materials which are designed to provide basic support for the instructional program of a particular content area at an appropriate level will be adopted.

Since 1995, the Department of Education has worked with state committees to review and evaluate publishers' submissions primarily with respect to Standards of Learning (SOL) correlation. Following each review, the Department of Education provides school divisions with a list of the instructional materials submitted and a profile of each submission that includes the degree of Standards of Learning correlation.

On March 29, 2007, the Board of Education approved the K-12 history and social science textbook and instructional materials review schedule, indicating that following approval of the revised History and Social Science Standards of Learning in 2008, the Department of Education would begin the textbook review process. On February 19, 2009, the Board approved the process to be used and a timeline for the history and social science textbook review during 2009, with final approval of the state textbook adoption list in 2010. The Department used the established review process and criteria to administer the state adoption process for the Board of Education as outlined in Appendices A and B.

On March 6, 2009, the Department of Education posted a Superintendent's Memorandum soliciting nominations of individuals to serve on committees to review K-12 history and social science textbooks and instructional materials. The Department requested nominees who were teachers, principals, administrators, content specialists, or others who had expertise with the history content and the history SOL. Committee members were selected on the basis of expertise and experience in history and the social sciences and balanced regional representation. In June 2009, committees of Virginia educators received history and social science textbook samples along with K-12 *History and Social Science Standards of Learning* textbook correlations from publishers. Using the criteria outlined in Appendix B, members of these committees conducted individual analyses of the materials prior to meeting with the full committee. Appendix C contains a list of committee members.

In July 2009, the committees convened in Richmond to reach consensus on their reviews of the submitted materials. The consensus evaluations were shared with publishers, and publishers were given an opportunity to respond to the committees' reviews and recommendations. Requests by publishers for reconsideration were examined carefully prior to the list being submitted to the Board of Education for first review on January 14, 2010.

A 30-day public comment period began on January 15, 2010, immediately after the Board's first review of the list of materials. The books were available for public review at local examination sites located at eight Virginia public universities and community colleges. See Appendix D. One comment was received in the public comment mailbox from a teacher who questioned the expense of purchasing new textbooks at this time. Other comments received via e-mail addressed the following: 1) a request that textbook publishers include contributions of African Americans in history, literature, and science books; and 2) comments made on behalf of the Virginia Jewish community related to the quality, accuracy, and balance in the manner in which religions of the world were addressed in world history and geography textbooks.

The final review and the Board of Education's adoption of textbooks and instructional materials for K-12 history and social science occurred on March 18, 2010. See Appendix E for the list of approved textbooks.

Summary of Major Elements

On October 19, 2010, the Virginia Department of Education received from a *Washington Post* reporter an inquiry related to the participation of African Americans in the Civil War. Specifically, the inquiry related to a sentence in a Board-approved textbook for Virginia Studies entitled *Our Virginia: Past and Present* published by Five Ponds Press that stated: "Thousands of Southern blacks fought in the Confederate ranks, including two black battalions under the command of Stonewall Jackson."

After extensive input from Civil War historians, on October 20, 2010, the Virginia Department of Education advised the Commonwealth's school divisions that the statement about black Confederate soldiers on page 122 of the textbook was outside accepted Civil War scholarship and did not reflect the content of the Commonwealth's academic standards for grade four Virginia Studies.

The Virginia Studies *History and Social Science Standard of Learning* that includes the Civil War is VS.7:
The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by

a) identifying the events and differences between northern and southern states that divided Virginians and led to secession, war, and the creation of West Virginia;
b) describing Virginia's role in the war, including identifying major battles that took place in Virginia;
c) describing the roles played by whites, enslaved African Americans, free African Americans, and American Indians.

The companion curriculum framework for Virginia Studies VS.7c includes the following content:

- Whites, enslaved African Americans, free African Americans, and American Indians had various roles during the Civil War.
- Most white Virginians supported the Confederacy.
- The Confederacy relied on enslaved African Americans to raise crops and provide labor for the army. Many enslaved African Americans fled to the Union army as it approached and some fought for the Union.
- Some free African Americans felt their limited rights could best be protected by supporting the Confederacy.
- Most American Indians did not take sides during the Civil War.

The Virginia Department of Education's history and social science staff met with the Virginia Consortium of Social Studies Specialists and College Educators at its semiannual meeting on October 21, 2010, to discuss the textbook review process as it related to textbooks and instructional materials for fourth-grade Virginia Studies and to reinforce the importance of teaching the content in the Standards of Learning and the curriculum framework.

The publisher of *Our Virginia: Past and Present*, Five Ponds Press, indicated that it responded by sending stickers to cover the statement to school divisions that adopted the book. The publisher also

sent an electronic version of the page that it said would replace page 122 in the 2011 edition of the textbook.

On October 29, 2010, Superintendent's Memorandum #269-10 was released, advising Virginia's school divisions that technical edits to the 2008 History and Social Science Curriculum Framework had been made. The technical amendments clarified in more explicit terms the role of African Americans in the Civil War. See Appendix F. In United States History to 1865, USI.9f, page 33, language was revised in the first four bullets under "Effects of the war on African Americans" as follows:

- African Americans fought in ~~both~~ the ~~Confederate and~~ Union ~~armies~~ army. Some African Americans accompanied Confederate units in the field.
- The Confederacy ~~often~~ used enslaved African Americans as ~~naval crew members and soldiers~~ ship workers, laborers, cooks, and camp workers.
- The Union moved to enlist African American sailors and soldiers ~~early~~ during ~~in~~ the war.
- African American soldiers were initially paid less than white soldiers.
- African American soldiers were discriminated against and served in segregated units under the command of white officers.
- Robert Smalls, an African American sailor and later a Union naval captain, was highly honored for his feats of bravery and heroism. He became a Congressman after the war.

Also in October 2010, the superintendent of public instruction, directed staff of the Virginia Department of Education to conduct a comprehensive review of the history and social science textbook adoption process and to identify recognized historians to review for factual accuracy (a) the Virginia Studies textbook in question and the U.S History to 1865 textbook adopted by the Board and published by the same company, and (b) Civil War-era content in the two other Virginia Studies textbooks on the state adoption list and all U.S. History to 1865 textbooks on the list. The Department of Education received offers from two university faculty members to assist with a review of the Virginia Studies textbook in question. Department staff also contacted three additional reviewers to assist with a review of the same editions of the books the review committees had received. The reviewers were as follows:

Reviewing *Our Virginia: Past and Present*:

- Dr. Ronald Heinemann (Retired: Hampden-Sydney College) – Appendix G
- Dr. Lauranett L. Lee (Curator of African American History, Virginia Historical Society) – Appendix H
- Dr. Brent Tarter (Retired: Library of Virginia) – Appendix I

Reviewing Civil War-era content in the two other Virginia Studies textbooks on the Board of Education-approved list and all United States History to 1865 textbooks on the list:

- Dr. Christopher Einolf (DePaul University) – Appendix J

Reviewing *Our America: To 1865* (Five Ponds Press)

- Ms. Mary Miley Theobald (Retired: Virginia Commonwealth University) – Appendix K

In December 2010, the Department received the reviewers' comments and confirmed from them acknowledgment that their work would be publicly available. Appendices G through K contain the

comments as they were submitted to the Department of Education. These comments have been shared with the publishers of the books in question.

On December 27, 2010, *The Washington Post* contacted the Department of Education for information on the results of the reviews by the university faculty and the next steps the Department intended to take. The *Post* story ran on December 28, 2010. The superintendent of public instruction followed with a statement that when school resumed after the holidays, school divisions would be alerted to the factual errors noted by the historians and scholars, and staff would provide guidance on how to ensure that classroom instruction would not be distorted by misinformation. On January 3, 2011, the superintendent sent an e-mail to division superintendents with this information and informed them that the Board of Education would be asked to engage in additional discussion about how to improve the review process to reduce the possibility that factual errors would not be detected. Publishers of textbooks and instructional materials would likely need to contribute to this process by providing documentation that the books they submit have been reviewed by competent authorities who vouch for their accuracy. Finally, consideration must be given to the use of emerging technologies that are able to provide current and evolving information that is important to classroom instruction but may be beyond the scope of continuous review and approval by the Board of Education.

Superintendent's Recommendation:

N/A

Impact on Resources:

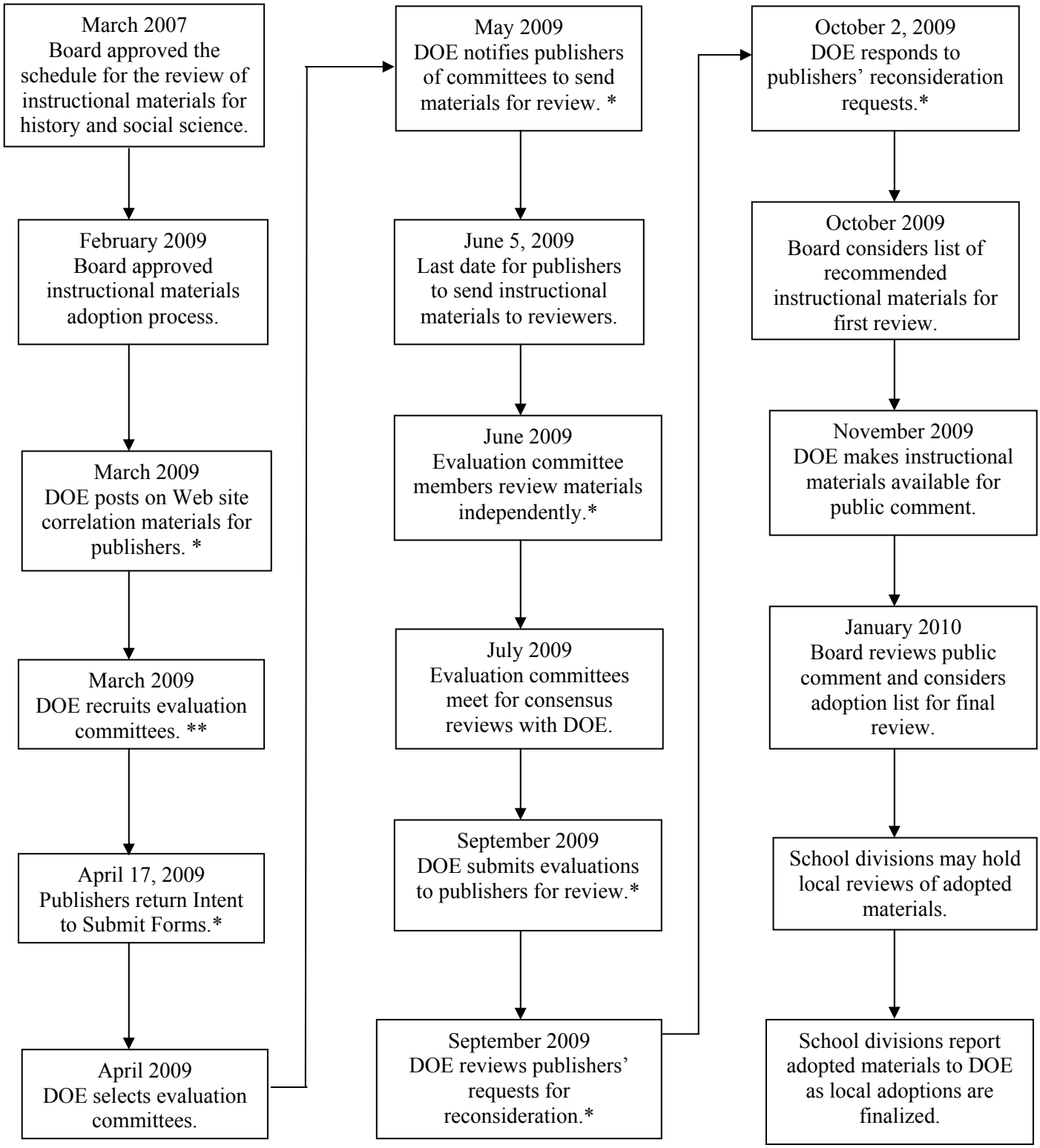
This responsibility can be absorbed by the agency's existing resources at this time. If the agency is required to absorb additional responsibilities related to this process, other services will be impacted.

Timetable for Further Review/Action:

The Department of Education will present additional information and options regarding revisions to the textbook review process at the Board of Education meeting on February 17, 2011.

Appendix A

2009 Adoption Process
History and Social Science Textbook and Instructional Materials Adoption



* DOE communication via Internet or e-mail
**Superintendent's Memorandum

Appendix B

Criteria for K-12 History and Social Science Textbook Review
Section I: Correlation with the 2008 Standards of Learning and the Curriculum Framework

Instructions for Reviewers

- Review the student text using the publisher's correlation form included in your shipment, and the *History and Social Science Standards of Learning Curriculum Framework 2008* as a guide. Complete each page of your correlation review sheet by evaluating if the information on the publisher's correlation form, the student textbook, and the curriculum framework all align.
- Using the rubric provided, assign a rating of Adequate, Limited, or No Evidence to indicate your judgment on how closely the individual bullets of each standard are supported in the student texts.
- For text materials that have an online version, please review the hard copy of that text first. If the hard copy version demonstrates adequate correlation to the *2008 History and Social Science Standards of Learning* and Curriculum Framework, it may not be necessary to do a detailed review of the online version of the materials.

Correlation with Standards of Learning – Using the information in the 2008 History and Social Science Standards of Learning and the 2008 History and Social Science Curriculum Framework for this subject, determine the degree to which content found in these instructional materials is correlated in *thoroughness* and *accuracy*.

Adequate **A**	**Limited** **L** (Note: Provide examples to support this rating.)	**No Evidence** **N** (Note: Provide examples to support this rating.)
Objectives and lessons are aligned with the standards.	Limited connections between the standards and the lessons are noted.	No correlation between the objectives and lessons and the standards.
Content is accurate, clear, and in sequential order.	Content contains some inaccuracies or is not always clear.	A logical sequence of content cannot be identified.
Most of the essential understandings, knowledge, and skills are supported.	Essential understandings, knowledge, or skills are not sufficiently addressed.	Essential understandings, knowledge, or skills are not addressed.
Many opportunities are provided for students to practice essential skills.	There is limited opportunity for students to practice essential skills.	Opportunities to practice essential skills are not included.

Criteria for K-12 History and Social Science Textbook Review
Section II: Additional Criteria: Instructional Planning and Support
Used for Grades K - 3
(Reported but not used in correlation and adoption considerations.)

Instructions for Reviewers

– Review the teacher's edition and the appropriate instructional materials and assign a rating to each item on the review worksheet. Use the rubric as a guide.

Adequate A	**Limited** L (Note: Provide examples to support this rating.)	**No Evidence** **N** (Note: Provide examples to support this rating.)
Criterion 1. Textbooks/instructional materials support literacy development by presenting content through a variety of reading selections that are appropriate for the grade level.		
Criterion 2 – Readability, writing style, length of sentences, and vocabulary are appropriate for the grade level.		
Criterion 3 - Materials are presented in an organized, logical manner and are appropriate for the age, grade, and maturity of the students.		
Criterion 4 - Materials are organized appropriately within and among units of study.		
Criterion 5 - Format design includes titles, subheadings, and appropriate cross-referencing for ease of use.		
Criterion 6 - Graphics and illustrations are appropriate.		
Criterion 7 - Sufficient instructional strategies are provided to promote depth of understanding.		
Criterion 8 - Materials present content in an accurate and unbiased manner. • Materials do not contain content errors (omissions of current content, out-of-date content, overgeneralizations). • Materials do not contain production errors (misspelled words, word omissions, incorrect answers). • Diverse groups (racial, ethnic, cultural, linguistic), males and females, people with disabilities, and people of all ages are represented appropriately.		

