

# COMMONWEALTH of VIRGINIA

## Board of Education Agenda

**Date of Meeting:** February 19, 2009

**Time:** 9 a.m.

**Location:** Jefferson Conference Room, 22<sup>nd</sup> Floor, James Monroe Building  
101 North 14<sup>th</sup> Street, Richmond, Virginia



**9:00 a.m. FULL BOARD CONVENES**

**Moment of Silence**

**Pledge of Allegiance**

**Resolutions/Recognitions**

- Presentation of Resolution of Appreciation to Suzette Denslow, former Deputy Policy Director and Legislative Director, Office of the Governor, for outstanding service to public education
- Presentation of Resolutions of Recognition to the Virginia Recipients of the 2008 Milken Family Foundation National Educators Awards

**Approval of Minutes of the January 15, 2009, Meeting of the Board**

**Public Comment**

**Action/Discussion: Board of Education Regulations**

- A. Final Review of Proposed Revisions to the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* (8VAC 20-131-10 et seq.)

**Action/Discussion Items**

- B. First Review of a Request for Approval of an Alternative Accreditation Plan from Fairfax County Public Schools for the Key Center
- C. First Review of a Request for Approval of an Alternative Accreditation Plan from Fairfax County Public Schools for the Kilmer Center
- D. Final Review of Proposed Revised *Mathematics Standards of Learning*

## **Action/Discussion Items (continued)**

- E. First Review of Process for State Adoption of Textbooks and Instructional Materials for K-12 History and Social Science
- F. First Review of a Recommendation of the Advisory Board on Teacher Education and Licensure to Grant Approval to Requests to Add New Endorsement Programs at Norfolk State University and Virginia State University

## **REPORT**

- G. Report from the Board of Education's 2008-2009 Student Advisory Committee

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

## **ADJOURNMENT**

### **PUBLIC NOTICE**

The Board of Education members will meet for dinner at 6:30 p.m. at the Crowne Plaza Hotel on Wednesday, February 18, 2009. 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 insure 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.



The current regulations were adopted by the Board of Education on May 24, 2006, and became effective on September 7, 2006.

The proposed regulations address three major areas. They would:

- Incorporate the graduation and completion rate for schools into Virginia's accountability system,
- Prescribe the requirements for the Standard Technical Diploma and the Advanced Technical Diploma, and
- Require all students, beginning in middle school, to have an Academic and Career Plan.

In July 2006, the President of the Board, Dr. Mark Emblidge, formed a special committee of the Board of Education to research and recommend policies to reduce the number of students who drop out of high school and to improve graduation rates, especially among minority students. The proposed graduation and completion index is an outgrowth of the work both of that committee and of the Board's adoption of a graduation rate formula in November 2006.

The 2007 General Assembly passed legislation that requires the Board of Education to establish the requirements for the Standard Technical Diploma and the Advanced Technical Diploma (HB 2039 and SB 1147). The legislation, as amended by HB 97 in the 2008 session, amends § 22.1-253.13:4 of the *Code of Virginia* to require the Board to:

D. 3. Establish the requirements for a technical diploma. This diploma shall meet or exceed the requirements of a standard diploma and will include a concentration in career and technical education, as established in Board regulations. A student who meets the requirement for the advanced studies diploma who also fulfills a concentration in career and technical education shall receive an advanced technical diploma, or if he chooses, he shall receive an advanced studies diploma. The Board may develop or designate assessments in career and technical education for the purposes of awarding verified credit pursuant to subdivision 6; ...

Finally, in a letter to the Board President dated December 20, 2007, Governor Kaine requested that the Board consider including the requirement for an academic and career plan for all students, beginning in the middle school years.

During the public comment period, September 1 through November 5, 2008, the Board received 475 comments. Most of the comments addressed either economics and financial literacy or graduation and dropout prevention, including the Graduation and Completion Index. Following the public comment period, the Board received several requests to delay implementation of any additional requirements in the proposed regulations because of the budget situation. A summary of the public comments is attached.

Finally, there are three bills before the 2009 General Assembly that relate to these regulations:

- HB 2166 (Lohr) would delay until July 1, 2010, any additional requirements related to school accreditation and graduation requirements.
- HB 2619 (Barlow) addresses transfer provisions for course credits earned for the Department of Education's online program, Virtual Virginia.
- HB 2552 (Crockett-Stark) would add to the requirements for earning a diploma a standard credit in economics and personal finance, beginning with the first-time ninth-grade class of 2010-

2011. Although Delegate Crockett-Stark strongly supports requiring a standard credit in economics and personal finance, in deference to the Board and recognizing that this issue would come before the Board this month, she asked that the bill be passed by with a letter to the Board of Education requesting that the Board consider establishing such a requirement.

**Summary of Major Elements:** The following substantive changes are proposed:

8 VAC 20-131-50. Requirements for Graduation:

- One credit in economics and personal finance would be required for the Standard, Standard Technical, Advanced Studies, and Advanced Technical Diplomas.
- Additional graduation requirements would become effective with the ninth-grade class of 2010-2011.

8 VAC 20-131-60. Transfer Students:

- Credits earned through Virtual Virginia, the online program, would be accepted in Virginia public schools.

8 VAC 20-131-140. College preparation programs and opportunities for postsecondary credit:

- The Academic Career Plan would become effective with seventh graders in 2010-2011.
- The development timeline is extended throughout the student's seventh-grade year with completion required by the fall of the eighth-grade year.
- The Board of Education will establish guidelines for development of the Plan.
- Any personal academic and career plans prescribed by local school boards for students in grades 7-12 that are currently in effect would be approved to continue without further action by the Board.

8 VAC 20-131-280. Expectations for school accountability and 8 VAC 20-131-300. Application of the standards:

- The Graduation and Completion Index points required for full accreditation would be increased from 80 to 85 percentage points.
- The points assigned for the certificate of completion is reduced from 60 to 25 points.
- Use of the Graduation and Completion Index for high school accreditation purposes would be delayed by one year with a five-year phase-in as originally proposed. The first year a school could be Provisionally Accredited or Accredited with Warning due solely to the graduation and completion index is the 2010-2011 academic year (2011-2012 accreditation year).
- The accreditation pass rates in effect for the 2008-2009 academic year will remain in effect through the 2009-2010 academic year.

**Superintendent's Recommendation:** The Superintendent of Public Instruction recommends that the Board of Education approve the proposed regulations as amended 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.