Criteria for K-12 History and Social Science Textbook Review
Section II: Additional Criteria: Instructional Planning and Support
Used for Courses from Virginia Studies through Virginia and U.S. Government
(Reported but not used in correlation and adoption considerations.)

Instructions for Reviewers

– Review the teacher's edition and the appropriate instructional materials and assign a rating to each item on the review worksheet. Use the rubric as a guide.

Adequate **A**	**Limited** **L** (Note: Provide examples to support this rating.)	**No Evidence** **N** (Note: Provide examples to support this rating.)
Criterion 1 - Materials are presented in an organized, logical manner and are appropriate for the age, grade, and maturity of the students.		
Objectives and materials are sequentially developed and aligned with the standards and framework.	Objectives and materials are inconsistent and aligned with the standards and framework.	Objectives and materials are sequentially developed and aligned with the standards and framework.
Criterion 2 - Materials are organized appropriately within and among units of study.		
Scope and sequence is easy to read and understand.	Scope and sequence is confusing and not easy to understand.	Scope and sequences is difficult to read and understand.
Criterion 3 - Format design includes titles, subheadings, and appropriate cross-referencing for ease of use.		
Organizational properties of the materials assist in understanding and processing content.	Organizational properties of the materials assist with limited emphasis in understanding and processing content.	Organizational properties of the materials do not assist in understanding and processing content.
Criterion 4 - Writing style, length of sentences, and vocabulary are appropriate.		
Readability is appropriate for the grade level.	Readability is appropriate but varies throughout the text.	Readability is not appropriate for the grade level.
Criterion 5 - Graphics and illustrations are appropriate.		
Visuals are accurate, support the student text, and enhance student understanding.	Visuals are somewhat unclear, have limited support for the student text, and enhance student understanding.	Visuals are inaccurate, do not support the student text, and do not enhance student understanding.
Criterion 6 - Sufficient instructional strategies are provided to promote depth of understanding.		
Materials provide students with opportunities to integrate skills and concepts.	Materials provide students with limited opportunities to integrate skills and concepts.	Materials provide students with no opportunities to integrate skills and concepts.
Criterion 7 - Materials present content in an accurate and unbiased manner. • Materials do not contain content errors (omissions of current content, out-of-date content, overgeneralizations.). • Materials do not contain production errors (misspelled words, word omissions, incorrect answers). • Diverse groups (racial, ethnic, cultural, linguistic), males and females, people with disabilities, and people of all ages are represented appropriately.		
Materials present content in an accurate and unbiased manner	Materials present content in an a less than accurate and unbiased manner	Materials present content in an inaccurate and biased manner

Appendix C

2009 History and Social Science Textbook and Instructional Materials Review Committee
July 28-29, 2008

Committee	Current Position	Division	Region
Kindergarten – Grade 3	Third-Grade Teacher	Chesterfield I	
	Second-Grade Teacher	Henrico I	
	History Specialist, K-5	Newport News	II
Virginia Studies	Fourth-Grade Teacher	Fairfax IV	
	Fourth-Grade Teacher	Chesterfield I	
	Fourth-Grade Teacher	Henrico I	
United States History to 1865	History Specialist, K-12	York II	
	Sixth-Grade Teacher	Fairfax IV	
	Sixth-Grade Teacher	Hanover I	
United States History: 1865 to the Present	U.S. II Teacher	Fluvanna V	
	U.S. II Teacher	Mecklenburg V	III
	U.S. II Teacher	Wythe VII	
Civics and Economics	History Specialist, K-12	Culpeper IV	
	C & E Teacher	Greensville VIII	
	C & E Teacher	Virginia Beach	II
World History and Geography to 1500 A.D. (C.E.)	W H & G I Teacher	Newport News	II
	W H & G I Teacher	Rappahannock IV	
	W H & G I Teacher	Waynesboro V	
World History and Geography: 1500 A.D. (C.E.) to the Present	W H & G II Teacher	Bedford V	
	W H & G II Teacher	Chesterfield I	
	W H & G II Teacher	Prince George	I
World Geography	W G Teacher	Spotsylvania III	
	W G Teacher	Virginia Beach	II
	History Specialist, K-12	Hanover I	
Virginia and United States History	V & U.S. H Teacher	Suffolk II	
	V & U.S. H Teacher	Mecklenburg V	II
	V & U.S. H Teacher	Rockbridge V	
Virginia and United States Government	History Specialist, K-12	Loudoun IV	
	V & U.S. G Teacher	Caroline III	
	V & U.S. G Teacher	Spotsylvania III	

Appendix D

Superintendent's Memo #005-10

COMMONWEALTH of VIRGINIA
Department of Education

January 15, 2010

TO: Division Superintendents

FROM: Patricia I. Wright, Superintendent of Public Instruction

SUBJECT: Public Comment Period for K-12 History and Social Science Textbooks and Instructional Materials

On January 14, 2010, the Virginia Board of Education accepted for first review lists of recommended textbooks for K-12 History and Social Science. The Virginia Department of Education (VDOE) has provided these lists on its website at http://www.doe.virginia.gov/boe/meetings/2010/01_jan/agenda_items/item_j.pdf.

The Virginia Board of Education is now seeking public comment on these textbooks and intends to review and approve lists of recommended textbooks and instructional materials for use in the public schools in the Commonwealth. Lists of adopted textbooks will be made available on the Department's website following the Board of Education's action on the recommended textbooks. It is anticipated that the Board of Education will act on the recommended lists in March 2010.

Review copies of all textbooks submitted for the current adoption cycle are available for public examination at various sites around the Commonwealth between January 15, 2010, and February 19, 2010.

The local examination sites include:
The College of William and Mary
Old Dominion University
George Mason University
James Madison University
Radford University
The University of Virginia's College at Wise
Longwood University
J. Sargeant Reynolds Community College

A list of specific contacts and locations for each of the review sites may be found at http://www.doe.virginia.gov/instruction/textbooks/review_process/locations.shtml.

Individuals are invited to examine the proposed textbooks at the examination sites and to submit written comments. Comments on the proposed K-12 History and Social Science Textbooks and Instructional Materials List may be faxed to the VDOE at (804) 786-1597 or sent via mail to Beverly Thurston, history coordinator, Office of Middle and High School Instruction, Virginia Department of Education, P. O. Box 2120, Richmond, Virginia 23218-2120. Comments may also be e-mailed to historytext@doe.virginia.gov. The Department of Education will begin to take public comments on January 15, 2010. Comments will be received through February 19, 2010.

Questions regarding the review process should be directed to Dr. Beverly Thurston, coordinator for textbook adoption, by e-mail at Beverly.Thurston@doe.virginia.gov or by telephone at (804) 225-2893.

PIW/BMT/yba

Appendix E

2010 Approved History and Social Science Textbook and Instructional Materials

Course	Publisher	Title
Kindergarten	Five Ponds Press	*Our World Let's Go! (print)*
	Houghton Mifflin Harcourt	*Houghton Mifflin Harcourt Our World, Now and Long Ago (print)*
Macm	illan/McGraw-Hill, a division of the McGraw-Hill Companies	*Macmillan McGraw-Hill Timelinks: Virginia Hello World Flipchart (print)*
Grade One	Five Ponds Press	*Our World Then and Now (print)*
	Houghton Mifflin Harcourt School Publishers	*Houghton Mifflin Harcourt, Virginia Social Studies: My Country, Yesterday and Today (print)*
	Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies	*Macmillan McGraw-Hill Timelinks: Virginia All Together Complete Student Edition Set (Includes 4 units) (print)*
Grade Two	Five Pond Press	*Our World Near and Far (print)*
	Houghton Mifflin Harcourt School Publishers	*Houghton Mifflin Harcourt, Virginia Social Studies: People and Places, Then and Now (print)*
	Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies	*Macmillan McGraw-Hill Timelinks: Virginia People and Places Complete Student Edition Set (Includes 4 units) (print)*
Grade Three	Five Ponds Press	*Our World Far and Wide (print)*
	Houghton Mifflin Harcourt School Publishers	*Houghton Mifflin Harcourt, Virginia Social Studies: Exploring Your World, Past and Present (print)*
	Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies	*Macmillan McGraw-Hill Timelinks: Virginia Exploring People, Places, and Cultures Student Edition (print)*
Virginia Studies	Five Ponds Press	*Our Virginia Past and Present (print)*
	Houghton Mifflin Harcourt School Publishers	*Houghton Mifflin Harcourt, Virginia Social Studies: Virginia Studies (print)*
	Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies	*Macmillan McGraw-Hill Timelinks: Virginia Studies Student Edition (print)*

Course	Publisher	Title
United States History to 1865	Five Ponds Press	*Our America to 1865 (print)*
	Glencoe, a division of The McGraw-Hill Companies	*The American Journey, Early years (print)*
	Glencoe, a division of The McGraw-Hill Companies	*The American Journey, Early Years (electronic)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal United States History, Beginnings to 1877, Virginia Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal United States History, Beginnings to 1877, Virginia Interactive Online Edition (Contract length subscription)*
	Houghton Mifflin Harcourt School Publishers	*Houghton Mifflin Harcourt, Virginia Social Studies: Virginia, United States History to 1865 (print)*
	Houghton Mifflin Harcourt School Publishers	*Houghton Mifflin Harcourt, Virginia Social Studies: Virginia, United States History to 1865 (electronic)*
	Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies	*Macmillan McGraw-Hill Timelinks: Virginia The United States: The Early Years Student Edition (print)*
	Oxford University Press	*A History of US – Books 1-6*
	Pearson Education, Inc., publishing as Prentice Hall	*Prentice Hall America: History of Our Nation, Beginnings to 1865, Virginia Edition (print)*
United States History: 1865 to Present	Glencoe, a division of The McGraw-Hill Companies	*The American Journey, Modern Times (print)*
	Glencoe, a division of The McGraw-Hill Companies	*The American Journey, Modern Times (electronic)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal United States History, Civil War to the Present, Virginia Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal United States History, Civil War to the Present, Virginia Interactive Online Edition (Contract length subscription) (electronic)*
	Oxford University Press	*A History of US, Books 7-10 (print)*
	Pearson Education, Inc., publishing as Prentice Hall	*Prentice Hall America: History of Our Nation, 1865 to Present, Virginia Edition (print)*

Course	Publisher	Title
Civics and Economics	Glencoe, a division of The McGraw-Hill Companies	*Civics Today (print)*
	Glencoe, a division of The McGraw-Hill Companies	*Civics Today (online)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal Civics in Practice: Principles of Government and Economics, Virginia Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal Civics in Practice: Principles of Government and Economics, Virginia Interactive Online Edition (Contract length subscription) (electronic)*
	Pearson Education, Inc., publishing as Prentice Hall	*Virginia Civics and Economics (print)*
World History & Geography to 1500 A.D.	Glencoe, a division of The McGraw-Hill Companies	*Glencoe World History: Early Ages (print)*
	Glencoe, a division of The McGraw-Hill Companies	*Glencoe World History: Early Ages (electronic)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal Ancient World History, Patterns of Interaction, Virginia Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal Ancient World History, Patterns of Interaction, Virginia Student Edition (Contract length subscription) (electronic)*
	Pearson Education, Inc., publishing as Prentice Hall	*Prentice Hall World History, Volume 1, Virginia Edition (print)*
World History & Geography: 1500 A.D. to the Present	Glencoe, a division of The McGraw-Hill Companies	*Glencoe World History: Modern Times (print)*
	Glencoe, a division of The McGraw-Hill Companies	*Glencoe World History: Modern Times (electronic)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal Modern World History, Patterns of Interaction, Virginia Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal Modern World History, Patterns of Interaction, Virginia eEdition Online (Contract length subscription) (electronic)*
	Pearson Education, Inc., publishing as Prentice Hall	*Prentice Hall World History, The Modern Era, Virginia Edition (print)*

Course	Publisher	Title
World Geography	Glencoe, a division of The McGraw-Hill Companies	*World Geography & Cultures (print)*
	Glencoe, a division of The McGraw-Hill Companies	*World Geography & Cultures (electronic)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*McDougal Littell World Geography, Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*McDougal Littell World Geography, eEdition Online (Contract length subscription) (electronic)*
Virginia and United States History	Glencoe, a division of The McGraw-Hill Companies	*The American Vision (print)*
	Glencoe, a division of The McGraw-Hill Companies	*The American Vision (electronic)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal The Americans, Virginia Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal The Americans, Virginia Student eEdition Online (Contract length subscription) (electronic)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt American Anthem, Student (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt American Anthem, Interactive Online Edition (Contract length subscription) (electronic)*
	Pearson Education, Inc., publishing as Prentice Hall	*Prentice Hall United States History, Survey, Virginia Edition (print)*
Virginia and United States Government	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal United States Government: Principles in Practice, Virginia Student Edition (print)*
	Holt McDougal, a division of Houghton Mifflin Harcourt Publishing Company	*Holt McDougal United States Government: Principles in Practice, Virginia ThinkCentral Student Access (Contract length subscription) (electronic)*
	Pearson Education, Inc., publishing as Prentice Hall	*Prentice Hall Magruder's American Government, with Virginia and United States Government (bundle)*
	Pearson Education, Inc., publishing as Prentice Hall	*Pearson Foundation Series: American Government, with Virginia and United States Government (bundle)*

Appendix F

Superintendent's Memo #269-10

COMMONWEALTH of VIRGINIA
Department of Education

October 29, 2010

TO: Division Superintendents

FROM: Patricia I. Wright, Superintendent of Public Instruction

SUBJECT: Implementation of the 2008 History and Social Science Standards of Learning and Technical Edits

As you are aware, full implementation of the 2008 *History and Social Science Standards of Learning* began in the fall of the 2010-2011 school year. Assessments developed using the new blueprints will be administered for the first time in the fall 2010 administration for only the end-of-course history and social science tests (World History and Geography to 1500 A.D. [C.E.], World History and Geography: 1500 A.D. [C.E.] to the Present, Virginia & U.S. History, and World Geography). The remainder of the new history blueprints will be effective with the spring 2011 test administration. School divisions will need to align curriculum to ensure that third-grade students being assessed in 2011 have been instructed in new content included in the revised 2008 Standards for grades kindergarten through three.

Technical edits to the 2008 History and Social Science Curriculum Framework have been made. In United States History to 1865, USI.9f, page 33, language has been revised in the first four bullets under "Effects of the war on African Americans." In Civics and Economics, CE.5e, page 16, the information on voter registration has been updated to reflect a change in the *Code of Virginia* effective January 1, 2010. The revised Curriculum Framework pages containing the technical edits can be found in Attachment A.

The 2008 History and Social Science Curriculum Framework, including the recent technical edits, may be accessed and downloaded at: http://www.doe.virginia.gov/testing/sol/standards_docs/history_socialscience/index.shtml.

The new history and social science blueprints may be accessed and downloaded at: http://www.doe.virginia.gov/testing/sol/standards_docs/history_socialscience/index.shtml.

For further information, please contact Beverly M. Thurston, history and social science coordinator, Office of Standards, Curriculum, and Instruction, by e-mail at Beverly.Thurston@doe.virginia.gov or by telephone at (804) 225-2893; or Betsy Barton, history and social science specialist, Office of Standards, Curriculum, and Instruction, by e-mail at Betsy.Barton@doe.virginia.gov or by telephone at (804) 225-3454.

PIW/BMT/BSB/vdg

Attachments

a. Technical Edits to the 2008 History and Social Science Curriculum Framework (PDF)

Appendix G

Review of *Our Virginia: Past and Present*
Submitted by Dr. Ronald Heinemann (Retired: Hampden-Sydney College)

Our Virginia: Past and Present is a beautifully presented brief history of Virginia designed for fourth grade students. The colors are dramatic and the artwork displaying portraits of individuals and events is excellent. The language appears commensurate for a fourth grade audience.

The text adheres very closely to the Standards of Learning even to the point of repeating them almost verbatim. Not much imagination here. And this is one of the major deficiencies of the book. There are great gaps in the story of Virginia. In the 17th century where are the Indian uprisings, the governorship of William Berkeley, Bacon's Rebellion? In the 19th century where are John Marshall, James Monroe and the other Virginia presidents, the Readjustors and the Populists? And speaking as a 20th century Virginia historian, I believe the coverage of that century is a sham: nothing about Progressives, labor unions, what Virginians were doing during the world wars, the 1920s, and the Great Depression (how could this decade-long event be left out?), Vietnam, and the Godwin governorship with its community colleges and a new constitution.

The apology for the author is that she is doing what the Standards tell her what is necessary to win the approval of teacher review committees. The real problem lies with the Standards themselves. They need to be drastically revised to be more inclusive of the overall history of the state. I realize the need not to overwhelm fourth graders with too much factual data, but some of these omissions are unacceptable. Furthermore, students, even fourth graders, can relate more easily to these recent events because they are in the news—recession/depression—somebody lost a job; Iraq/Vietnam—somebody died or was injured or is serving abroad.

My major reservations with the text are its historical inaccuracies; they are appalling in number. I realize that you don't want to overwhelm your audience with a lot of dates, but if they are included, they must be accurate, along with statements of fact. Even professional historians make mistakes or disagree over dates and interpretations, so I have tried to verify my corrections by consulting several sources. And I cannot guarantee that I have caught every error.

List of corrections:

Page	Comment
27	As you note—black bears not brown bears
47	As on page 35 change the colors for the locations of the Chickahominy and Eastern Chickahominy tribes.
50-51	Raleigh never came to America, so he was not "sent…to start a colony" and thus he never "sailed back to England." Nor did he and the Queen imagine a "new land called Virginia" since it was not yet named. He named it for the Queen after the first expedition returned. And he sent three expeditions--1584, 1585, and the Lost Colony expedition in 1587, so the latter was not the "first" British colonists.

Page	Comment
54	Smith did not land in the winter of 1607 and he did not begin to give orders as soon as he returned from captivity. He did not assume command of the colony until the following September as the timeline on page 62 correctly points out.
55	No mention of Pocahontas saving John Smith. This likely did not happen but students will be aware of the story so it should be addressed in this history. Pocahontas was probably eleven when she met Smith (not ten) and she was likely taken to Jamestown, not Henricus, after she was kidnapped, and married Rolfe there. These events are hard to verify; I rely on Helen Rountree's work.
57	The resupply ships of 1610 included men and women.
67	"loaves of bread" not loaves bread.
78	If you bring up Washington at Fort Necessity should you not say that he surrendered it to the French? And that he was with General Braddock during that ambush?
79	Battle of Quebec occurred in 1759, not 1760.
81	There remains a debate over who fired the first shots, though most blame the British, not the patriots; so why not say-- the first shots of the Revolution were fired at Lexington, Massachusetts between the British and the patriots. (Lexington should be mentioned)
82	Explanation of the "Parson's Cause" is inaccurate. Henry did not fight the law paying ministers in tobacco, but supported the Two-Penny Act, passed at a later date, that had to do with the monetary rate the ministers were to be paid; the issue for Henry was the right of the King's Privy Council to override the House of Burgesses. On timeline—Henry led the militia against Dunmore in 1775, not 1776; and he was governor of Virginia in 1776-79 and 1784-86, not 1785.
83	Henry did not serve as a Virginia lawmaker for 25 years; he was a legislator off and on during that time period.
85	Washington had been made commander in chief of the army in 1775, not 1776. Timeline on p. 90 has it right.
94	Typo—1787 not 1877. And Jefferson was not at the Constitutional Convention in 1787. And some repetition—"One of the biggest problems" was state representation-- in two paragraphs on same page.
95	Section on constitutional debates is poorly done—what happened to Madison's plan? How did the delegates decide the issue of slavery?
96 Timeline	—Washington was leader of the army from 1775-1783, not 1776. And he did not preside over the "Continental" Congress in 1785 which no longer existed, but presided over the Constitutional Convention in 1787.
98	Madison was Secretary of State from 1801-1809, not 1803. Also, Madison did not study law at William and Mary. Also on pp. 98, 102, and R3—portraits of Thomas Jefferson—is this really Jefferson? Even if it is, I would use another portrait because this one makes him look too much like a dandy. He certainly did not look like this when he was president (the picture on p. 98).
102	Jefferson was not a delegate to the Constitutional Convention. And he was president from 1801-1809, not 1800 when he was elected.

Page	Comment
103	Washington and Adams "belonged to one political party. Jefferson did not." But he did belong to a party—the Republicans—so include it. Both Lewis and Clark were Virginians.
115	Eleven states joined the Confederacy, not twelve.
116	Richmond became the capital of the Confederacy in 1861, not the mid-1860s.
117	The Monitor and the Merrimack were not the first ships made from iron; they were the first iron-clads to fight a battle; and that battle occurred on March 9, 1862, one day not two days. And why are we limited to just two land battles in Virginia--because the SOLs say so? The first battle for Richmond in 1862 (Peninsula Campaign or the Seven Days) and Chancellorsville are both more important than Fredericksburg.
118	The first battle at Bull Run was on July 21, 1861, not 1862. And the Southerners were not led by Jackson but by Generals Beauregard and Johnston.
119	Jackson won his nickname "Stonewall" at the battle of 1st Bull Run. And he was not the "mastermind" of that victory, but just one brigade commander heroically doing his job. And he was shot by his own men-- several not just one. And the casualties in the two battles at Bull Run were over 30,000 (approximately 5,000 and 25,000 each) not 6,000.
120	Grant was made a major general of volunteers, not all volunteers in 1862.
121	Lee was asked by General Winfield Scott to lead Union forces, not Lincoln, although Scott may have informed Lincoln of his choice. And Lee assumed the presidency of Washington College, not University. It was renamed after he died.
122	Delete the line "Thousands of Southern blacks fought…Jackson" There is no evidence to support either of these two points. A few blacks may have fought for the South but not in organized units. By the time the Confederacy created such units late in the war it was too late for their participation. For this reason I would also delete or rephrase the line—"But not all Virginian soldiers were white,,," It creates a wrong impression. Also the spelling of Stand Watie—a 't' not a 'd'.
124	On April 2, 1865 Confederate defenses fell at Petersburg, not Richmond. The evacuation of the capital followed.
125	Lee did not wave a white flag from a hill overlooking the Appomattox River. His aide took a white flag through the lines to tell Grant that Lee was ready to surrender.
126	Eleven states, not twelve, left the Union. Also South Carolina left the Union in December, 1860, not 1861. Also, Lincoln's Emancipation Proclamation did not free all the slaves in the Confederate states, only in those states and areas not controlled by the Union army; areas in Virginia and Tennessee were excluded as well as the loyal border states.
127	There was no battle of Richmond in 1865; there was one in areas around Richmond in 1862, which is not mentioned in the text.
129	The chapter heading give dates 1865-1877, the time period of Reconstruction, but the material in this chapter goes down to the end of the 19th century.

Page	Comment
138	Why have a picture of Hiram Revels, a non-Virginian? Better Blanche Bruce, who while also a Senator from Mississippi during Reconstruction, was born a slave in Virginia. Or why not John Mercer Langston, the first African American from Virginia to serve in Congress in 1890-91?
138	Grant was elected in 1868, not 1870. Also the Freedmen's Bureau was terminated in 1872, not in 1877. Also Plessy v. Ferguson in 1896 did not make segregation the law of the land; it allowed states to impose it if they so desired. Also we have the 13th amendment abolishing slavery in December, 1865 while on page 126 it says it ended in January, 1865. It passed Congress in January and was ratified in December. I would delete the January reference on p. 126 and leave the reference on p. 138.
143	America went to war in 1917, not 1916.
145	George Marshall as a Virginian is a bit of a stretch. He was born in Pennsylvania, went to VMI and spent most of his life on army bases outside of Virginia until he came to Washington D.C. in the late Thirties. It would be better to emphasize life in Virginia during WWII with a reference to Marshall. Picture of the Iwo Jima monument—I think this is a monument to the Marines of all wars, not all soldiers of WWII. It is officially called the Marine Corps War Memorial.
146	Rather than emphasize just the Brown case from Kansas, it should also be mentioned that the Davis case from Prince Edward County was one of the five cases making up the Brown decision. Also Harry Byrd did not make voting easier in Virginia. By the 1940s Virginia had one of the lowest percentages of people voting in the entire country.
147	Byrd did not write the Southern Manifesto. It was written by Sen. Strom Thurmond of South Carolina with Byrd's encouragement. Also there were three school systems closed in Virginia from September, 1958 until January, 1959 when courts threw out the massive resistance laws. Prince Edward was closed by the local board of supervisors in Sept. 1959 and reopened in 1964 (not 1963) by court order. This material needs to be rewritten in this book.
149	The Civil Rights Act or public accommodations act ending public facility segregation passed in 1964. The Voting Rights Act passed in 1965.
158	The Irene Morgan bus case was decided in 1946, not 1954. Also desegregation does not end in 1963 (it continued), but segregation in schools ended (legally but not effectively) in 1964 in Prince Edward. Also in timeline you have Wilder taking over as governor and then being elected!
R22	Mount Rainier in Washington is not in right place.
R23	Adirondack in New York is misspelled; Mt. Katahdin in Maine is misspelled.

What can I say? This book needs to be withdrawn from classrooms immediately, or at least by the end of the school year, because of its many errors. But it has potential. Most of the corrections along with improved explanations of some of the events can be made very quickly. It satisfies the SOLS so my reservations on coverage would not have to be addressed at this time, but I hope improvements in the SOLS will produce better textbooks. I will be happy to explain or elaborate on my comments at your convenience.

Appendix H

Review of *Our Virginia: Past and Present*
Submitted by Dr. Dr. Lauranett L. Lee (Curator of African American History, Virginia Historical Society)

Overall, this book was well done. The narrative read well, the information was presented in short, concise blocks, new terms were introduced where appropriate, the selected images supported the narrative, and the chapter reviews reinforced the learning process. The author conveyed a great deal of factual information into digestible bites for fourth grade students to grasp key concepts and employ critical thinking skills.

I would appreciate a stronger sense of Virginia's role in the international slave trade. A paragraph or two would introduce students to the role of slavery in shaping Virginia and America's economic, social and cultural history. This could be best achieved by creating a character who is an enslaved child. Such a character would thereby help students begin to grapple with the subject of slavery from a personal perspective.

I'd also like to see a stronger focus on women. Although the inclusion of women is significantly better than has been seen in past textbooks, I see an opportunity to highlight the work of women for example in the section entitled The Law-Makers (pp152-53). Attorney Constance Motley Baker comes to mind. In addition ordinary people who did extraordinary things such as Mildred and Richard Loving provide a context for understanding change over time.

Below are a few places where I have sticky notes:

Page	Comment
60	Arrival at Old Point Comfort (now Ft. Monroe) not Jamestown
71	There should be separate sections for Africans and Native Americans. In addition to music as a contribution to American society, foodways and language are also important.
87	James Lafayette: Super-spy. Show political connection between General Assembly and James Lafayette's request for freedom.
95	The Constitution of the United States: good concluding example. Refer to African American and women's changing status in America with 13, 14, 15, and 19th amendments.
113	Stronger emphasis on enslaved children. This section would benefit with a character with whom the students can identify. As is, the word slavery evokes no images of enslaved people as individuals. See Wilma King, et al., research on the subject.
114-15	Virginia Leaves the Union The role of slavery is submerged. Also, Lincoln's role is still seen as the "Great Emancipator" when in fact, Lincoln claimed not to want to interfere in the southern way of life. His complexity is not seen here (Same with Washington, Jefferson and Lee).

Page	Comment
122	The concern with the section entitled "The Virginia Confederates" has already been noted elsewhere by others. A re-reading of the last sentence might state: "Thousands of Virginia blacks were forced to support the Confederate ranks working as…..Also, the Contrabands at Ft. Monroe (1861, Shepard Mallory, Frank Baker and James Townsend and General Benjamin Butler's contraband decision) should be included. It highlights the agency of enslaved people to stride toward freedom.
136-137	The Machines Roar Here is a missed opportunity to introduce women's role in child labor reform.
146	A photo of Barbara Johns in addition to the Moton H.S. would personalize the narrative further especially because Johns' name is included. The *Davis v. Prince Edward County* should be included to show Virginia's role in the landmark court case of *Brown v. Board of Education*.
152-53 The Law-Makers	Include attorney Constance Baker Motley. In the area of personal relationships, include *Loving v. Virginia* (overturned miscegenation laws in 15 states) and a photo of Mildred and Richard Loving.
157	The Judicial Branch Include Judge Roger Gregory, first African American judge to sit on the United States court of Appeals for the Fourth Circuit. He is the only judge ever confirmed by two presidents of opposite parties, 2001.
Addendum:	First female chief Justice of the Supreme Court of Virginia, Cynthia D. Kinser will be sworn in on February 1, 2011.

Appendix I

Review of *Our Virginia: Past and Present*
Submitted by Dr. Brent Tarter (Retired: Library of Virginia)

This is a handsomely designed and produced book. I particularly like the use of maps, photographs, test sidebars, and conjectural renderings to keep the students aware that it is people who are the subject of historical study. The excellent photograph on page 45 of the Indian boy in an automobile using an electronic device is a very good example of linking present people with the past, and the uneasy expressions on the faces of the girls in the photograph on page 149 say quite a lot.

I am not competent to assess the appropriate language level for use in the fourth grade, nor am I competent to judge the maximum amount of subtlety and complexity that it is reasonable for pupils at that level to master. Much of historical interpretation and presentation requires subtlety and complexity to avoid oversimplification that can lead to learning of inaccurate or misleading or confusing versions of history. I presume that some of the consultants listed on the verso of the title page have reviewed the text for that purpose.

I am glad to see the names Deanna Beacham, Kareene Wood, and Kenneth Adams listed there, which is probably why the portions on Indians are much better in this book than was the case a few years or decades ago. The emphasis on African Americans also marks a major improvement in history texts during the last few decades, however uneven it still is, but I must confess that I was surprised to see relatively little, yet, about women's history. Woman suffrage, for instance, is entirely missing. The geographical parts of the book are pretty good, too. I presume that Donald Zeigler, also listed among the consultants, may have helped get that right. I do not recognize the names of any of the other reviewers.

It is evident to me that nobody reviewed the text properly for factual accuracy, nor is it evident that anybody gave an informed consideration to interpretation and balance. That much of the first half of the nineteenth century is missing entirely, and the chapter on the entire twentieth century is the same length as the chapter on the Civil War alone and only about two pages longer than the chapter on the American Revolution, raise serious questions about the conception and coverage of the text as a whole.

In my review of the volume, I found a substantial and alarming number of factual errors and mangled quotations and inclusions of quotations from sources of questionable reliability. I also found some very significant omissions, some internal inconsistencies, and some erroneous or questionable descriptions and analyses of historical events. Some are so ludicrous and difficult to explain that I cannot understand where the misinformation came from, such as George Washington presiding over the Continental Congress in 1785, Thomas Jefferson and Patrick Henry attending the Constitutional Convention of 1787, U. S. Grant being elected president in 1870, or George C. Marshall dying in 1949.