**Regulations Establishing Standards for Accrediting  
Public Schools in Virginia (SOA)  
8 VAC 20-131  
Summary of Public Comments**

The public comment period required pursuant to § 2.2- 4000 et seq., of the *Code of Virginia* commenced September 1, 2008, and ended November 5, 2008. During the comment period the Virginia Board of Education received comments from 475 individuals or groups regarding the proposed revisions to the SOA. The following document provides a summary of each comment submitted. This document is intended for summary purposes only. All comments received are available in full to each member of the Board of Education. The 475 commenters provided comments in the following areas:

- Diploma Requirements (including Technical Diplomas) – 25 individuals or groups commented on the diploma requirements.
- Graduation Rates and Dropout Prevention (including the Graduation and Completion Index) – 117 individuals or groups made comments in the area of graduation rates and dropout prevention. One group’s comment included a petition with 209 signatures supporting the comment.
- Academic and Career Plan – 12 individuals or groups commented on the proposed academic and career plan.
- Economics and Financial Literacy – 329 comments were made on the subject of economics and financial literacy.
- Funding – Eight comments addressed the issue of funding the proposed amendments.
- Double Testing of Students – Four commenters addressed the issue of eliminating double testing of students.
- Removal of Students – Four commenters addressed the issue of providing notice to parents when students are removed from classes.
- Other – Eight comments were in categories either not addressed by these regulations or not in the major categories where amendments are proposed.

Subsequent to the closing of the official public comment period growing concern from school divisions regarding the revenue forecasts resulted in many divisions writing to the Board. The divisions expressed concern regarding the current economic situation and the inevitable K-12 budget cuts that will result. Due to the reduction in state funding for public education in conjunction with new regulatory requirements proposed in the revisions school divisions have requested that the Board of Education postpone “implementation of any unfunded mandates until the General Assembly provides sufficient funding that will enable local school districts to meet increased accountability standards in a fiscally responsible manner.” A summary of these letters

is also included at the end of the comments.

	<b>Commenter</b>	<b>Comment</b>
1.	Robert Leber , Director, Education and Workforce Development Northrop Grumman Shipbuilding	<p>Commenter has two areas of concern for the proposed regulations:</p> <ul style="list-style-type: none"> <li>• Only one credit hour of "Fine Arts, Foreign Language, <u>Economics or Personal Finance</u>" is required for the Technical Diploma.</li> <li>• The requirement for 3 credits of a foreign language for the Advanced Technical Diploma seems excessive, while it requires only one credit hour of "Fine Arts or <u>Economics</u>."</li> </ul> <p>Economics and finance are important educational components and unfortunately these subjects do not always get the attention they need. The proposed credit requirements do not promote the level of economic and financial literacy Virginia's students will need to thrive in our changing economy, particularly in technical careers. Students must be provided with an understanding of the basic economic principles they will need to be successful in their adult life, particularly considering that they are now in charge of their own retirement plans via 401k programs vs. the defined benefits programs of past.</p>
2.	Beth and Daniel Dorman	<p>The current Virginia Standards of Learning require that students learn how to form the cursive letters in the third grade. However, the Standards of Learning do not require students to achieve mastery of cursive. Virginia students are unable to read cursive script and unable to provide cursive signatures. There is no longer a place on the report card to record a student's level of achievement of this important skill. The record needs to be restored to the report card and students need to master cursive writing.</p>
3.	Helen Rickard	<p>A substitute teacher for the Prince William County schools and for Manassas City schools has been searching and applying for teacher assistant jobs for the past year with no luck. The individual was told by other staff that it is very hard to get a full-time job in the school system and it's all who you know when it comes to getting a full-time position. She finds this very unfair and is upset that she cannot be a teacher assistant in either school division.</p>
4.	Cheryl A. Poe Advocating 4 Kids	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p>

		<p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
5.	D. Desai	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
6.	Debra A. Grant	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>

7.	John A. Caggiano, Ed.D. Westside Elementary School Principal	<p>An elementary principal (grades 4-6) in Isle of Wight County is concerned about the proposal to no longer allow students to double test in math. Many schools, in an effort to increase rigor, are pushing students to excel in mathematics. One such strategy is taking Grade 6 students with a strong foundation in basic mathematical concepts and scheduling them to take Pre-Algebra in Grade 6. While not all of these students will take Algebra in Grade 7, many of them will. If double testing is eliminated schools will be penalized for adding rigor.</p> <p>The principal would hate to see double testing done away with simply for financial reasons. And that unintended consequences are considered.</p>
8.	Cary Epes	<p>Commenter strongly supports requiring that all students receive economic education to improve their personal financial management.</p>
9.	Catherine J. Rotolo	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
10.	Judy Mejia	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special</p>

		Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.
11.	Dee Jacobson	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
12.	Dylan Rosenthal	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
13.	Melinda Whitehurst	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to</p>

		students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.
14.	Barbara Foster	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
15.	Parent Greenbrier Schools	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
16.	Judy Lucenta	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and

		<p>Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p> <p>In addition commenter requests the SOA provide a scientific research-based reading program that utilizes a multisensory phonetic awareness approach to all children. Commenter states that not all children are given proper training to learn how to read, and teaching reading to all students will improve the graduation rate and decrease the drug abuse and crowdedness of our jails.</p>
17.	Theresa Speight	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
18.	Trenace B. Lewis The Sound of Judah	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to</p>

		<p>students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
19.	Mary S. Howard	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
20.	Regina Craig- Parent and Daughter	<p>Commenter states that only the Standard and Advanced Diplomas should get full credit; other options such as GEDs should be weighted according to their value to the student after high school; graduation rates must be increased for all of Virginia's most vulnerable students, including economically disadvantaged students, students with disabilities or who have limited English proficiency, and minority students.; increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p>
21.	Mieko Manuel Timmons	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to</p>

		<p>students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p> <p>Commenter supports effective and sustainable initiatives to prevent and decrease the drop out rate for school-aged children.</p>
22.	Daniel" Seok H. Choi	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
23.	Amy Estes, Vice President Counseling Delivery ClearPoint Financial Solutions	<p>Commenter requests the final regulations include requiring all students to complete an Economics/Personal Finance Course prior to graduation. Commenter states that high school graduates have not been taught the importance of the wise use of credit, how to manage their budgets within their means, and more often than not, these citizens end up in financial crisis. This financial crisis not only impacts their ability to meet their financial obligations, but impacts their ability to find good paying jobs as well as retain jobs without implications that are caused by garnishments or judgments. Additionally, they pay higher interest for loans, are often victims of payday lending, and pay higher premiums for insurance as they are identified as "credit risks" on their credit reports. It often bleeds over into marital issues, innocent children suffering due to foreclosures and lack of sufficient funds to meet their daily needs, and also leads to health implications due to stress and</p>