Moreover, there are some split infinitives scattered throughout the text and some questionable uses of commas and incorrect application of quotation marks. Somebody ought to

have reviewed the text so that what students read and learn here does not undermine the teaching that should be taking place about correct English usage and writing skills in other classrooms.

Here follow my notes on the text and illustrations:

Page	Comment
Title Page	The date 1929 underneath the portrait of Maggie Walker suggests that she was born or became a bank president or something in that year. In fact, she had been president of the St. Luke Penny Savings Bank for many years by then. I suppose the date must have come from some sloppy research that disclosed that under an authorization made late in 1929, her bank and another merged as of 2 January 1930 under the new name of Consolidated Bank and Trust Company, of which she was the first president. See also the note on this for page 150.
12	The map shows two white spaces for incorporated cities in Alleghany County, but one of them, Clifton Forge, relinquished its independent city status, and so the second white space, which is not identified, should be removed.
12	On the Elevations of Virginia map, there is a red triangle near the site of Mount Rogers, but there is nothing in the legend to indicate what the triangle means or why it is there. Add another phrase about the location of Virginia's highest mountain?
16	The definition of the word Peninsula indicates that it is a land form surrounded on three sides by water, but the description of the Eastern Shore near the bottom left lists only two bodies of water bordering that peninsula. Add to those Hampton Roads or modify the definition to indicate that a peninsula is a piece of land extending into a body of water or surrounded by water on all sides but one.
23	The mouth of the Rappahannock River, not the whole thing, lies a few miles south of the mouth of the Potomac River. And the mouth of the Rappahannock River is "extremely wide," as the text states, but it is not a wide river everywhere, as the illustration on page 26 shows. It might be wise to think about recasting the language about the rivers to indicate that below the Fall Line all of the rivers flow more slowly and become much wider than above the Fall Line.
23	The York River was also important before and at the time of English settlement as the principal residence of Powhatan. Perhaps the text could be modified to include something like: "It has always been important, first as the principal residence of Powhatan, then as the scene of many early settlements, and later. . . ." Moreover, the illustration caption has smaller streams branching off of the York River as if they grew from it, when in fact they are tributaries that feed into it. The hydrology is topsy-turvy.
24	The reference in the first paragraph to "seagulls" is incorrect in several ways. They are properly gulls, not seagulls, and almost none of the species seen in Virginia nest on or near the sea, although two species regularly nest on the shores of the ocean or bay. Several species of gulls winter in Virginia, and during the winter gulls may be seen nearly anywhere east of the mountains. I suggest deleting that short sentence.
26	The illustration of White Oak Canyon may not, in fact, be an illustration of the Rappahannock River. If I understand the geography correctly, the stream in the canyon is a tributary of the Rapidan River, which in turn is a tributary of the Rappahannock River.

Page	Comment
27	In "The Hills Are Alive" section, there are and never have been any brown bears in Virginia since human habitation began. Change "Brown bears" to "American black bears" and procure a photograph of *Ursus americana* instead of *Ursus arctos*. Insofar as I can tell from books of reference, the illustration of the rattlesnake is correctly a Timber rattlesnake, *Crotalus horridus*.
29	The photograph of the turkey is of the eastern subspecies of Wild Turkey and not of the domesticated species of turkey that is raised for the market in Virginia. Those birds are all or almost-all white. I suggest substituting a photograph of a domestic turkey from an actual turkey farm.
37	In the third paragraph of right-column text, "people lived in harmony with the animals and plants of the region" strikes me as somewhat simplified and romanticized. All human history exhibits better or lesser adaptations to the natural environment, and all such environments change with human habitation or exploitation. I suggest, instead, "and people made wise use of the natural resources where they lived, which allowed them to thrive."
38	In "The Earth Talks" a farm is or was not "built atop" a town. Buildings might be, but the agricultural part of a farm was not built. I suggest, "revealed that beneath the surface of the farm land were evidences of the town of Werowocomoco."
41	Rather than in the first green box, "Algonquian towns were always along the water," I think it safer and more accurate to write, "Algonquian towns were usually near the water."
44	In the second paragraph the statement, "White, black and Indian cultures were all kept apart in separate schools. . . ." is misleading in that it immediately follows a sentence dealing with "the 1800s," when in fact there were no schools, public or private, for black and Indian students or even any public schools for white pupils for much of the time. You could begin the second sentence in that paragraph more accurately and educationally with, "In the first half of the 1900s, white, black, and Indian students had to attend different schools, and the schools for black and Indian students were inferior to the schools for white students." That would then allow for an extra educational opportunity to ask pupils why the Monacan students in the photograph look so gloomy.
49	Subtitle "The Birth of Jamestown 1607–1700" is a long birth, so you might just delete the subtitle and leave the date range to stand for the chapter, which it does, or better, yet, change the subtitle to "The Birth of the Virginia Colony."
51	The exact number of men, women, and children who left England for North America in 1587 is not particularly important or easy to verify and therefore might best be rendered roughly, as "more than 100." I do not recall that Raleigh actually accompanied the expedition that he sponsored. The account of the Lost Colony is *very* condensed, but that probably doesn't much matter for the fourth grade.

Page	Comment
51	In the sidebar, the description of the grant to Virginia, "stretched 100 miles in every direction from the landing site," is not right. The first charter encompassed the land 50 miles north and south of the settlement and 100 miles inland. It did not include the ocean to the east. What is omitted is also important and interesting, so I suggest adding, "The second royal charter, issued in 1609, granted Virginia all of North America north and northwest of the Atlantic coast for 200 miles north and south of the latitude of Point Comfort. That included much of what later became the United States."
52	The date for landing on Jamestown was 14 May 1607.
53	The first Englishman to die at Jamestown did not die on 6 August 1607. Some had already died by then. Omit that portion of the sentence.
53	The emphasis on uselessness of the gentlemen is now known to be something of an exaggeration. The settlers intended to purchase or barter or simply take necessary supplies from the Indians; and they built the fort as much for protection from anticipated Spanish interlopers as from local Indians.
54	Captain John Smith: "Everyone else thought he was obnoxious" is an exaggeration, but other than Captain Christopher Newport, Smith was the only man with much experience living with non-English-speaking people and also experience in military affairs. That made him an obvious know-it-all, but he did know more, and that was a secret of his ability, once he took command of exploring parties and of the colony, to be a more successful leader than anybody else.
54	"Smith's drawing of Powhatan" is probably not a drawing that Smith made; it is an illustration based on his description that somebody else made for Smith's book.
54	The quotation about Powhatan has been simplified. The accurate text (rendered in modern spelling) is: "Their emperor proudly lying upon a bedstead a foot high, upon ten or twelve mats, richly hung with many chains of great pearls about his neck and covered with a great covering of raccoon skins." I would remove the date 1616 from the caption because it suggests that Smith witnessed the scene in that year. In fact, he published his account in that year.
55	The quotation from Powhatan has been significantly modified. The accurate text (rendered in modern spelling) is: "What will it avail you to take that by force you can quickly have by love, or to destroy them that provided you food. What can you get by war, when we can hide our provisions and fly to the woods? whereby you must famish by wronging us your friends." I would remove the date 1616 from the caption because it suggests that Powhatan made the speech in that year, which was in fact the year in which Smith published his account of the speech.
55	In the Pocahontas section, she is described as acting as a "contact" between the Indians and the English. It might improve the account to describe her as an interpreter and to find space to insert another sentence something like, "Like Pocahontas, who learned English, several of the young English boys went to live with the Indians to learn their language. Young people of both populations served as interpreters."
55	John Smith's characterization of Pocahontas has been modified. The accurate text (rendered in modern spelling) is: "She next under God was still the instrument to preserve this colony from death, famine, and utter confusion."

Page	Comment
55	In the Pocahontas section, Henricus is described once as a "new colony," when, in fact, it was a new town or settlement within the colony of Virginia.
56	The John Smith quotation has been slightly modified. The accurate text (rendered in modern spelling) is: "He that will not work shall not eat, except by sickness he be disabled." In this instance, it is accurate to include the date 1608, which is the year in which he issued the edict. But why are there quotation marks around the non-quotation, "no work, no food" policy? Quotation marks suggest that those were John Smith's actual words, which they were not. I think that it is not good policy to allow students to think that words within quotation marks are genuine historical texts when they are not.
56	Colonists probably did not plant any merchantable tobacco as early as 1608 or 1609, as this page implies.
57	The statement that 60 of 504 colonists died during the Starving Time is not entirely correct, inasmuch as there was no exact account of the number of colonists residing in Virginia at the beginning of the winter. Modify the text to indicate that many of the English residents of Jamestown died during the Starving Time. As it happens, a smaller garrison at Point Comfort spent the winter happily and healthily.
57	Why is Sir Thomas Dale's title placed within quotation marks? The titles governor or president aren't. What does the title mean? That is not given, so there is no useful educational value to include the title with or without the quotation marks. I suggest replacing the obscure title (would somebody think of him as an old frontier law officer?) with something like, "Sir Thomas Dale arrived in command of military reinforcements," which is entirely correct and easy to understand.
57	John Rolfe and Pocahontas married in 1614, not in 1616.
58–59, 62, 64, 69	There is repeated confusion in the use of names in treating the founding of the Virginia General Assembly in 1619 and its later evolution in 1643 into a bicameral legislature. It is true, as is stated on 58, that burgesses and Council member met together as the General Assembly, but neither it nor any part of it was called the House of Burgesses until 1643, when the House of Burgesses came into being, and thereafter it was one part of the General Assembly and not, as is implied on page 59, one of two legislatures. On page 62, it was the General Assembly, which included burgesses, that was founded in 1619. The display quotation on page 64 is misidentified as taking place in or about the House of Burgesses in 1619, when no House of Burgesses existed. And the construction of a new capitol building in Williamsburg, depicted on page 69, was a capitol building, not a House of Burgesses.
60	The section on the introduction of Africans into Virginia is much better than what used to appear in textbooks, and it is to be commended for indicating that little is known about what became of the first people who arrived, that some may have become slaves, some servants, or some even free. But to suggest, as in the final words on the page, that the arrival in 1619 began a "long and terrible struggle for dignity" is not very educational or necessarily even correct. Why not, "Thus began a long and terrible time of slavery, hard work, degradation, and often death. Under those circumstances, dignity was difficult at best and probably just about impossible."

Page	Comment
61	The discussion in the "Send More People!" section suggests that the importation of numerous African laborers increased soon after 1619, when in fact there was only a trickle until the middle of the century and not more than a few hundred by the end of the century. Supplies of English men and women willing to indenture themselves in Virginia fell below the colony's demand for labor during the second half of the century, leading to a slow increase in the willingness of large-scale planters to spend large sums of money to purchase life-time slaves. Moreover, the section suggests that the demand for laborers in Virginia created the international slave trade, which was in fact a very flourishing and profitable business long before as well as during and after the importation of Africans into Virginia. What actually happened is that the increasing demand for laborers in Virginia slowly drew Virginia and the British into a more active and profitable participation in the slave trade that the Spanish and Portuguese had been engaged in for decades by 1619.
64	The quotation attributed to John Pory in 1619, "Our intent is to establish one equal and uniform kind of government over all Virginia," does not appear in the historical record. It must be some later writer's characterization that has been repeated as if Pory's words. Pory was Speaker of the General Assembly of 1619; there was no House of Burgesses then.
68	In the Town in Trouble section, it appears as if Sir William Berkeley was still governor when the capital was moved out of Jamestown in 1698, but he wasn't because he'd been dead for more than twenty years by then; and the reason the capital was moved was not because the soil was exhausted on the island. Moreover, it has been plausibly suggested by people who know these things that the city was very flourishing in 1676, when the state house there may have been the largest building on the continent north of Mexico, and it became a substantial city again later in the century before the fire of 1698. And again, Berkeley did not kick out people "who did not follow the ways of the Church of England"; some laws passed during his administration restricted the rights and behavior of some Puritans and of Quakers, which is a very different thing. A more thoughtful and careful description of the importance of Protestant Christianity and the established Church of England in colonial Virginia would be good here, and it would set up much more effectively the significance of the disestablishment of 1786 on page 101.
69	The statement that work on the capitol—not on a House of Burgesses—began on 18 May 1699 in Williamsburg is incorrect. On that date the House of Burgesses approved a resolution to erect a capital at Middle Plantation, which was renamed Williamsburg, but the governor and Council had to agree later, and construction of the capitol did not begin on that date. Therefore, that date is of no usefulness. I suggest removing it and stating that in 1699 the General Assembly ordered that construction of a new capitol building be begun in Williamsburg.
71	In the Farewell Germany section, it is certainly a serious exaggeration to state, "By 1790 almost one third of white Virginians spoke German." It is true that in the Shenandoah Valley and nearby mountains a very large number and a large proportion of white Virginians were of German origin or extraction and that German was the first language of many or most of them.

Page	Comment
73	The Capital Resources paragraph would confuse me if I were young and just had learned five pages earlier that the word *capital* means "A city or town that is the site of a state or country government." I tried to think of a substitute word for *capital* for this section, but in fact it is not about Using Virginia's Resources, as are the other two paragraphs in green; it is about creating value (which is capital by another name and with another definition) to exploit Virginia's Resources.
74	Bacon's Rebellion occurred in 1676, not in 1674, but because there's not a syllable elsewhere in the book about Bacon's Rebellion, of what use to students would that entry in the timeline be even if corrected? I am delighted to see that none of the old insupportable rubbish appears here about Bacon's Rebellion being a (or the first) colonial revolt against royal misrule, but leaving it out rather than mischaracterizing it is not much of a gain for education or comprehension. Bacon's Rebellion is extremely difficult to characterize accurately even in a substantial treatise (I know, I have a long scholarly article coming out early in 2011 that advances a reinterpretation of its causes and consequences), much less in a brief account suitable for a fourth-grade textbook. But it was the largest and bloodiest rebellion of white people in North America before the American Revolution and so therefore should not be omitted.
74	The 1705 reference to the laws is not accurate. The first laws respecting slavery in Virginia were passed in the 1660s. What occurred in 1705 was a general revision, or codification, of all of the colony's laws, and in the process the laws concerning slavery were compiled into the first comprehensive slave code. That is an important event, but it is substantially different than being the first laws; and "the rights of non-whites in Virginia" were not so much reduced by that codification as given greater clarity and precision.
77	The passage quoted as from George Washington, "Let us raise a standard to which the wise and honest can repair; the rest is in the hands of God," is almost certainly spurious, or some later writer's characterization or invention. I checked with the editors of the modern edition of *The Papers of George Washington* at the University of Virginia, and they have no record of his saying or writing anything of the kind and agree with me that it does not sound like George Washington, anyway. Remove it.
78–79	The two paintings depicting Washington show him and his soldiers wearing red coats, as if they were British soldiers, but Virginia militia uniforms (at least for the officers and probably for the men) were blue.
78	"By the mid-1700s there were 13 British colonies along the Atlantic Coast." In fact, there were more than that, but the main point here needs to be that there were British colonies and also French colonies and that the two kingdoms claimed the same inland regions. The reason that they came to blows was not their "hatred" for each other but their rival claims to space in North America as a part of their larger rivalry for eminence in Europe and for colonies elsewhere.
79	In the blue box about Washington, it would perhaps confuse me to read that Washington "fought with" the British, because that phrase can also mean "fought against." Modify it to read "fought on the side of" the British.