		the lack of ability to provide preventative care.
24.	Kim Wilkerson, Vice President, Virginia Community Credit Union	Commenter requests the final regulations include requiring all high school students complete a financial literacy course. Commenter states that students today graduate with calculus but cannot balance a checkbook. They have no understanding of the basics of personal finance therefore explaining low credit scores and the inability to correct credit problems.
25.	Cheryl Ayers, Director Center for Economic Education Lynchburg College	Commenter supports a required economics/personal finance course for every high school graduate (not just those earning an advanced diploma).
26.	Melanie Marks	Commenter supports a stand-alone economics & financial literacy course for all high school students. Commenter states that financial literacy incorporates an understanding of economics, personal finance and investing, smart saving, wise use of credit, and understanding of taxes, insurance, etc.
27.	Emily Willis, Librarian, Culpeper Middle School	Commenter believes it does not make sense to add an economics/personal finance requirement only for students pursuing an advanced studies diploma. Commenter states that all students would benefit from this type of instruction and that adding an elective requirement is not a good idea. Commenter states that students pursuing advanced studies diplomas are usually overbooked with activities and classes.
28.	Mary Ellen Hutchind, Culpeper Middle School	<p>Commenter states that language in 8VAC20-131-30. Student achievement expectations should read:</p> <p>“...students who are accelerated shall take the test of the grade level enrolled or the tests for the grade level of the content received in instruction. No student shall take more than one test in any single content area in any tested grade.”</p> <p>Commenter removed the words "be required to":  Commenter opposes double testing and requests that students stop being double tested because it only makes some schools look better than they really are and others look worse than they really are. Commenter believes ending double testing will show how/what students are really learning across the state.</p>
29.	Carolyn Inskeep Culpeper Middle School	<p>Commenter opposes double testing and does not feel the changes in 8 VAC 20-131-30 are strong enough.  Commenter suggests that the language should state "NO STUDENT SHOULD BE ALLOWED to take more than one test in any single content area in any tested grade."</p>

30.	Bruce T. Whitehurst, President and CEO, Virginia Bankers Association	Commenter believes it is time to require all students to take a course in economics and personal finance. Commenter urges the Board to find a way to include such a course in all diploma tracks. Commenter states that there is a need to educate our youth on basic financial literacy.
31.	Jenifer Choi-White Secondary Alternative Education Teacher Waynesboro High School	Commenter opposes creating a "Graduation and Completion Index" which would be used for accreditation purposes. Commenter believes schools should not be put at risk of not receiving accreditation because students with extenuating circumstances do not graduate on time.
32.	Vicki L. King, Librarian Beverly Manor Middle School	Commenter states in reference to 8 VAC 20-131-140 Academic and Career Plans that "this one of those well-intentioned plans created by someone far removed from the classroom. This plan does nothing more than add yet another piece of paper to be completed and filed just so the school can say it is compliant. No one in any K-12 public school has time to do what is proposed. A piece of paper does not improve a child's education: only a well-planned teacher can do that. The state continually adds things to the teacher's plate without every taking anything away. Our guidance counselors are well-equipped to guide students down the correct educational path through conferences and scheduling. No further documentation is needed."
33.	Stacy K Puckett, Controller Virginia Bankers Association	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
34.	John R. Milleson, President and CEO Bank of Clarke County	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
35.	Kellee Edelin Assistant/Project Manager Virginia Bankers Association	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
36.	Gail N. Askew Manager, Health & Welfare VBA Benefits Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
37.	N Byrd Newton, President Northern Neck State Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.

38.	Amy P. Binns Training Events Manager Virginia Bankers Association	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
39.	Bobby Fothergill Vice President / Agency Manager Virginia Title Center, LLC	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
40.	E.J. Fogarty	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
41.	Suzanne Jenkins Senior Accountant Virginia Bankers Association	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
42.	Matthew J. East Collections Representative Bank of Botetourt	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
43.	Francine A. Bramble Administrative Assistant VBA Benefits Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
44.	Mrs. Nancy M. Moga, Principal Callaghan Elementary School	Concerning the proposed change in 8VAC20-131-210. Role of the principal: <u>“Notify the parents of students removed from class for disciplinary reasons for two or more consecutive days in whole or in part.”</u> Commenter states that this is the practice in most schools. Commenter suggests changing parents to parent or guardian. Commenter states that principals rarely have enough time to contact one parent let alone both.
45.	Jeanette Burrows-Holt Credit Administration Assistant Bank of Botetourt	Commenter endorses the requirement of a class in economics and personal finance for all high school students.
46.	Scott Horchler SunTrust	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
47.	Robert N. Fothergill	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
48.	Rita Cook-Raynor Banking Officer American National Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.

	and Trust Company	
49.	Rex A. Hockemeyer Executive Vice President Union Bankshares Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
50.	Trudy C. Epps American National Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
51.	Robin Brown American National Bank and Trust Company	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
52.	Beverly Terry	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
53.	Helm Dobbins Executive Vice President American National Bank and Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
54.	Charles H. Majors President & Chief Executive Officer American National Bank & Trust Company	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
55.	Lisa Johnston, MBA Accounting Operations Supervisor American National Bank & Trust Company	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
56.	Sandra P. Buchanan Credit Clerk American National Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
57.	Meredith T. Moore	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
58.	Carol M. Barnett Executive Assistant to Jeffrey V. Haley American National Bank and Trust Company	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
59.	Kim Richardson Principal-Forrest Elementary	Concerning the proposed change in 8VAC20-131-210. Role of the principal: <u>“Notify the parents of students removed from class for disciplinary reasons for two or more consecutive days in whole or in part.”</u> Commenter states that this is the practice in most schools. Commenter suggests changing parents to parent or guardian. Commenter states

		that principals rarely have enough time to contact one parent let alone both.
60.	Allison Mease StellarOne	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
61.	Stuart Evans American National Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
62.	Maxine Nester	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
63.	Bobbi Weimer Virginia Bankers Association	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
64.	Susan Mason Virginia Bankers Association	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
65.	Richard G. Frank, Executive Vice President StellarOne Bank	Commenter applauds the Board's effort to institute personal financial literacy courses in the curriculum of Virginia schools, and urges the Board to expedite the requirement.
66.	Anne and Raymond Worley	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
67.	Neal Petrovich Executive Vice President and Chief Financial Officer American National Bank and Trust Company	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
68.	Michelle A. Alexander Senior Vice President & CFO Bank of Botetourt	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
69.	Brenda B Reagan American National Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
70.	Tara Y. Harrison, CPA, Director of Internal Audit Stellar One Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
71.	Leta Beecher	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
72.	Michael A. Estes VP-Area Exec. Pendleton Comm Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.

73.	Donna Hankins, Director of Human Resources American National Bank and Trust Company	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
74.	Joseph A. Hoge Director of Corporate Loan Review StellarOne Corporation	Commenter advocates for an economics and personal finance course.
75.	Maggie Elbourn	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
76.	Stephanie A. Hottle Customer Service Representative Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
77.	Michele Haynie Executive Assistant Shore Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
78.	Gary R. Shook President Middleburg Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
79.	Pat Henderson Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
80.	Tasha W. Parrish Processor / Cash Flow program Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
81.	Joseph Boling, Chairman and Anna L. Campbell Middleburg Financial Corporation (SOA Box)	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
82.	G. Leonard Pittman, Jr. Corporate Banking Market Manager StellarOne	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
83.	Thomas H. Richardson Vice President Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
84.	Jeffrey W. Farrar, CPA Executive Vice President and Chief Financial Officer StellarOne Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.

85.	Patricia R. Lewis VP & Director of Human Resources Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
86.	George M. Longest, Jr. Bank of Essex	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
87.	Jason R. Brady Vice President & Lending Officer Rappahannock National Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
88.	Teresa Rowe Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
89.	Patricia L. Clark, Residential Loan Officer Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
90.	Garland L. Humphries Vice President - Credit Administration Bank of Botetourt	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
91.	Kasey Milby Administrative Assistant Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
92.	Andrew T Shotwell Senior Vice President - Operations Bank of Botetourt	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
93.	Melissa Norris Teller Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
94.	Becky Foster Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
95.	Nancy Bowley Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
96.	Sheri H. George Loan Processing Center Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
97.	Cathy Mise AVP & Loan Officer Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
98.	Mary D. Tabor StellarOne	Commenter urges the Board to require all students to take a high school economics and personal finance course and

	Senior Vice President	include such a course in all diploma tracks.
99.	Penny Gilbert Branch Manager Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
100.	G. Lyn Hayth, III. President, Bank of Botetourt	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
101.	Lisa H. Cannell Director of Human Resources StellarOne Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
102.	Ed Gumphrey Virginia Beach	Commenter endorses adding basic economics training to the high school curricula, for all students, not just those earning an advanced studies diploma.
103.	Teresa W. Stewart, AVP Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
104.	Dianne Hall VP/Chief Operations Officer Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
105.	Jack Geier   AVP/I.T. Manager Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
106.	William P. Heath, Chairman of StellarOne Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
107.	Randy K. Ferrell, President and CEO Fauquier Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
108.	Susan L. Dameron Executive Assistant Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
109.	Lee M. Kerns StellarOne Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
110.	Michael R. Kane, Sr. Senior Vice President StellarOne Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
111.	Jessica Sandlin	Commenter believes the current K-12 curriculum is not enough. Commenter believes economics should also be a requirement in high school.
112.	Theresa L Singer	Commenter requests that the Board consider making it mandatory for all high school students to take a one year course on economics and personal finance. Commenter believes one semester should be devoted to each of those

		topics, and that it should not be an either/or choice.
113.	Cathy Jackson Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
114.	Phyllis E. Hyde LPC Chesapeake Bank Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
115.	Sheila Church Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
116.	G. William Beale President & CEO Union Bankshares Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
117.	Howie Soucek HR Director Manry Rawls	Commenter suggests that the Board include a requirement that each student must successfully complete a course in public speaking and a course in economics and personal finance to graduate.
118.	Marlene Caldwell Accountant Bankers Insurance, LLC	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
119.	John & Allison Wilson	Commenter does not support wasting discussion time and money on additional diploma types. Commenter believes the process should be simplified in the school system to support efficient operations.
120.	Robert H. Williams Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
121.	Julia N. Bell Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
122.	John W. Rock Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
123.	James W. "Jim" McAlister Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
124.	John D. Meade, III Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
125.	W. Mark Nelson Chief Financial Officer First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
126.	William H. Hayter President & CEO First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.

127.	Leton L. Harding, Jr. Executive Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
128.	Roberta A. Looney Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
129.	Robert “Chip” Glover Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
130.	John P. Bowers Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
131.	Carl H. Craig, Jr. Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
132.	James C. Hyson Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
133.	Laurie L. Landes Senior Vice President First Bank & Trust Co.	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
134.	Melissa Loudermilk Branch Manager Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
135.	Johanna M. Northstein, Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
136.	Shelton Land, Land Mindz, Inc Angela Alston	<p>Commenter believes if parents know the importance and difference between diploma types then many parents in the low income community would push their children toward the highest attainable diploma.</p> <p>Commenter requests that the Board (1) increase the target to 90 points or more to promote diploma graduates and eliminate graduation gaps among student subgroups; (2) provide a small “extra credit” value to Advanced and Standard diploma-earners; (3) weight Special and Modified diplomas below the Advanced and Standard diplomas; and (4) lower the value of all non- diploma options such as GEDs and Certificates of Completion to reflect the diminished opportunities that they offer to students.</p>
137.	Donna Crane IB Coordinator Midlothian High School	Commenter is concerned that the Board proposes requiring two additional standard credits in order to earn an Advanced Studies Diploma – one in economics or personal finance, and one in an elective, thus requiring a total of 26 standard credits for the advanced diploma. Commenter is concerned

		for International Baccalaureate diploma candidates; they are required to take IB courses in six areas as well as an additional course, Theory of Knowledge. Commenter believes that if added to the state mandates for an Advanced Studies diploma, these requirements make it extremely difficult, if not impossible, for any curricular choices for these students. Commenter inquires whether a state waiver for either of these classes is a possibility.
138.	Jackie L. Cooper Staff Auditor Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
139.	Paula Owens Mortgage Lending Specialist Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
140.	Tammy Krejcarek	Commenter relayed concerns on behalf of some teachers regarding the third grade SOL revisions.
141.	Cheryl Tilley Accounts Payable/Cash Application Specialist Virginia Bankers Association	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
142.	Megan Emanuel Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
143.	Ginger Smith	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
144.	Judi DeDonato	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
145.	Sharon Waters, Parent	Commenter believes guidance counselors and special education teachers need to receive better professional development for addressing the different needs of autistic children.
146.	Beth Perry	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
147.	Lisa M. Roberts	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion

		index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials. Schools need teachers and staff who know how to help special needs students graduate with regular diplomas.
148.	Michele Hymer Blitz	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
149.	G. Lynn Wingard	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
150.	Sheila Kuders	Commenter believes inadequate and under funded services to support students with special needs after graduation are the more critical issues rather than the type of diploma a special needs student receives.
151.	VA Public Schools Graduate	Commenter urges the Board to not base school accreditation only on test scores. Commenter encourages the Board to provide a strong reward system for schools that find ways to keep students engaged in and attending school; to provide incentives to increase graduation rates for Latino/Hispanic students, especially targeting those that are limited English proficient; and to provide incentives to increase graduation rates for pregnant teenagers.
152.	Barbara Keefe Parent	Commenter supports Standards of Learning and educational support for students with special needs to ensure they graduate with a regular diploma.
153.	Carrie Shuler	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
154.	D. DiCola Commenter	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
155.	Ms. Vasantha K. Rayman	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
156.	Deanne McNulty	Commenter requests that the Board increase the target to at

		least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
157.	Keith S. Farrell	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
158.	Nancy F. Maloy	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
159.	Corrine Louden	Commenter advocates for requiring a course in economics and personal finance to graduate.
160.	James T Campbell, CPA VSCPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ol style="list-style-type: none"> <li>1. Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>2. Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ol>
161.	Kelly Stefanko, CPA	Commenter advocates for requiring a course in economics and especially personal finance to graduate.
162.	Tracey D. Coats, CPA Chief Financial Officer CWD Kids	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma</li> </ul>

		<p>requirements.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
163.	E. Neal Post	<p>Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.</p>
164.	Sammy Cohen, MPA,CPA Director of Business Services Virginia Beach City Public Schools	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
165.	Tracy Schneider VP - Marketing and Operations CWD Kids	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul>

		<p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
166.	Bradford R. Jones, CPA CMA CVA Partner, Family Business Group	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
167.	Stephen Y. Dickinson, Controller & CAO Media General, Inc.	<p>Commenter requests that personal finance be included in graduation requirements.</p>
168.	Jesse S. Novak Senior, Roanoke College	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and</p>