Page	Comment
79	In Who Will Pay? the sentence "Britain gained new territories by winning the war, but they were almost broke." An English teacher would point out that what this sentence actually states is that the territories were almost broke. How about: "Britain gained new territories by winning the war but had many bills to pay afterward and raised taxes on people in Great Britain and in the colonies." The next sentence, "the fighting had been on American soil," suggests that the war took place only in North America, which is entirely incorrect. As Lawrence Henry Gipson stated it about 75 years ago, the war was a world-wide war for empire.
80	Not Another Tax! also appears to indicate that Parliament taxed the colonists, only, and the adjacent Life and Liberty section underplays the importance of no colonial representation in Parliament and overplays the fact of taxation.
80	The definition of Parliament is not quite correct, inasmuch as peers formed the House of Lords, and other people elected the members of the House of Commons. A word like *peers* requires a definition, and an accurate definition would invalidate the definition of the word *Parliament*.
80	Patrick Henry's liberty or death speech was not to a secret session of the House of Burgesses. It was to a public session of a convention of men (many of whom were or had been burgesses) who were acting for the patriots of Virginia.
81	A Midnight Ride closes with two sentences that conflate the date of the first meeting of the Second Continental Congress (May 1775) and the election of George Washington as commander in chief of the new Continental Army (June 1775). See page 85, where this also needs to be made accurate and clear.
82	The red box characterizing the Parson's Cause is entirely incorrect. Henry in effect defended the right of the General Assembly of Virginia to pass a temporary law (even if the king disapproved of it) that modified the manner in which ministers of the Church of England were paid and that also applied to how all other people paid debts that they owed during a temporary financial emergency
85	In the second paragraph of "Life, Liberty, and the Pursuit of Happiness," building on the opening line of the first paragraph, has John Adams in 1776 suggesting that George Washington become commander in chief of the new Continental Army, which in fact took place in June 1775, as should be made clear back on page 81.
86	Choosing Sides begins, "When the War of Independence began in 1776," when, in fact the fighting, the war, began back in the spring of 1775. Remember Lexington and Concord, not to mention Bunker Hill?
86	It may be correct that a few black soldiers took part in the early months of the Revolutionary War, but the opening of the second paragraph in The African Americans and War section suggests that there may have been a great many. Both Washington and Congress changed their minds slowly as the war progressed and eventually took some black soldiers into the army.
87, 107	In the James Lafayette story, what does "Super" mean in "Super-spy"? Moreover, the man's name was James, not James Armistead, regardless of what a great many ill-informed old references state. Armistead was the surname of his owner, not of the man. So change the references there to identify him as James. After the General Assembly awarded him freedom, James gave himself the surname Lafayette. His name appears erroneously again on page 107 in the chapter exercises for a chapter in which his name does not otherwise appear either correctly or incorrectly.

Page	Comment
89	The quotation marks around "sword of surrender" make no sense, so delete them. If there is room, it might be educational to insert a brief sentence indicating that the ceremonial handing over of an officer's sword is a token of surrender.
90	In 1774 when the first Continental Congress met, it was not to "talk of independence from England"; it was to coordinate colonial protests against British policies. It was not until early in 1776 that the idea of independence began to make headway.
94	Congress approved the Articles of Confederation in 1777, not 1877, and they were not ratified and put into effect for several more years, until after Virginia gave to the United States all of its land claims north and west of the Ohio River, which is highly worth mentioning.
94	The inclusion in the red box of the name of Thomas Jefferson among the members of the Convention of 1787 is wrong. He was in Paris then. How could a blunder like that have taken place and not been caught?
95	The Constitution of the United States did not specify "Who can vote" until the amendments adopted in the twentieth century. Delete that.
95	It is misleading in the extreme in A More Perfect Union? to write that "Many Northerners" wanted slavery to be abolished or restricted and that "People from the southern states did not." A great many white Southerners at that time had qualms about the continuation of slavery, and it is very unlikely that any appreciable number of black Southerners "did not." Amend to "Some influential white political leaders in the southern stated did not."
95	In that same section, it leaves an erroneous impression to write that "Two Virginians, Patrick Henry and George Mason" voted against the constitution, even though both men voted against it in the Virginia Ratification Convention of 1788, because the paragraph is about slavery and the preparation of the Constitution in Philadelphia in 1787. Patrick Henry wasn't in the Convention of 1787 (any more than Thomas Jefferson was), and neither man opposed or refused to sign the Constitution because of its slavery clauses.
96	In the section with dates for George Washington's life, he was commander in chief of Continental Army from 1775 (not 1776) until 1783; he never presided over Continental Congress (not in 1785 or at any other time), but he did preside over Constitutional Convention in 1787, which should be included. Elsewhere on that same page, Washington was in the army for eight years, not nine.
98	In the section with dates for James Madison's life, he was born on 15, not 16, March 1751; he was secretary of state from 1803 to 1809, not just in 1803, and he never attended the College of William and Mary, and he never studied law at any institution of higher education, and he was not a lawyer.
98	In describing the meeting of the Convention of 1787 in Philadelphia, it is entirely incorrect to write that the delegates met "with the winders shut to keep out swarms of flies (screens had not been invented)." Perhaps screens hadn't been invented yet, but the reason they closed the windows was so that they could debate in secrecy and people could not listen through the open windows.
99	It is utterly incorrect that in the Convention of 1787 Madison "broke the delegates into small groups and asked each group to deal with just one or two issues at a time instead of the huge problem of making a nation." Delete that entire sentence.

Page	Comment
101	It is extremely misleading to give the title In God We Trust to the brief section on the Act for Establishing Religious Freedom in Virginia. That's exactly what Thomas Jefferson did not propose and what the General Assembly did not enact. That is applying a twentieth-century phrase incorrectly to an eighteenth-century law. It is also incorrect to state that the act "became a part of the Bill of Rights." It and many other sources had an influence on what went into the Bill of Rights, but the Bill of Rights did not include it or any of its explanatory language. If something substantial had been included earlier in the textbook about the place of the Church of England in colonial Virginia and also about the persecution of dissenters (principally Baptists) early in the 1770s, it would make this section better and more meaningful.
101	The summary of the Second Amendment here is much preferable to the incorrect summary of the Second Amendment given on page R12.
101	The summary of the Fifth Amendment here incorrectly states that "No one can be charged with a crime without a jury hearing the evidence." The correct language would be, "No one can be tried for a crime without a jury hearing the evidence."
101	The summary of the Ninth Amendment is utter nonsense. The summary on page R12 is better.
102	In the section with dates from the life of Thomas Jefferson, he was not ever a member of any of the Virginia or United States Constitutional Conventions.
102	Thomas Jefferson did not invent the polygraph; he "used" and he "improved" one.
103	Correct the spelling of name of Meriwether Lewis by removing one of the two *r*s in his surname and removing the incorrect *a*.
106	The deaths of Thomas Jefferson and John Adams did not occur on the fiftieth anniversary of the "signing of the Declaration of Independence"; 4 July 1826 was the fiftieth anniversary of the "adoption of the Declaration of Independence." The formal signing of the Declaration of Independence took place in August 1776.
107	The name of James Lafayette appears here, again, with the incorrect Armistead included; and he is here in an exercise relating to this chapter in which he does not otherwise appear. What are pupils to make of that?
107½	Here is what I learn from what is omitted from this book about the time period 1800–1859: Nobody named Gabriel (whose name was never Gabriel Prosser and should never be given that way) organized a large-scale revolt against slavery in 1800 Nothing took place in the state during the War of 1812 No Virginians took part in national politics during the four decades after James Madison was president, and so there was no state's rights philosophy There was no Monroe Doctrine There was no John Marshall or judicial review or mode of constitutional interpretation There was no struggle to allow white men who owned little or no property to vote and consequently no state constitutional conventions There was no Nat Turner or a bloody revolt against slavery in Southampton County (but see 112) There was no debate about slavery's future in the General Assembly in 1832

Page	Comment
107½ (cont.)	There was no American Colonization Society and no Liberia There were no free blacks in Virginia There were no women in Virginia There were no cities in Virginia There was no industrialization in Virginia There were no railroads built in Virginia There was no slave trading business in Virginia There was little or no commercial agricultural diversification in Virginia There was no temperance movement in Virginia There were no churches in Virginia There were no camp meetings or Second Great Awakening in Virginia No religious denominations in Virginia or anywhere else in the state split off from denominations in the north over slavery or theological issues There were no institutions of higher education in Virginia except the University of Virginia (mentioned in a previous chapter) There were no sectional differences in the United States There were no sectional differences within Virginia that predated West Virginia statehood
110	The boldfaced heading in italic type that states that "economic differences" were the reason for the secession of some Southern states is flat wrong. There were major differences in political economy from region go region and even larger differences between slave states and free states, but almost no historian will any longer repeat the fiction that it was merely incompatible economic differences that led to the Civil War. But see a radically different and even more insupportable cause given on page 123.
110	It is not correct, as stated in the first paragraph of Life in the North that "The North's economy was mostly industrialized." In fact, a large majority of people everywhere in the United States, including in all of the northern states, lived on farms or in small towns, not in cities, and only a minority worked in industrial establishments, some of which were in the South, notably in Richmond. In this same paragraph, it is incorrect to state that in an industrial economy "slavery did not make good financial sense, so it died out north of Maryland." Industrial slavery, in fact, made very good economic sense in many places in Virginia, and slavery did not die out north of Maryland; it was abolished by deliberate acts of legislation or constitutional prohibition. In the final analysis, voters determined whether a state had slavery. North of Pennsylvania and the Ohio River, slavery was not as important as to the south, and it was easier for people with anti-slavery beliefs to procure legislation or constitutional provisions to abolish slavery gradually; but to the south no state legislatures or constitutional conventions voted against the profitable institution. It was deliberate human decisions, not natural economic processes, that governed where slavery existed and where it did not by 1860.
111	The two paragraphs on cotton are largely correct, but it would be much better to indicate that cotton production was not a large plantation business in Virginia at any time and that the state's economy and its economic life were much more varied that in some places farther to the southwest. Why not include information about Virginia here? Is none known?

Page	Comment
112	An overdue bow to Nat Turner on this page ends troublingly with no reference to the legislature's strengthening of laws to protect slavery and to restrict the activities of enslaved people and also of free blacks.
112–113	The Underground Railroad features Marylander Harriet Tubman without any hint that she was not a Virginian and probably never entered Virginia. Other examples of freeing men and women from slavery could be adduced, such as Anthony Burns' escape and recapture (which would allow the author to bring in the extremely important but entirely overlooked Fugitive Slave Act of 1850); the very brief reference to Henry Box Brown could be reworked and enlarged to allow that Virginian's story to do the work that the Marylander's story is supposed to do. It would be much better to indicate, too, that he took the middle name Box and to replace the word *crate* in the text with *box*.
114	The paragraph A New Leader does not successfully deal with the complexity of how opponents of the spread of slavery into the western territories became a source of fear about threats to slavery where it already existed. The use of the phrase "state's rights" here suggests that the paragraph is cast so as to put the blame for Southern secession on people who threatened the right of states to legalize slavery rather than on the people who appeared to threaten the national republic by spreading slavery throughout the western territories. There were only two state's rights subjects discussed in Virginia during the secession crisis: whether a state had a right peacefully to secede from the United States; and whether Congress could be trusted to suppress the rights of Northern states to refuse to return fugitive slaves.
115	Eleven, not twelve, Confederate States of America.
115	The separation of about fifty western and northern Virginia counties from the state and the formation of West Virginia was not entirely rooted in pro- or anti-secession sentiment. The story is much more complicated than that and more important, but nothing in the missing section on nineteenth-century Virginia's political and legal history leads up to that event. This episode needs to be included and explained more intelligibly.
116	The caption is wrong in stating that "Richmond became the capital of the Confederacy in the mid-1860s"; that happened in the middle of 1861.
117	The battle between the *Monitor* and *Merrimack* (technically, then, the *CSS Virginia*) took place on 9 March 1862, not on 8 and 9 March 1862, and the two "iron-clad" ships were not "made from iron instead of wood," they were armored with iron.
119	The brief biographical section on Stonewall Jackson, coupled as it is with accounts of the second Battle of Manassas, suggests that he got his nickname then rather than a year earlier at the first battle there. Moreover, it is not the "Battle of Second Manassas," there being but one Manassas, but the Second Battle of Manassas (or Bull Run), there being two battles at the one place. The rudimentary index (160–161) muddles this even worse by having references to the Battle of Second Manassas and to the Second Battle of Bull Run, which was the same thing by a different name, and also another to Bull Run.
120	Why confuse students by including Grant's baptismal name without indicating that he never used it and not giving his full name as it is known to history?

Page	Comment
120	The quotation attributed to U. S. Grant, "If you see the President, tell him for me that whatever happens there will be no turning back," is said to have been uttered in May 1864, soon after he took command of the United States Army in the field in Virginia. I would add the date to give the quotation some meaning.
121	The Robert E. Lee quotation, "I cannot raise my hand against my birthplace, my home, my children," expresses the essence of his opinions late in April 1861 after an intermediary offered him, at Abraham Lincoln's suggestion, the command of the United States armies in the field in the event of war. Lee resigned from the army rather than accept the command. The versions of this sentiment that I can find read: "I have been unable to make up my mind to raise my hand against my native state, my relations, my children & my home"; and "I have not been able to make up my mind to raise my hand against my relatives, my children, my home."
122	There were no regular units of African Americans (free or enslaved) in the Confederate Army. There were numerous black men pressed into work on fortifications or as body servants or in other ways, but it is not defensible to repeat this post–Civil War propaganda as if it were fact.
122	It is correct to assert that "Most American Indians did not fight for either side and stayed neutral during the war" only if you contemplate the entire Indian population of what is now the United States. There were organized units of Indians in both armies, if I remember correctly, and in Virginia, although most people do not know it, many Pamunkey men served as guides for the United States Army or as pilots or in other capacities with the United States Navy during the war.
122	The quotation from Charles Tinsley, "We are willing to aid Virginia's cause to the utmost of our ability. There is not an unwilling heart among us," may be accurate, but there is no convincing evidence that any substantial number of free black Virginians took an active part in military operations on the side of the Confederacy, even at the time of the outbreak of the war. This gives a very misleading impression.
123	The quotation from M. M. Miller**,** "I can say for them that I never saw a braver company of men in my life," is accurate, but it appears in a misleading context. Miller was a white officer from Illinois who commanded a company of black Louisiana soldiers serving in the United States Army. The battle that he described in the letter than includes the quotation took place in the southwest, hundreds of miles from Virginia. As it appears here, featured very prominently on the very next page after the Tinsley quotation and in connection with the erroneous assertion that there were two battalions of African Americans in Stonewall Jackson' brigade, suggests that Miller was describing black Confederate soldiers. I'd take this out, entirely, and replace it with something that is inadequately treated here, the regiments of United States Colored Troops recruited in Virginia who fought with great bravery and success in their native state.

Page	Comment
123	The quotation attributed to General Robert E. Lee, "The commanding General deems the prompt organization of as large a force of negroes as can be spared . . . to the slaves is offered freedom and undisturbed residence at their old homes in the Confederacy after the war," is actually (and I looked at the *New York Times* in which the lost Petersburg newspaper in which it is supposed to have appeared was quoted) is from two Petersburg men acting under Lee's authority and offering freedom to enslaved people whose owners let them serve in the Confederate army. And it was not just Lee who made the decision to enroll and free slaves. He and Jefferson Davis reluctantly recommended to the Congress of the Confederacy very late in the war that freedom be offered to enslaved men who would fight for the Confederacy, and Congress reluctantly agreed, but no (or virtually no) enslaved men have been documented enlisting in Virginia as a consequence.
123	It is certainly not true to write, as in the first sentence of A Difficult Decision, that "The fight to end slavery was a major cause of the Civil War." Not only does that assertion contradict the equally incorrect assertion on page 110 that irreconcilable "economic differences" were the cause, it collapses back to 1860 and 1861 a determination that slowly grew among politicians and civilians and soldiers in the United States during the course of the war that in order to save and restore the Union, it was necessary to destroy the institution of slavery that had threatened to destroy the United States.
123	The brief reference to enslaved Virginians seeking freedom within the lines of protection of the United States Army deserves very much more emphasis. Alongside the great bloodshed of the war, that was the biggest and most important story of the Civil War. Men and women and children seeking refuge and freedom forced that hands of the United States Army and government and led by incremental steps to Lincoln's Emancipation Proclamation. A great many thousands of enslaved Virginians won their freedom that way even before the end of the Civil War. And several regiments of United States Colored Troops, recruited in Virginia, took part in the fighting to restore the Union and to end slavery. That deserves a vast deal more attention than the late and feeble attempt of the Confederacy to recruit and free slaves.
124	The fire that destroyed much, but not all, of Richmond in April 1865 was not set to destroy provisions but to destroy cotton and other valuable merchandize (and also perhaps to destroy some armaments) that would be valuable to the United States if captured.
126	Another attempt at bringing in Nat Turner fails by tailing off in the unclear statement that it "leads to growing troubles in the South." What, if anything, are students supposed to learn from that? That what followed later in the form of the Civil War was Turner's fault? There is, in fact, nothing in this text that indicates what the consequences of Nat Turner's rebellion really were.
126	South Carolina seceded on 20 December 1860, not in 1861, as the chronology has it.
127	The worksheet asks students to list the name of the winning general at the "Battle of Bull Run (1st)" using information in the book, but the information isn't there, and Jackson, who is given credit, wasn't the commanding general; and it asks students to list the name of the winning general at the "Battle of Richmond," when in truth there wasn't a Battle of Richmond.

Page	Comment
128	Add an opening quotation mark to Booker T. Washington's quotation, "There are two ways of exerting one's strength: one is pushing down, the other is pulling up."
129	The date range for this chapter, 1865–1877 is wrong for at least two reasons: Congressional Reconstruction in Virginia concluded in January 1870, not in 1877, and there is quite a bit in this chapter about later events in the nineteenth century and even, the twentieth century, for which see the photograph of an automobile on page 135. It is astonishing and entirely indefensible not to include in this chapter or at the beginning of the final chapter an account of the disfranchisement of African Americans and poor white men by the Constitution of 1902.
130	It is a gross exaggeration to the point of falsehood to write, "Railroads, bridges, farms, and plantations had all been destroyed" during the Civil War.
130	Reconstruction under the authority of Congress and under the direction of military officers lasted in some places in the old South until 1877, but in Virginia Reconstruction legally ended in January 1870. Constructing a new Virginia lasted longer and which is what this chapter ought to be about but by and large isn't.
131, 138	About the Freedmen's Bureau: there never was a forty acres and a mule program, which has been exposed as a myth for more than 125 years. Take that falsehood out.
131	The real tragedy of sharecropping is not that people got in debt and left (and it is very doubtful that any significant number of black Virginians were exodusters, who mostly came from Mississippi and Alabama and perhaps Louisiana); the real tragedy is that if one year's crop was inadequate to the family's expenses, they borrowed from the land owner against future crops, which put them into a state of long-term or permanent indebtedness and *then they couldn't leave.*
132	The orange sidebar on Jim Crow is not bad up until the end, then it misleads by concluding incorrectly, "the name Jim Crow became an unkind way to refer to African Americans." In truth, Jim Crow became an informal way of referring to legal and extralegal racial discrimination of a great many sorts.
132-133	There ought to be something much more explicit and horrible in here about lynching. There ought to be more about Virginia in here, too. This section, especially page 133, is written as if the author knew nothing about Virginia during the period or as if nothing happened in Virginia during the period, so some Southern information gets drawn in, some of it anachronistically from the twentieth century. The green box about imposing knowledge tests on voters was a twentieth-century technique; Virginia required a poll tax as a prerequisite for voting (blue box) for a few years late in the 1870s and early 1880s, not during the time period ostensibly treated in this chapter; the 1895 poll tax receipt is an Arkansas document and probably ought to be replaced with something from the right time period and state; the red box about racial segregation in public places, especially swimming pools, is also a post-1890s practice, so the Alabama illustration should be replaced with something from the right time period and state; and separate but equal schools and other public facilities post-date the 1890s, so the text in the purple box should be transferred to the next chapter. This whole section is very misleading because it concerns things that did not happen in Virginia during the time period.

Page	Comment
132–133 (cont.)	*Did nothing of importance happen in Virginia?* Why do student not learn here that about two dozen African American men served in the Constitutional Convention of 1867–1868 and that about three times that many more African American men served in the General Assembly of Virginia between the late 1860s and the early 1890s? Why don't they learn that there was a Constitutional Convention of 1867–1868? And that it created the state's first system of public schools for everybody? And that it allowed all men, including African Americans and formerly enslaved men, to vote? Hiram Revels, an African American member of the United State Senate, from Mississippi, is mentioned, as is the election of five African American members of the House of Representatives, but the election of John Mercer Langston, an African American, to the House of Representatives from Virginia in 1888 is omitted, as his is service as president of the college that is now known as Virginia State University, not to mention the founding of that school.
134, 136	The writing of the opening section on page 134 and the heading on page 136 suggest incorrectly that industrialization took place everywhere in Virginia immediately after the Civil War or later in the nineteenth century, which is not correct, nor was that the first industrialization in Virginia. See the note for page 142.
134	The second sentence of the section From Big Lick to Roanoke appears to suggest that the first railroad track in Virginia was laid in the 1850s because the first sentence is about railroads in the post–Civil War era; but in fact the first steam railroad service in Virginia began in the 1830s. The first railroad to run through what later became Roanoke dated from the 1850s. The text and the red sidebar about the importance of coal is accompanied by a photograph of a steam engine pulling a passenger train rather than a train of coal cars, which I think would be much more to the point.
137	The photograph of a woman at a tobacco stemming machine is described as a woman waiting for tobacco to go through it, but the pile of stems (if that is what they were) next to her suggests that the tobacco has already gone through the machine.
138	U.S. Grant was elected president in 1868 and took office in March 1869, not in 1870.
138 The	Freedmen's Bureau ceased to operate in 1872, not in 1877.
141	The quotation attributed to L. Douglas Wilder, "Knock down the fences that divide. Tear apart the walls that imprison. Reach out; freedom lies just on the other side," is universally credited to Thurgood Marshall. It is possible that Wilder quoted Marshall, but that does not justify attributing the language to Wilder.
142	"The Machine Age came to Virginia with a great big roar" suggests that it happened everywhere and all at once and only at the beginning of the twentieth century, all of which are incorrect. See the note for pages 134, 136. Also: Where is Woman Suffrage? Somewhere in here there ought to be a Great Depression, and there ought to be a great outmigration of African Americans from Virginia.

Page	Comment
143	The inventions section is gratuitous and refers to many things not mentioned in the text and to some things (such as audio cassettes) that the students may not even understand. And some are wrong: There were almost a dozen patents issued in the United States between 1859 and 1900 for people lifting gizmos that resemble escalators. The word Escalator appears to have been first registered as a trade mark in 1900. Rudimentary motion picture apparatus appeared before 1910, and I could not find any particular reason why that year was of especial significance. I easily found half a dozen references to lighted traffic signals previous to 1923 and no reason why that year was of especial significance. One of the first successful experimental demonstrations of color television was made in 1940, but commercial applications did not follow for about a decade, so why is this really important? Mechanical computation devices long predated 1942, and it is not clear to me from some preliminary research that 1942 was an especially critical date within a period of three or four years when electronic computation devices were being developed. I easily found references to video games in 1971, suggesting that they were not invented in 1972 As with computers, I found references to stand-alone computers in the 1970s, suggesting that even if personal computers were first marketed in 1981 (and I am not certain about that), specifying that date may not be wholly accurate.
143	Get dates right. The United States entered World War I in 1917 and entered World War II in 1941.
143	The Pentagon was reported to be the largest building in the world by floor space when it was completed early in the 1940s. Is it still? Wouldn't it be more evocative to keep the earlier assertion rather than allow somebody, sometime, somewhere, to find a larger one and cast doubt on the accuracy of the book?
145	George Marshall died in 1959 not in 1949.
146	Harry Byrd was a member of the United States Senate from 1933 to 1965, thirty-two, not thirty-three years. If the severe restriction of the electorate by the Constitution of 1902 had been included in the text, as it should have been, then it would explain better how Byrd dominated state politics for such a long time and allow students to learn about how he and his political machine thrived on the open denial of elemental American rights of citizenship to a large majority of adult Virginians during much of the twentieth century. That shouldn't have been left out, but it was.
146–ff	The section on Civil Rights, although very brief and quite condensed, is on the whole pretty good and does not skirt the most difficult issues.

Page	Comment
148	Why repeat the text of the placard in the red box when the placard is equally easy to read?
149	The lower right photograph is terrific. The girls' uneasy expressions appear to offer a teaching opportunity that ought to be pointed out so as not to be missed.
150	Maggie Walker's life dates are 1867 (not 1857) to 1934.
150	Consolidated Bank and Trust Company was formed under an authorization issued late in 1929 and effective early in January 1930, when Walker's bank merged with other black-owned Richmond banks, but she was president of the St. Luke Penny Saving Bank for many years before that. Consolidated Bank and Trust Company ceased having a separate existence quite recently, so perhaps it would be more appropriate to state that it was one of the banks that survived the Great Depression (which was quite a success story, but one that can't be told without including the Great Depression in the textbook) and remained in business until another bank purchased it early in the twenty-first century. See the notes on this for the title page.
151	"Back in the 1960s when Ashe was a boy" should be "Back in the 1950s" because he left Virginia in 1960.
153	Linwood Holton was governor from 1970 to 1974; he did not become governor in 1974.
154	Wilder was the first African American state senator in the twentieth century, not "since Reconstruction."
155	The picture of a fighter jet with a caption about Langley Air Force Base actually shows Fort Monroe, not the air force base. Maybe it would be good to include a map showing major military and naval installations in Virginia.
157	Leroy Hassell has incorrect dates given for his service. He became a member of the Supreme Court of Virginia in 1989 and was chief justice from 2003 to 2010.
158 Chronology:	1901. The first Jim Crow laws were not passed in 1901 but had already been accumulating by then. 1946. The text, "African Americans struggle to get decent schools, buses, jobs, and housing as segregation worsens" is not correctly attached to this date alone; in fact, struggles had been going on for a long time by then, and segregation worsened in the first half of the century, not in 1946. 1946. This is the date that the Irene Morgan case was decided in the Supreme Court of the United States, not 1954. And it wasn't a Richmond law, it was a state law (see page 148). Add: 1985. Mary Sue Terry elected attorney general, the first woman elected to statewide office in Virginia. This is every bit as worthy of prominent attention as Wilder's election as lieutenant governor and governor. 1990–1994. The entry on Wilder seems to argue with itself, identifying him as "the first African American to serve as governor in U.S. history" and then appears to qualify that by stating that he was "the first elected black governor in U.S. history." The problem here is that P. B. S. Pinchbeck, a black man, served briefly as acting

Page	Comment
	governor of Louisiana in the 1860s or 1870s, succeeding to the office when it became vacant. So Wilder was not the first black governor, but he was the first black man elected governor. Here, I suggest removing all references to his being the first and making certain that they all identify him as the first black American elected governor of a state.
160–161	The rudimentary index should include all of the names and dates and places and events and concepts required by the SOLs. I didn't check them all, but I wondered why there is an entry for *Source*, even though it is one of the terms defined in the book. I have already commented on the confusion in the text about Manassas and Bull Run, which is compounded in the index by separate entries for Battle of Second Manassas, Bull Run (Manassas), and Second Battle of Bull Run. There is a similar goofeyness in having separate entries for Moton High School and R. R. Moton H.S. There are only two references to women in the index and not enough in the book, itself, which makes no mention of Woman Suffrage. There is no entry in the index for *Slavery*, either. I did not proofread the texts of the documents but suggest that somebody do so. In that section, several descriptions or paraphrases of a number of constitutional provisions in the colored bubbles are enclosed in quotation marks but are not quotations. It is not wise to provide examples of incorrect usage of language or punctuation that might confuse or mislead students and create later problems for the students or problems later for language arts teachers. Most of those descriptions are good enough (exceptions noted below), but they should not be displayed within quotation marks.
R2	Improper use of quotation marks in second red bubble.
R3	Improper use of quotation marks in both red bubbles.
R4	Improper use of quotation marks in first red bubble.
R5	Improper use of quotation marks in both blue bubbles.
R6	The description of the impeachment process in the first blue bubble as "the power to publicly scold the President" is entirely incorrect and also contains a split infinitive, setting a bad example of English language usage; I suggest: "Congress has the power to remove a president or other office holder from office for improper behavior."
R6	Improper use of quotation marks in third blue bubble.
R10	The description of the work of the courts in the first blue bubble, making certain that the laws are "fair," is not at all correct. I suggest: "The courts make certain that the laws are administered properly."
R10	The definition of treason in the third blue bubble is incorrect. Many things short of treason might "hurt the United States." A closer paraphrase of the Constitutional language, such as "making war against the United States or giving aid and comfort to its enemies" would be much better.

Page	Comment
R12	The Second Amendment purple bubble is misleading. For a better summary, see page 101. The country did not have a national army when the Bill of Rights was adopted, but it does now, requiring some modification of language, because even fourth grade students probably know that there is a United States Army. The difficulty of describing the meaning of the Second Amendment is now much compounded by the recent decision of the Supreme Court of the United States that effectively erased the first half of it. I suggest, "When the Constitution was adopted, the United States had no national army, but the people had the right to own firearms as part of their responsibility to serve in the militia to defend the country."
R14	The boldfaced "Liquor Abolished," as the text of the amendment and the description in the accompanying purple bubble indicate, is not correct. "Manufacture, sale, and distribution of alcoholic beverages was prohibited" would be better, but of course it didn't prevent any of those events.
R17	Improper use of quotation marks in all three orange bubbles.
R28–R29	The places-to-visit section might be more valuable and interesting to pupils if it were accompanied by a map of the state showing where those places are; and if pupils were actively stimulated to visit some of those places, a map might help parents get there.

Appendix J

Civil War-era Content in the Two Other Virginia Studies Textbooks on the Board of Education-approved list and all United States History to 1865 textbooks on the list Submitted by Dr. Christopher Einolf (DePaul University)

I have reviewed the textbooks that you sent to me for errors, and my report on each book is below. Generally, the textbooks were pretty accurate, except for the two written by Berson, which I think you should avoid. I didn't think the overall quality of the textbooks was very high, except for the two books by Hakim. They tend to present lots of disconnected facts without explanation, and overwhelm the reader with visual clutter. The Hakim books, by contrast, present coherent stories, explain not just what happens but why it happened, and use visuals judiciously, to support the text rather than to distract from it.

I also thought the Virginia component of the Civil War history chapters was lacking. I'm not sure if this is covered in other curriculum materials, but virtually every county in Virginia had some significant Civil War event. The textbooks focus only on the major battles on the Peninsula and between Richmond and Washington. There's no mention, for example, of the Shenandoah Valley campaigns, the 1865 Union raids in southwestern Virginia, and the fighting in the Tidewater area outside of the 1862 Peninsula campaign.