		<p>personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
169.	Kara A. Whiteley Marketing Manager CWD Kids	<p>Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.</p>
170.	George E. Nichols Vice President-Finance VTLS Inc.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
171.	Jeffrey W. Foutz, CPA University Housing Group, Inc. and Affiliates	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following</p>

		<p>changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
172.	<p>Douglas W. Adams CPA, CFP® Tax Manager B. J. Kane &amp; Company, P.C.</p>	<p>Commenter believes that most personal finance courses have a project on picking and tracking stocks out of the financial pages. Commenter requests that these projects be avoided because they do little to teach and they are counter to the concepts of asset allocation portfolio theory that most successful financial planners and investors are using. Commenter believes personal finance courses should be as practical as possible. Commenter considers the exposure to personal finance far more important than the academic teaching of economics which, the teachers will more than likely focus on.</p>
173.	<p>David S. Timms CPA/ABV, CVA VALUATION ONE OF VIRGINIA BEACH</p>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
174.	<p>James Branham Cost Settlement &amp; Audit Manager</p>	<p>Commenter supports the position of the Virginia Society of CPAs, and advocates for requiring all students to take a high school economics and personal finance course and include</p>

	Department of Medical Assistance Services	such a course in all diploma tracks.
175.	Gregory M. Lawson, CPA/ABV Stephanie R. Peters, CAE Virginia Society of Certified Public Accountants (VSCPA) Chair of the Board of Directors VSCPA President & CEO	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
176.	Rachel Puckett, CPA Sr. Tax Manager Talecris Biotherapeutics, Inc.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
177.	Lewis J. Jones, CPA	Commenter urges the Board to require all students to take a

		high school economics and personal finance course and include such a course in all diploma tracks.
178.	Brenda Springer, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
179.	Gordon A. Adler CPA	<p>Commenter supports the Virginia Society of CPA's position to include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students</p>
180.	Lara B. Casteel, CPA/Legal Assistant Morin & Barkley LLP	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the</li> </ul>

		advanced studies technical diploma to read “Fine Arts or Economics and Personal Finance.”
181.	Mary Jo Fields, Virginia Municipal League (VML)	VML’s position is that local governments cannot continue to be the senior partner in funding education. VML requests that any revisions to standards that increase costs need to have funding attached to them, and that the Board not impose new funding and administrative requirements. VML further requests that the Board review standards to determine if there are any that can be deferred or delayed. If the state cannot fund the mandates and requirements under the standards of accreditation and the standards of learning, then those standards should be revised to reflect what can be funded.
182.	Dr. Randy D. Barrack Executive Director/CEO Virginia Association of Secondary School Principals, Inc. President Virginia Foundation for Educational Leadership, Inc.	Virginia Association of Secondary School Principals (VASSP) has two distinct concerns regarding the proposal to require Academic and Career Plans for all 7th and 8th graders. First, VASSP believes that middle school students are not of a maturity level to make firm decisions about career paths. Currently educators promote career exploration during the middle school years through elective courses and via large group approaches (i.e., Career Days) in order to expose students to a range of career paths. Educators believe this methodology of early exposure to the career discussion is the best and most age appropriate way to introduce students to the widest variety of fields. Second, regulations that address academic and career guidance already exist in the Virginia Administrative Code Chapter 620 8VAC20-620-10 requiring each school to make “reasonably available with available resources” academic and career guidance to all students. Within these parameters, each school division must assess its capabilities and priorities based on available funding and local objectives. The VASSP recommends that the Academic and Career Plan initiative might be more effectively accomplished through means of a statewide survey to ascertain how each school division currently approaches academic planning as well as the different ways schools provide career information. Results of the survey could then be used to create a “best practices” inventory as well as an assessment tool, which could be utilized as an accountability measure for future reporting purposes.
183.	Digby A. Solomon President & Publisher Daily Press	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
184.	Dr. Kitty J. Boitnott,	VEA comments address the following sections of the

	<p>President, Virginia Education Association (VEA)</p>	<p>regulations:</p> <ul style="list-style-type: none"> <li>• 8 VAC 20-131-30- VEA supports the proposed revision clarifying that no student can be required to take separate tests for both their enrolled grade level and for the advanced grade level of the content received in instruction.</li> <li>• 8 VAC 20-131-50- VEA supports efforts to elevate public perception of career and technical education. VEA believes not only should new diplomas be created but a more comprehensive system with a broad spectrum of assessments that prepare students for the workforce should be created.</li> <li>• 8 VAC 20-131-50- VEA does not believe that altering diploma requirements or changing course sequences will work without additional state funding for overburdened localities.</li> <li>• 8 VAC 20-131-140- VEA opposes the academic and career plan proposal by the Governor. VEA believes the plans create extra paperwork that will fall on school staff taking time away from instruction. Also this proposal will require in-service training; the development of software; and additional personnel. VEA believes assessment of the fiscal impact is needed.</li> <li>• 8 VAC 20-131-210- VEA supports the revisions to this section.</li> <li>• 8 VAC 20-131-280 – VEA has concerns regarding unintended consequences of the graduation and completion index and the possibility it will result in channeling students into GED programs. VEA would like to work with the Board to develop a system that encourages schools to work towards higher graduation rates, including rewarding schools for keeping students engaged; awarding points for diplomas according to their value to students after high school, and disaggregating graduation data to ensure vulnerable students are not left behind.</li> </ul>
185.	<p>Pamela H.Orsini, CPA Golden Living</p>	<p>Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.</p>
186.	<p>Ken Yasnowsky</p>	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p>
187.	<p>Kathleen E. Valentine</p>	<p>Commenter requests that the Board increase the target to at</p>

		least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
188.	Kevin Simowitz Virginia Organizing Project	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
189.	Angela Ciolfi Just Children	<p>Just Children supports:</p> <ul style="list-style-type: none"> <li>• The use of a graduation and completion index for high school accreditation;</li> <li>• Giving schools credit equal to the values of the credential for students who receive a diploma or GED or who remain in school working to achieve a diploma or GED;</li> <li>• Giving schools credit for keeping students in school no matter the amount of time it takes to earn a diploma or GED.</li> </ul> <p>Just Children opposes:</p> <ul style="list-style-type: none"> <li>• Awarding points for certificates of completion;</li> <li>• Setting the target closer to the value of a GED than to a diploma;</li> <li>• Treating all diplomas equally when they are not equal in value to students;</li> <li>• The absence of any accountability for narrowing graduation gaps. Commenter asserts data should be disaggregated for accountability purposes.</li> </ul> <p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Increase the target to at least 90 points using the existing graduation and completion index; and</li> <li>• Change the index to add incentives for schools to support students to reach for Standard or Advanced diplomas</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Keep the target at 80 points; but also</li> <li>• Change the index to add incentives for schools to support students to reach for Standard or Advanced Diplomas; and</li> <li>• Change the index to reduce the points awarded to schools for GEDs. The final target (80 points) is closer to the points awarded for a GED (75 points) than a Standard or Advanced Diploma (100 points); and</li> <li>• Change the index to significantly reduce points awarded to schools for certificates of program completion; and</li> </ul>