The textbooks say little about the separation of West Virginia from Virginia – surely an important event in Virginia history. They talk about Robert E. Lee, but don't talk about the two Virginians who were among the Union's most important generals, Winfield Scott and George Thomas. Some books mention Scott's Anaconda Plan but forget to mention he was a Virginian. The Virginia Historical Society has a nice exhibit about Scott's, Thomas's, and Lee's decisions upon Virginia's secession – this material belongs in a book of Virginia history.

The textbooks say almost nothing about the highly significant contributions of African American Virginians to the Union cause, and focus on the 54th Massachusetts instead. Actually, African American Virginians who risked their lives to flee to Fortress Monroe were the initiators of the Union's "contraband of war" policy, beginning the chain of events that led to the Emancipation Proclamation. Don't these men deserve a mention in a Virginia history textbook? As described in these textbooks, the Civil War in Virginia was a whites-only affair; blacks were the passive beneficiaries of white actions.

I don't think the Virginia Department of Education is really getting its money's worth out of these publishers. It seems that they have just written one big national textbook, and then slightly emphasize aspects of national history for each state, rather than actually writing the history of that state. For example, many of these textbooks write about the 54th Massachusetts, rather than regiments of African American troops that were raised or that fought in Virginia. They mention the Virginia aspects of the Civil War that would be mentioned anyway in any U.S. history text (the major Virginia battles). It doesn't take that much work to research Virginia-specific aspects of history, particularly as the Virginia Foundation for the Humanities has put most of this history online in its Encyclopedia of Virginia. See, for example, its entry on Fortress Monroe: http://www.encyclopediavirginia.org/Fort_Monroe_During_the_Civil_War

Having said all this, I am glad you are seeking expert opinions about these textbooks and trying to correct errors. The textbooks that I reviewed are pretty accurate, with one exception (one of the Berson books), so your regular review process seems to be working pretty well. I'm honored to be part of this effort.

Appleby et al. 2009. *The American Journey, Early Years.* Glencoe/McGraw-Hill.

Page	Comment
463	"Many Southerners, though, did not trust the Republican Party to protect their rights." This sentence seems to imply that the textbook author agrees that white Southerners had a right to own slaves. I think a better phrasing would be, "Many white Southerners, though, did not trust the Republican Party's promise." This is good. The few problems I found were questions of simplification and omission, not outright errors.
475	The "By the Numbers" oversimplifies to the point of inaccuracy. Few regiments actually had 1000 soldiers in them, and corps varied in size – they had anywhere from 2 to 4 divisions.
476	This quote ends too early, and creates an inaccurate impression of Lincoln's views on slavery in 1862. The full sentence is: "If I could save the Union without freeing *any* slave I would do it, and if I could save it by freeing *all* the slaves I would do it; and if I could save it by freeing some and leaving others alone I would also do that."
494	Field hospitals were near the front, but I think it's an exaggeration to state that surgeons worked "with bullets and cannonballs flying past their heads." They weren't that close, unless the front moved very quickly and unexpectedly.

Banks et al. 2011. *Timelinks: Virginia Studies Student Edition SE, Grade 4 [Virginia Studies].* Macmillan/McGraw-Hill.

Page	Comment
144	"Southern troops were more skilled in shooting, hunting, and horseback riding than Union troops." I find this dubious – there were many westerners in the Union army who were equally skilled, and in any case the kind of firing done in battle is very different from the kind of shooting done while hunting.
147	Space probably precludes saying much about Virginia Indians during the Civil War, but there is something to say about them. Laurence Hauptman's *Between Two Fires: American Indians in the Civil War* has a couple of chapters about Virginia Indians who fought both for the Union and the Confederacy.
151	"General Lee lost almost one-third of his forces." Given the context, this sentence implies that Lee lost 1/3 of his army in Pickett's charge. The text should make clear that he lost 1/3 of his men in killed, wounded, and missing over the entire battle, not in the 50 minutes of Pickett's charge.
153	The chart would be more relevant to students if it reported battle deaths in the current wars in Iraq and Afghanistan.

Page	Comment
154	The battle here is the Battle of Five Forks, not Five Forks Union.
155	"Each soldier received a horse or mule to ride home." This is incorrect. Confederate soldiers who owned their own horses could keep them, but neither army distributed horses or mules for those who didn't already have one.

Banks et al. 2011. *Macmillan/McGraw-Hill Timelinks: Virginia The United States: Early Years.* Macmillan/McGraw-Hill.

Page	Comment
259	I think it's more accurate to say that draft riots broke out in "some" Northern cities, not "many."
276	I think it's too strong to say that Sherman's soldiers "terrorized" the South, especially when the same verb is used to describe KKK terrorism later in the book. Sherman did not "burn Atlanta," he burned parts of it. It is not true that "many cities in Sherman's path were left in ashes." Only one city – Columbia – was burned in South Carolina, and historians debate over who was most responsible, but Sherman's soldiers did burn many small towns and villages.
281	There's a simple numerical error here – "If two-thirds of the 36 Senators" should be, "if two-thirds of the Senators, or 36 Senators, had voted against Johnson."
285	The poll tax wasn't illegal at the time. "Unfair" or "discriminatory" would be more accurate than "illegal."

Berson et al. 2011. *HMH Virginia, United States History to 1865, Virginia Edition.*

This book contains so many errors just on the Civil War that I have to wonder how inaccurate the other chapters are. Instead of correcting the errors, I recommend that the Department of Education stay away from this book entirely. I notice that there is not a single historian listed among the authors and reviewers. Anyone with even a basic knowledge of American history could have avoided many of these errors.

Page	Comment
373	The book only tells half the story of why Arkansas, North Carolina, Tennessee and Virginia seceded. Both the attack on Fort Sumter and Lincoln's call for troops to suppress the rebellion triggered secession. This is an important point, particularly since this is a book about Virginia history.
377	This page gives the impression that the Confederacy had an advantage in railroad artillery, which is false. It also gives the impression that the Confederacy had an advantage in balloon surveillance, and that this was important, both of which are false. See http://www.centennialofflight.gov/essay/Lighter_than_air/Civil_War_balloons/LTA5.htm The Union army also had many troops experienced in outdoor living, since most Northerners were farmers and many came from the frontier states.

Page	Comment
382	Atlanta and Richmond were not destroyed during the Civil War. Sherman destroyed all items of military value in Atlanta, but left most of the city standing; the Confederates destroyed military items in Richmond, and fires burned many homes, but again most of the city remained. Combat was not "often… man-to-man." Bayonet fighting was very rare. A few machine guns saw action but neither they nor "rifles that could shoot great distances" were responsible for the heavy casualties. Finally, the graph shows that the Confederacy had more troops in 1865 than in 1864, which is not true.
385	African Americans did not fight in both the Union and Confederate armies. There was a Louisiana militia unit with African Americans and a regular unit formed very late in 1865 in Virginia, but neither did any fighting. The Confederacy did not "often" use enslaved African Americans as naval crew members and soldiers.
386	I've never heard of any 7 year olds as drummer boys. 11 sounds more correct. If they can't back up this claim of 7 year old drummer boys with a reference, they should take it out.
390	"Pickett's Charge" actually involved 2 other divisions besides Pickett's, so there were 15,000 men, not 5,000. And if anyone can correctly answer question 6 from the microscopic map on this page, they deserve an award.
392	Sherman did not destroy Atlanta. His army destroyed military stores and buildings, but not the entire city. Lee wasn't "quickly" running out of troops and supplies – the siege of Richmond took nearly a year. Confederate troops didn't set the entire city of Richmond on fire. And the text doesn't explain why they did burn some buildings.
398	Question 14: Memphis, Vicksburg, and Natchez were not port cities "where supplies could be received."

Berson et al., 2011. HMH Virginia Studies, Virginia Edition [Virginia Social Studies: Virginia Studies]. Houghton Mifflin.

This book isn't as bad as the other Berson book, but there are still some problems.

Page	Comment
183	"Richmond was closer to military leaders" doesn't make a lot of sense; "Richmond was closer to the front lines" is more accurate.
187	A Virginia textbook should mention George Thomas and Winfield Scott, in addition to Lee and Jackson, and should explain how different Virginians interpreted their conflicting duties to "birthplace, my home, my children" versus their duty to the government.
190	A number of Virginians not only "moved to the North" but joined the Union army.

Page	Comment
191	Virginian ex-slaves played an important role in fleeing to Fortress Monroe and setting up the contraband policy; blacks fought in numerous battles, most notably the Battle of the Crater around Petersburg. They deserve more than this token mention.
195	"Union forces did not control the Confederacy": Actually, by 1/1/1863 the Union controlled many areas of the Confederacy: large parts of Tennessee, eastern North Carolina, and Louisiana, including Memphis, Nashville and New Orleans.

Davidson et al. 2009. *Prentice Hall America: History of our Nation, Beginnings to 1865, Virginia Edition*.

This is accurate. I only found one omission, on p. 511: One major battle is missing from the map: Nashville (1864), a Union victory.

Deverell et al. 2009. *United States History, Beginnings to 1877*. Holt McDougal.

This was pretty good – I only found one major error and one miniscule one:

Page	Comment
429	"More than 100 innocent slaves who were not part of Turner's group were killed in an attempt to stop the rebellion." Actually, most of these were killed after the rebellion was defeated, as revenge – the killings were hate crimes that had nothing to do with stopping the rebellion.
523	The line connecting Murfreesboro with Chattanooga, that says 'Grant," shouldn't be there; nor should the red line pointing north towards Murfreesboro. Grant didn't lead an offensive towards Chattanooga in 1863, he just personally joined the Union army that was already there, having retreated there from Chickamauga. And the battle of Murfreesboro was the result of a Union advance, not a Confederate advance (so the red line pointing towards Murfreesboro should be deleted).

Hakim, Joy. *A History of Us.* Oxford University Press.

There were no errors in these books, and what's more important, the writing was excellent. You should use these books wherever possible – they are vastly superior to all the others.

Appendix K

Review of *Our America: To 1865* (Five Ponds Press)
Submitted by Ms. Mary Miley Theobald (Retired: Virginia Commonwealth University)

I liked the author's "voice;" it is friendly and engaging. And the book seems well-aimed at 5th graders: not overly simplistic and not too complicated.

However, I could not recommend adopting it due to the horrifying number of errors. Virtually no page is without error; many pages have several. There are spelling errors, errors of historical fact, grammatical errors, faulty illustrations, mistaken maps, punctuation errors, careless errors of repetition, and inexplicable changes in font style. Perhaps worse than the errors is the inconsistency—words spelled two different ways on the same page or commas used capriciously. I have marked in the textbook to show as many of the errors as I could find on a quick reading.

Spelling Errors

The number of spelling errors shocked me. A simple check with Webster's dictionary would have taken care of most. Some examples: Mississipi, Washinton, Lousiana Purchase, Lousianna Purchase, governement, developement, ammendment, seccession, neccesary, weathy, email, seperate, Fedex, and astronmer. Archaeology is spelled correctly (preferred spelling) on page 45 but on page 30, it is archeology. I have marked all these and many others in the text.

Then there are the problems with compound words that could have been solved by Webster's. Some error examples: on-going, far-away, day to day, cabinet makers, out-numbered, and Vice-President. On the same page we see flat lands and flatlands (flatlands is correct). These and others are marked in the text.

Then there are typos, such as the one on page 20: "vey" for "very."

Errors of Historical Fact

History is not an exact science, and historians disagree about many things. That said, there are serious mistakes in this book.

Page	Comment
40	The word Anasazi is no longer preferred. Ancient Pueblos or Ancestral Pueblos is used. The word Anasazi is Navaho for "enemy ancestors" and the Pueblo Indians naturally prefer that their ancestors not be known by a Navaho word that carries a negative connotation. Yes, this is a little Politically Correct, but having traveled twice in the past two years through Pueblo and Navaho reservations, I think it's a reasonable change. It is one that is being made in all museum exhibits and historical writing, so the textbook may as well conform to current practice.

Page	Comment
55	Under three sections, Spain, France, and England, the book lists features of each country's interaction with America's Indians. In the Spanish column, it says "Carried European diseases that killed millions of native peoples." Very true, but it does not say that under the French or English columns, and those people brought as much, if not more, disease as the Spanish. Below the three, there is a note that says, "All the European explorers brought guns, iron swords, and metal farm tools." This would be a good place to include something about diseases. Also, swords in those days were made of steel, not iron.
58	"In 1607 Queen Elizabeth sent three ships to found Jamestown, Virginia." That would have been difficult, since Queen Elizabeth died in 1603, and neither she nor her successor, King James, "sent" any ships. They approved when a private company, the Virginia Company, sent ships to Jamestown, and no doubt King James approved when the colonists astutely named the town after him.
68	"They had been terribly persecuted and had seen friends killed." I would like to know the source for this statement. I've never heard of Pilgrims being killed in England. Mostly they left England because they wanted to get away from the bad influences of the established Anglican Church. The statement seems over-the-top, but I can't prove or disprove.
77	"Wigmakers made those all-important head toppers, since it was the style in the 1700s for most men to wear wigs." False. Most men did not wear wigs. *Some* upper class men wore wigs, but the majority of men were not members of the gentry or upper class. It would be more accurate to say "some men." I double-checked this with the experts at the Wigmaker's at Colonial Williamsburg who concurred. The master of the shop wrote: "You are correct in that most men did not wear wigs. We can estimate only about 5% of the population wearing wigs. Roughly 2% gentry and 3% middling sort. Those of middling sort were comprised of tradesmen and professionals such as lawyers, doctors, merchants, ship captains and teachers. . . . Females also wore wigs, however they were from the gentry class, thus referred to as ladies. Women worked for a living and did not, however sometimes they wore hairpieces etc. The majority of the population was just surviving, putting food on the table was their priority not fashion."
85	"Very few people in colonial America could read . . ." This is a myth. The overwhelming majority of white colonists were literate. In New England, literacy rates were higher than elsewhere because there were more schools and there was an emphasis on learning to read the Bible, but even in Virginia and other Southern colonies, almost all white men and even most white women could read in the eighteenth century. Percentages change over time, always growing larger, but even in the seventeenth century, about 60% of men in Virginia could read and about a quarter of the women. Figures are higher for the northern colonies. At no time in American history did "very few people" know how to read (unless one is talking about African Americans or Native Americans).

Page	Comment
88	"The bottom line was that the King wanted control of the lucrative fur trade for himself." The bottom line was rather that the King (or more accurately, Parliament) knew that colonists living over the mountains were too far away to govern and too deep into Indian territory to protect from the inevitable Indian wars. Improving the fur trade with friendly Indian relations was a relatively minor concern. http://www.ushistory.org/declaration/related/proc63.htm
89	"Colonists who did not pay the tax could be taken to a British court in Canada where it was impossible to have a proper trial by a jury of their peers." Taken to Canada? Violators and smugglers and others who committed crimes relating to trade were to be tried in the admiralty or vice-admiralty courts. This was deemed necessary because local juries approved of smuggling and let the smugglers off every time. I have never heard of being taken to Canada and would ask the author for documentation on that.
89	"Imagine sharing your bedroom with an enemy soldier!" British soldiers are not the enemy until the Revolutionary War started. They are "your soldiers." Wording should be changed, perhaps to "sharing your house with a few soldiers."
89	The tone of this page troubles me a little. "Make the Americans pay to maintain Britain's army!" It really wasn't that unreasonable to expect the American colonists to share the cost of the soldiers who were there to protect them from the French and Indians. English citizens in England were paying very high taxes at this time to pay for the army to protect the colonists . . . was it right to ask them to pay more and the Americans to pay nothing? I realize it's hard to discuss a complex subject like this with fifth graders, but I think they can understand that there were two sides to the story.
91	". . . until you realize that it hurt America's tea makers, whose tea already had a heavy tax." America didn't have any tea makers; the climate isn't suited to growing tea. American had merchants who sold smuggled tea, avoiding the tax. Again, I understand it is hard to explain a complicated issue in simplistic terms, but this treatment of the Tea Act isn't accurate.
98	"Washington and French General Lafayette inspect troops before the Battle of Morristown in New Jersey." First of all, there was no Battle of Morristown. Morristown was where Washington and his troops wintered in 1777 (January 6-May 28). Second, Lafayette was not a general until July 31, 1777 and didn't even meet George Washington until August 10, 1777, long after Morristown, so they wouldn't have been reviewing any troops.
99	"Continental soldiers, some shooting bullets made form their own melted-down pewter spoons and plates, captured 6,000 Hessian and British soldiers . . ." The myth of the pewter bullets is one I've addressed in an article in Colonial Williamsburg's magazine. Gunsmith experts at Colonial Williamsburg say that, while it is possible to make bullets out of pewter, they would have been too light to do much damage. Pewter is mostly tin, and a tin bullet would not go very far or pierce the flesh when it struck. The gunsmiths say they know of no instance in colonial history where people melted pewter to make bullets.

Page	Comment
100	"Steuben . . . came up with a new and quicker way to load, shoot, and reload . . ." Von Steuben's main contribution, besides endless drilling and teaching about camp hygiene (i.e., digging latrines), was to train the inexperienced soldiers in the use of a bayonet. This deserves mention before anything about reloading.
103	"while a military band played a song called *The World Turned Upside Down*." Historians have found no evidence that this myth is true. It was not mentioned in any of the many eyewitness accounts of the surrender. It was first mentioned only 41 years after that event. See http://www.americanrevolution.org/upside.html for an exhaustive (!) discussion.
104	"This leads to Jefferson's Declaration of Independence and the Revolutionary War which after eight hard years, ends with Washington's victory at Yorktown, Virginia." The fighting ended in 1781, five years after the Declaration. The war officially ended with the Treaty of Paris in 1783, seven years after the Declaration. In neither case was it eight years.
114	"Madison presented ten amendments to the Constitution." Madison presented twelve amendments; ten were ratified.
115	". . . the slave trade could be allowed to continue for at least 20 more years, to the advantage of the Southern states that depended on slave labor." The international slave trade was to be cut off in 1808, period, not "at least 20 more years." The domestic slave trade continued until the Civil War.
126	"By 1800 Americans had settled as far west as the Mississippi River . . . Every day huge barges floated down to New Orleans—one of the busiest harbors in the United States." New Orleans was certainly one of the busiest harbors, but in 1800, it was not in the United States. Not until the Louisiana Purchase in 1803 does that port come to the U.S.
130	"In 1819, Spain decided to give Florida to the United States." Spain was forced to sell to the U.S.; it did not voluntarily give anything away.
131	Why does the chapter on Spanish colonies include Oregon, a joint British/American possession. Seems confusing.
131	"Every single American died, but the Mexicans lost the fight a few weeks later . . ." The official Alamo website tries to correct this persistent myth: *"Thermopylae had her messenger of defeat; the Alamo had none."6 This famous quote conveys the notion that none survived the Battle of the Alamo. It is true that nearly all of the Texans under arms inside the fort were killed in the March 6, 1836, attack. However, nearly twenty women and children, who experienced the twelve days of siege leading to the final assault, were spared and allowed to return to their homes. The survivors also included Joe, the slave of William B. Travis. The best known Alamo survivor, Susanna Dickinson, was sent to Gonzales by Santa Anna with a warning to the Texans that the same fate awaited them if they continued their revolt.7 (For more information about the Survivors, please see the FAQs page of this web site)*
132	"Steamboats traveled along America's rivers and on its brand-new canals—man-made waterways that linked regions." Steamboats sailed on rivers, and later oceans, but not on canals. Barges were used on canals, usually pulled by mules along a towpath.

Page	Comment
132	"New York's Erie Canal opened in 1825. Lands west of the Appalachians now had an easy way to move goods to the east coast using this new water link between the Great Lakes." Poor wording makes this sound like the Erie Canal linked the Great Lakes, when it linked Lake Erie to the Hudson River and New York.
135	"Cyrus McCormick's young grandson was there on the day the reaper was tested." (then the book quotes the grandson's "eyewitness " account). Since Cyrus McCormick was 22 in 1831 when he first tested his reaper, it is unlikely his grandson was present. The reason this grandson's account is quoted is to "prove" that a black slave, Jo Anderson, helped invent the reaper. While the slave helped with all the farm work, including building a reaper, he should not be credited as a co-inventor, as some Politically Correct people would like. It is a serious mistake to title this section "Anderson and McCormick's Reaper." It was Cyrus McCormick's reaper. http://www.virginialiving.com/articles/lion-of-the-hour/index.html
136	"The Quakers, a religious group, believed that all people were created by God." A rather unnecessary sentence, don't you think? What religious group does not believe that all people were created by God? It doesn't say anything about the Quakers' beliefs. It might be better to note that they were Christian pacifists who believed all people were equal, even women, Indians, and blacks.
146	Makes it sound as if there were two agreements, one in 1820 that admitted Maine as a free state and Missouri as a slave state and another one "In that same year" called the Missouri Compromise that stated that any new territory added north of an imaginary line would be free. In fact, these are both from the same agreement, the Missouri Compromise of 1820.
149	"Oddly, he did not free those still enslaved in the Border States." Aside from the unwarranted capitalization of border states, this sentence is misleading. This act was not odd at all. The author suggests that Lincoln did something inexplicable and puzzling, when it was anything but. He was afraid to free the slaves in the slave states that remained in the Union (the border states of Missouri, Kentucky, Maryland, and Delaware.) He freed them where he had no authority to free them, hoping to cause trouble in the South and keep the British from recognizing the South. It worked.
151	"At war's end, Davis was taken prisoner and spent two years in jail as punishment for his part in the war." Wow—a pretty light sentence, huh? Actually, Jefferson Davis spent two years in jail waiting for his trial, which never came. He was finally released on bail and never tried. Charges were dropped in 1869. His punishment for the war was definitely NOT two years in jail.
152	"Evenings were spent playing cards or checkers, writing letters to loved ones, reading old worn newspapers, and playing baseball by torchlight." That would be some trick, playing baseball by torchlight, since you couldn't see to catch a ball. Torches give off almost no light beyond a few feet from the flame. I have never seen any mention of playing baseball by torchlight.

Page	Comment
153	"Horseshoes were nailed to shoes to keep the soles from being worn away." Now really . . . can you picture this? How would you nail a horseshoe to a shoe sole? I checked with Al Saguto, Master Shoemaker at Colonial Williamsburg and probably the country's leading expert on all things related to shoes. He writes, "Oh boy is that a wild one! Iron (and other metal) sole- and heel-plates—some of the latter were horseshoe shaped)—plus the good old "hob nail" (i.e. "hob nailed boots") were added to soles and heels to protect the bottoms and for added traction. Such metal things started with the Roman army boots (hob nails)--they made the footwear last longer and made the army sound more formidable marching over those paved Roman roads. From the late Middle Ages onward, metal stuff for soles and heels was usually the mark of a rustic, farmer, or soldier, as such additions would ruin the footwear for indoor urban wear on floors. Fast forward.... Civil War boots & shoes were not issued with much more that tiny iron nails in the heel for prolonged wear, but some troops (both sides) in some theatres of war added iron heel plates or horseshoe-shaped heel-rims. The practice has nothing to do with the Civil War per se."
156	"Atlanta, Georgia, was one of the South's largest cities. It was an important railroad hub . . ." Yes, Atlanta was a railroad hub, but it was one of the smaller cities in the South. In the 1860 census, Atlanta ranks 99th among American cities, with a population of 9,000. The South had many, many cities larger than Atlanta, including Baltimore at 212,000, New Orleans at 169,000, Louisville at 68,000, Richmond at 38,000 (25th), etc. Georgia alone had three cities larger than little Atlanta: Savannah, Augusta, and Columbus. http://www.census.gov/population/www/documentation/twps0027/tab09.txt
157	"During the war African Americans served in both the Confederate and Union armies. More than 190,000 men served in the Union Army and Navy, and 37,000 perished to save the Union. The Confederacy also used slaves as naval crew members, soldiers, and servants in the field." This suggests that blacks served in roughly equal numbers in the Union and Confederate armies. Needs rewording. Something like, "The Confederacy prohibited African Americans, slave or free, from serving in the military, but clearly some few did fight for the South. Many more served as officers' servants, teamsters, cooks, musicians, laborers, and other noncombatant roles." Professional historians are in agreement that the number of blacks serving in the Confederate army was miniscule.
159	Questions and Answers. I did not check out every Q&A at the end of each chapter, only this one, but it is completely wrong in its coordination of pages with questions, so I suspect the others are too. Where it says, "Use pages 144-145 to answer questions 2-3 in complete sentences," the questions are addressed on pages 145 and 146. Where it says, "Use pages 148-149 to answer question 5 in complete sentences," the correct pages are 150-151. Where it says, "Use page 155 to answer question 7 in complete sentences," the correct page is 157. Where it says. "Use pages 150-151 to complete question 8 and 9," the correct pages are page 154 for question 8 and the whole chapter for question 9.

Grammatical Errors

Page	Comment
48	"Each country believed that their culture was superior to the others." Should read, "Each country believed that its culture was superior to the others."
77	"Southern farms grew bigger along with a huge divide between weathy plantation owners and the folks who toiled for them." Aside from leaving the "l" out of wealthy, the sentence makes no sense.
91	"Now, after meeting with his fellow "son of Liberty," Paul Revere, and others had a new plan." Faulty wording. Should probably be ". . . *he* had a new plan."
99	"—with loans to help pay for guns, uniforms, soldiers to help in battle, and ships to bring the war to the high seas." Should be "—with loans to help pay for guns and uniforms, soldiers to help in battle, and ships to bring the war to the high seas."
113	"The President can veto (say no) to laws that the Legislative branch . . ." Should be, "The president can veto (say no to) laws that the legislative branch . . ."

Faulty Illustrations

Page	Comment
59	Shows a picture with caption: "Fur traders in the 1600s strike a bargain." But the picture looks very 18th-century to me, especially the rifle. I am no gun expert and didn't spend the time to research guns in the 17th century, but it would not take more than a couple hours to find pictures of period guns to check this.
66	Picture of man in suit of armor with caption, "Don't leave home without it! A suit of armor was a must-have for many male settlers arriving in America." Armor was quite rare in America. Archaeologists have uncovered a couple pieces of armor, notably a helmet and breastplate, but I asked the noted archaeologist Ivor Noel Hume, retired from Colonial Williamsburg, for his view and he said no one, to his knowledge, had excavated any below-the-waist armor in colonial America. Full armor was only used by horsemen, and no horses came on the first ships to North America. Even later, when horses did arrive, no cases of full suits of armor are known to have come. That medieval sort of warfare was outdated. According to Noel Hume, "A half suit for a gentleman would be fairly normal, but below that level a caboset helmet and a jack coat or brigandine would have been the norm." There were very few gentlemen in early Virginia and very little armor. The picture should be replaced.

Mistaken Maps

Page	Comment
59	Map says Champlain in Canada: 1609-1616. I'm not sure what they are trying to say, but Champlain started exploring in Canada in 1603 and was in Canada, on and off (mostly on), until his death in 1635. Not sure what 1616 refers to.

Page	Comment
82	Map showing Fort Necessity (which is spelled wrong as Neccesity) locates the fort in the wrong state. Fort Necessity is in Pennsylvania, not Ohio. Fort Duquesne is also in Pennsylvania, not Ohio. (The text accurately states that Fort Duquesne is near Pittsburgh, but the map positions it in Ohio.)
127	St. Louis is always written as St., not Saint.
155	Three Civil War battles are mentioned. Each has a map beside it. The map beside the Battle of Vicksburg shows Virginia, and marks the town of Frederickburg" (without the "s").

Punctuation Errors

I was not asked to line edit this book, but had a hard time not doing so! As an editor, I was dismayed at the mistakes I found. Clearly, this book has not seen a proofreader. Perhaps more distressing than the editing errors are the inconsistencies.

Professionals can disagree about editorial styles, but the Chicago Manual of Style is the format usually used in book publishing. It is widely considered the de facto style guide for American English, and the one I use when editing a manuscript. When I first realized the author was not following this style, I thought, well, she is using MLA or a house style. But no.

There are also many dictionaries and spelling can vary, but the standard in publishing is Merriam-Webster's, which I use. Many of the errors could have been corrected with a quick check of the dictionary, for words like "far-away" on page 51, which should be "faraway," and "heat-wave" on page 94. (Which should be "heat wave.")

In her use of hyphens, the author is inconsistent, not seeming to understand the difference between a noun and an adjective, as in "the eighteenth century" but "an eighteenth-century book." On page 112, we find "six year term" on one line and on the next, "two-year term." The one with the hyphen is correct. There are many others.

There are so many errors in comma usage that I could not mention or mark them all. I indicated a few of the more egregious in the text. Briefly, sometimes the author uses a comma in a series (Joe, Beth, and Sam), and other times she leaves it out (Joe, Beth and Sam). The first example is correct for American English. Sometimes the author uses a comma after an independent clause; sometimes she does not. Sometimes the author uses a comma after a dependent clause; sometimes she does not. (Page 52. "As explorers from Portugal began voyages of discovery along the coast of West Africa they were unaware that inland there were rich empires that had been thriving for centuries." A comma needs to go after the word Africa.) Some commas are randomly inserted into sentences, such as on page 70: "There were natural deep water harbors, in the growing towns of New York and Philadelphia." Also on page 114, where it says, "Virginian, George Mason, had been a patriotic leader . . ." There are commas where there should be semicolons, as on page 100, "While waiting for supplies to come, many soldiers were starving and sick, their equipment was in tatters." Should read, "starving and sick; their equipment" or "starving and sick, and their equipment . . ."

Capitalization is inconsistent throughout the book. Words like President are randomly capitalized in the middle of a sentence, as on page 118, " . . . became America's fourth President when Thomas Jefferson's term ended." Then in another place, they are not capitalized, which is correct.

There is inconsistent use of colons: example on page 116-117.

Careless Errors of Repetition

Page	Comment
56	Purple box sidebar repeats from page 54.
130	Blue box sidebar on 130 repeats from 128.
57	Consecutive sentences are almost exactly the same. "They tried to enslave the Indians, and threatened them with death if they did not do as they were told. Many Americans were enslaved by the Spaniards and threatened with death if they did not do as they were ordered."

Inexplicable Changes in Font

Page	Comment
137 em	ancipation
138	suffrage

There do not seem to have been any historians involved in the writing of this book.
When I checked the credentials of the people listed in the front as reviewers, I found very little. Four women from Richmond are mentioned on page 2, but no qualifications or degrees are listed. A quick Google search found that two of them may, at one time, have been teachers, and one graduated from a local high school. This is not encouraging.

One of the two degreed people serving on the advisory board is Dr. Donald Zeigler, Professor of Geography at Old Dominion, which explains why I found little to complain about in the first part of the book, the part about geography. I doubt he saw the final text, for there were several spelling errors that he would surely have caught. The other, Dr. Melissa Matusevich, is an assistant professor at East Carolina in the Department of Curriculum and Instruction. Not sure of her background, but it seems unlikely that she ever saw the finished product.

What I don't see are any historians. That is the basic problem here.

I would not like to see this book adopted for Virginia's fifth grades.