		<ul style="list-style-type: none"> <li>Require high schools to reach the goals, or make significant and sustained progress, for economically disadvantaged students, students with disabilities, students with limited English proficiency, and minority students.</li> </ul>
190.	Lilli Hoffman	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
191.	Roger Lewis	Commenter supports Sarah Hopkins Finley’s article about a proposal for adding economic and/or personal finance classes for graduation requirements. Commenter supports the Virginia Board of Education’s consideration of a requirement for increased high school focus on economics and personal finance.
192.	Jeffrey Szyperski Chairman, President, and CEO Chesapeake Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
193.	Amy Eckard	Commenter feels that although Sarah Hopkins Finley’s article about a proposal for adding economic and/or personal finance classes for graduation requirements is a good idea the real focus should be on basic math and English.
194.	Margaret Greene	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
195.	Hunter Edwards	Commenter supports Sarah Hopkins Finley’s article about a

		proposal for adding economic and/or personal finance classes for graduation requirements. Commenter supports the Virginia Board of Education’s consideration of a requirement for increased high school focus on economics and personal finance.
196.	Dianne E. Hall, Accountant Michael B. Cooke, C.P.A., P.C.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <p>196. Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</p> <p>197. Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</p>
197.	Bonnie C. Turner, CPA, FLMI Director Variable Accounting Genworth Financial	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine</li> </ul>

		Arts or Economics <i>and Personal Finance.</i> "
198.	Jennifer R. Commander, CPA Partner and Chief Financial Officer Winston Partners	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
199.	Janet A. Rivara	<p>Commenter is in favor of teaching finances to high school students. Commenter advocates for such a curriculum for special needs students. Commenter believes such instruction should actually be offered in middle school along with earlier vocational and technical options.</p>
200.	Windora Bradburn	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended</li> </ul>

		for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i> ”
201.	Rebecca Tiblin	Commenter supports the recommendations made by the Virginia Society of Certified Public Accountants to include, at the minimum, one unit of credit in economics AND in Personal Finance in graduation requirements.
202.	Derek Myers Associate Professor Emeritus Virginia Tech	Commenter requests that the Board consider adopting a combined financial literacy and basic economics curriculum as a graduation requirement for all of Virginia's high school seniors.
203.	Christine Radcliffe Haddon, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
204.	Jon Bridges	Commenter advocates for a mandatory requirement for Virginia public high school students to take/pass at least one course on Economics/Personal Finance.
205.	Jennifer L. Todd, CPA Managing Member Todd & Price, PLC	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
206.	Bradley P. Nicklin Partner Beers + Cutler	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and</p>

		<p>personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
207.	Susan Boothe Controller ST Solutions	Commenter supports regulations establishing standards for financial courses in our Virginia schools.
208.	Christine Roby	Commenter inquires into why it has taken the Board so long to establish Standard Technical and Advanced Technical diploma programs. Commenter also supports requiring all high school students take a financial literacy course
209.	Tom Rosengarth, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
210.	Melissa C. Goemann, Juvenile Law and Policy Clinic, UR Law	Commenter requests that the Board (1) increase the target to 90 points or more to promote diploma graduates and eliminate graduation gaps among student subgroups; (2) provide a small “extra credit” value to Advanced diploma-earners; (3) weight Special and Modified diplomas at 100 points; and (4) lower the value of all non diploma options

		such as GEDs and Certificates of Completion to reflect the diminished opportunities that they offer to students.
211.	Brian Johns	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
212.	Katherine B. Hoffman, President Charlottesville National Organization for Women	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
213.	Adelaide Alexander	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
214.	John Blair Reeves Sr.	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
215.	Jim & Mariett Eggleston (SOA BOX)	Commenter supports financial literacy for high school students.
216.	Lisa Cusack	Commenter requests that the Board consider adopting a combined financial literacy and basic economics curriculum as a graduation requirement for all of Virginia's high school students.
217.	Alice Cannon	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
218.	Kinne J. Hoffman	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
219.	Margaret Kertess	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials. Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter

		suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.
220.	Rebecca Slickis	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
221.	Becky Thomas	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
222.	Geraldine Woodley	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
223.	Susan Clark	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
224.	Janice Armstrong	Commenter states that special education students are capable of meeting and need to meet the same standards as all students. Commenter believes that if schools are to prepare special education children for independent living, employment, and further education the students need a high school diploma that means the same for all children. Commenter believes excusing special education students from SOL exams through portfolios has totally relieved the elementary schools of their accountability in teaching kids to read and do math. Commenter states that students who are two and three years behind in reading and math are passing advanced proficient on VGLA, but they are not being taught to read. Commenter states that graduation and a diploma should mean something and it begins in the primary reading programs.
225.	Len Dillon, President Dillon Insurance	Commenter supports requiring economics and financial literacy to graduate. Commenter believes there should not

	Agency, Inc.	only be a basic personal finance class but higher level classes as well. This class should include the basics of savings and investment, principles of interest, basic stock market knowledge and personal taxes.
226.	J. Bradley McCall, CIC, CISR, Treasurer McCall Insurance Agency, Inc.	Commenter supports requiring economics and financial literacy to graduate.
227.	Gary S. Zuckerman A&R Associates	Commenter believes that every student must pass a course in economics and personal finance as a condition of graduation.
228.	Linda A. Conner Business Development Officer & Lender American National Bank & Trust Company	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
229.	R. Michael Hedden Senior Vice President / Director of Operations Bankers Insurance, LLC	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
230.	Terrance E. Rogstad, CPA Shareholder Swart, Lalande & Associates, P.C.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
231.	William Duval	Commenter requests that the Board change whatever laws/regulations/rules that may need to be changed to: increase graduation rates, and reward the hard work by all those thousands of children with varying degrees of disability in the accomplishment of successfully navigating

		the SOL tests. Commenter believes that children with disabilities' work should be reflected by them earning at the very minimum a standard diploma.
232.	Karen S. Killian, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include "personal finance" in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read "Fine Arts or Economics <i>and Personal Finance</i>."</li> </ul>
233.	Kelly Murphy	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
234.	Ed Brugh	<p>Commenter supports Sarah Hopkins Finley's article about a proposal for adding economic and/or personal finance classes for graduation requirements. Commenter supports teaching about all types of lending, what to avoid and what loans to seek out, including instruction on conventional mortgages, FHA mortgages, USDA mortgages, home equity loans, second mortgages, credit card loans, student loans, 90 day notes, auto loans, commercial loans, and SBA loans. Also it would be good to give instruction on life insurance, such as whole life and term life. Another item of instruction would be the development of a family budget, saving money, retirement planning, employment loss planning, college funding planning, and home ownership planning.</p>
235.	Paige T. Lilley W. T. Chapin, Inc.	Commenter does not "feel that the requirement should be either or on Economics for Financial Literacy."
236.	Andrew T. Martin, C.P.A.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in</li> </ul>

	Corbin & Company, P.C.	<p>economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
237.	Neil Turner	Commenter requests that the Board adopt new requirements for graduation to include meaningful instruction in economics and personal finance as a requirement for graduation for all Virginia high school students.
238.	Ginny Napier Director of Guidance Poquoson HS	Commenter supports the addition of economics/personal finance to the high school graduation requirements. Commenter does not like the requirement for the standard diploma that gives students the option of a foreign language, economics, or personal finance. Commenter believes it makes no sense for one segment of the graduates to not be required to take the course, and that foreign language is certainly beneficial but it is not an appropriate substitute.
239.	Valerie R. Coley	Commenter believes in the importance of implementing incentives in the Virginia School System. Commenter states that there are children who cannot read or sound out the alphabets, but are being pushed through a system that is not helping them to even get to a point of graduation. Commenter feels the focus should be on the basics, phonics and implementation of some type of life skills/vocational training. Commenter states that every student isn't academically successful but if we place academics along with Vo-Tech there would be a change in the school system and the drop out rate.
240.	Matthew Freeman	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative

		<p>diplomas and other credentials. Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
241.	<p>Adrienne E. Volenik  Director, Disability Law Clinic  Acting Director,  National Center for Family Law  School of Law  University of Richmond</p>	<p>Commenter's concern with the proposal is that schools receive the same point values for awarding Special and Modified Standard diplomas as they receive when awarding Advanced and Standard diplomas. Commenter states that these diplomas put graduates at a disadvantage in the marketplace, with the military, and with four-year colleges and community colleges. Commenter states that data reveals that many special education students capable of earning Advanced or Standard diplomas are instead earning Modified or Special diplomas. Commenter states that there are no state wide guidelines as to how many may be awarded. The 2008 On-Time Graduation Results data reveals that, while students with disabilities graduate at roughly the same rate as the overall population, the type of diplomas awarded to students with disabilities varies widely across the state. Commenter asserts that this wide variability reveals that many disabled students are not given a fair opportunity to achieve to their full potential. Commenter believes that this variability can be remedied by a firm standard from the state that serves as an incentive to all school systems to help disabled students achieve the highest attainable credential. Commenter indicates that some school districts are offering special education students no opportunity to earn Standard and Advanced diplomas. Commenter asserts that by setting the graduation rate at 80 points and awarding Modified Standard and Special Diplomas 100 points, schools have no incentive to push students with disabilities to meet the "challenging expectations that have been established for all children" under the federal IDEA and Virginia regulations requiring that "every student shall be expected to pursue a Standard Diploma or Advanced Studies Diploma." Commenter requests that the Board (1) increase the target to promote</p>

		diploma graduates and eliminate graduation gaps among student subgroups, (2) provide a small amount of “extra credit” value to Advanced and Standard diploma-earners or weight Special and Modified diplomas somewhat lower than Advanced and Standard diplomas; and (3) lower the value of all non diploma options such as GEDs to reflect the diminished opportunities that they offer to students.
242.	Ronald F. Miller President & CEO Summit Community Bank	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
243.	Daniel G. Waetjen Group/State President Greater Washington DC Banking Region BB&T	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
244.	Jim Thomas Executive Vice President Chief Credit Officer EVB	Commenter urges the Board to require all students to take a high school economics and personal finance course to graduate.
245.	Norman Blanchard	<p>Commenter asserts that if the Standard Technical Diploma and the Advanced Technical Diploma are to be introduced, students should be able to receive more intensive and student specific instruction in math classes prior to entering the ninth grade. Commenter believes encouraging new approaches to math and science classes may help steer students toward the technical diplomas.</p> <p>For the graduation and completion index Commenter asserts that GED recipients should be rated at 85 points.</p> <p>Commenter states that the GED has undergone significant revision in recent years and should be accepted as a viable alternative to a regular diploma. Commenter believes that schools should receive more credit than proposed for preparing students to pass the GED while enrolled in high school or within a year after they have left school.</p> <p>Commenter asserts that students not graduating but still in school should receive 80 points. Commenter urges the Board to celebrate students remaining in school in order to complete their education. Commenter suggests creating a responsibility index for students, parents and community members.</p>
246.	Debbie Barnes	Commenter believes there should be something on the SOL about simple life things, such as balancing a check book, percentage rates, and money management.
247.	Heather and Barry Gale	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion

		index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials. Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.
248.	Bob Good	Commenter supports Sarah Hopkins Finley's article about a proposal for adding economic and/or personal finance classes for graduation requirements.
249.	R.R. Casanovas	Commenter states that students in elementary, middle and high school levels should receive instruction in an economics curriculum, and all levels need a basic and fundamental understanding of economics and knowledge of checkbook balancing, budgeting, saving, and investing.
250.	Elizabeth H. Nolte, CPA	Commenter urges the Board to include both personal finance and economics as a requirement for high school graduation. Commenter believes students should be well educated in financial matters with an understanding of the use of credit, banking, how to get a loan, the consequences of borrowing, how supply and demand affect pricing, the tax system, why money is deducted from their paychecks for federal and state withholding, Social Security and Medicare, how to balance a checkbook, and fill out a simple tax return.
251.	Shirley A. Gary	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
252.	Susan Proffitt	Commenter urges the Board to require all high school students take, and pass, an economics and personal finance course.
253.	Sarah Hopkins Finley Executive Director Virginia Council on Economic Education	Commenter urges the Board to require all high school students to pass an economic/personal finance course as a requirement to graduate. The Council suggests modifications to the current proposal, to achieve this without eliminating other required courses: <ul style="list-style-type: none"> <li>• For the Standard Diploma, replace one of the five elective options to require an economics/personal finance course</li> </ul>

		<ul style="list-style-type: none"> <li>• For the Advanced Studies Diploma, replace the option to take economics <i>or</i> personal finance with the requirement for a single combined course</li> <li>• For both the Standard and Advanced Technical Diplomas, students could have the option of satisfying a required economics/personal finance credit as one of the four career and technical credits or electing it as an option as currently proposed or as part of satisfying one of the social science credits. With some modification, an existing Business education course (Finance 6121) would provide a good economics/personal finance course for students.</li> </ul>
254.	Desiree Childress	<p>Commenter requests that the Board</p> <ul style="list-style-type: none"> <li>• look at and revamp the list of computer accommodations available for students with disabilities (color/filter screens, enlarged font, voice over options, reading options, and hiding icons should be standard accommodations)</li> <li>• make VGLA/VSEP offered and reviewed in each IEP during the 8th grade year</li> <li>• have avenues and supports in place for VSEP in high school</li> <li>• provide students who take the VGLA/VSEP with the opportunity to take the SOL with accommodations for practice and knowledge for higher education opportunities,</li> <li>• keep all students in a general educational setting with appropriate supports,</li> <li>• look at the curriculum framework and add multisensory learning within the scope of SOL.</li> </ul>
255.	Preston Lemon	<p>Commenter requests that the Board (1) increase the target to 90 points or more to promote diploma graduates and eliminate graduation gaps among student subgroups, (2) provide a small amount of “extra credit” value to Advanced diploma earners (3) weight Special and Modified diplomas below Advanced and Standard diplomas; and (4) lower the value of all non diploma options such as GEDs and Certificates of Completion to reflect the diminished opportunities that they offer to students.</p>
256.	Kelly Godwin - UR Juvenile Law and Policy Clinic	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Disaggregate the graduation data between white males and black males.</li> <li>• Give schools incentives to retain students.</li> <li>• Reward schools who keep students engaged.</li> <li>• Implement retention programs to keep students in school.</li> </ul>

		<ul style="list-style-type: none"> <li>• Ensure that full credit is not given for credentials that don't offer full opportunities.</li> <li>• Create incentives for early planning and high expectations.</li> <li>• Give full credit only for standard and advanced diplomas while other options are weighted according to the value to the student after high school.</li> <li>• Disaggregate graduation data about Virginia's most vulnerable students.</li> </ul>
257.	Parents of an autistic child in Blacksburg	Commenter believes guidance counselors and special education teachers need to receive better professional development for addressing the different needs of autistic children. Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials. Schools need teachers and staff who know how to help special needs students graduate with regular diplomas.
258.	Heather Tower	Commenter does not want the educational bar lowered. Commenter believes our educational standards are failing the American people.
259.	Pamela E. McIntire	Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.
260.	Anne Chapin	<p>Commenter requests that the Board increase the target to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p> <p>Commenter is concerned about the points awarded to certificates of program completion with the opinion that there is no evidence that they provide any benefit to students. The Commenter suggests that the SOA include dropout prevention that rewards schools for keeping students engaged in school; for diplomas only the Standard and Advanced Diplomas should get full credit; other options such as GEDs, Certificates of Program Completion, Special Diplomas and Modified Standard Diplomas should be weighted according to their value to the student after high school; disaggregation of graduation data about Virginia's most vulnerable students to ensure success for all.</p>
261.	Mary Wagner	Commenter feels the accreditation system should reward schools for providing instructional programs to meet the

		needs of at-risk students to help them graduate on time. Commenter requests that the Board increase the target to at least 90 points.
262.	Congressman Robert C. "Bobby" Scott	Commenter is concerned that the proposed standards do not place enough emphasis on awarding students a regular diploma. Commenter suggests that the proposed standards are too lenient in the area of alternative credentials and detract from encouraging students from pursuing regular diplomas. Commenter's second concern is that the proposed standards do not require increased graduation rates for all students especially minority and low income students. Commenter requests that the graduation rates be applied to individual groups of students and that the data be disaggregated.
263.	Sally W. Southard Chairman, Salem City School Board	Commenter requests that the Board make personal finance and economics required courses for graduation, give school divisions the flexibility to decide which teacher licensure codes are acceptable to teach these courses, and that school divisions be able to decide if the course requirements are taught as two semester 0.5 credit courses or one 1.0 credit full year course.
264.	Jan Pingel Binford Middle School	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include "personal finance" in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read "Fine Arts or Economics <i>and Personal Finance.</i>"</li> </ul>
265.	Richard Paul Haigh Grafton High School	Commenter urges the Board to require all students to take a high school personal finance course to graduate that includes ethics.
266.	Frank Chimento	Commenter requests that the Board:

		<ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
267.	Kathy Bergmann Woodbridge Senior High School	Commenter requests that all students be required to take a financial literacy/economics based course for graduation. Commenter believes the existing finance course curriculum available to students in Virginia that is taught in the Business and Informational Technology departments as an elective can be updated to meet the requirements being presented.
268.	Susan Wyatt	Commenter encourages the Board to approve the proposal to incorporate economics <i>or</i> financial literacy as a one credit elective course option or a required course option of three diplomas (standard, advanced studies and standard technical).
269.	Elizabeth Pase Business and IT Instructor	Commenter requests that all students be required to have both a course in Personal Finance and a course in Basic Economic Theory. Commenter states that despite the number of credits required for graduation, seniors should be required to attend school all day unless they have employment in a co-op type job arrangement which is oriented towards a career goal. Commenter does not believe working at a fast food business meets that description. Commenter believes students, and society in general, are being done a huge disservice when the minimum required is accepted as sufficient.
270.	Richard G. Smith, CPA/ABV, Member Witt Mares, PLC	Commenter requests that the Board require a course in economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.

271.	Carolyn Meyer RN BSN	Commenter states that every school should have a nurse with the ratio of 1 nurse to 750 students. Commenter believes this is necessary to address student needs such as food allergies, asthma, diabetes epilepsy, sickle cell anemia, or handicaps requiring assistance, injuries, and illness that occur during the day. Commenter believes having a non-professional staff member do this type of work is setting the schools up for liabilities. Commenter wants legislation to mandate nurses in every school with an adequate ratio of students per nurse.
272.	Barbara Cullerton, CPA,Senior Manager CS&T CPAs	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
273.	Ann B. Emerson, School-to-Career Specialist Department of Instruction Stafford County Public Schools	Commenter is in favor of requiring Academic and Career Plans for 8th graders. Commenter believes students need to realize that mathematical and scientific reasoning and problem-solving, analytical skills (developed in social studies), reading and writing are critical components of career and life success. Commenter believes that this goal can only be accomplished with significant career development. Commenter believes that creating bridges between these subject areas is something that career development can achieve. Commenter asserts that the state needs to ensure adequate time, attention, and funding is provided and that schools are required to do career development. Career development needs to be directed by educational professionals who are well-qualified, and not stretched between too many other tasks.

<p>274.</p>	<p>Ken Bassett History and Social Sciences Office of Student Learning and Professional Development Prince William County Public Schools</p>	<p>Commenter is troubled by implementation of the <a href="#">Personal Finance objectives</a> developed in 2006. Commenter asserts that although the objectives are aligned to standards in three content areas: Mathematics, Career and Technology Education, and History and Social Sciences, the objectives are most often implemented in the 12th grade Government course. Commenter states that the history and social science curriculum community was not consulted in the creation of the standards that many of them now must teach so many 12th grade teachers report feeling inadequately prepared to teach the course. Commenter requests that the economics objectives currently found in the 12th grade US Government standards be removed from that course. Commenter’s rationale is that adding a graduation requirement that includes economics standards (apart from personal finance objectives), would be redundant given the current 2001 standards: GOVT. 14,15,16 and the 2008 revised standards: GOVT. 12,13,14,15,16. Commenter asserts that given the recent revisions of the Government standards, it may be that the Board will not entertain the suggestion of revisiting the standards. In that event, commenter wants to express support for the addition of a financial literacy course requirement that included the economics objectives with the understanding that VDOE remove those standards at the next revision cycle on the grounds that the underlying course work for the CTE endorsements for personal finance and economics are the best preparation for teaching these topics to our students.</p> <p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics and personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> <li>• Any required credit (even electives) should include a course that incorporates both economics AND personal finance, not economics OR personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. If a statewide graduation requirement in economics and personal finance is not feasible, for consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the Virginia JumpStart asks that language be amended for</li> </ul>
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		the advanced studies technical diploma to read "Fine Arts or Economics and Personal Finance."
275.	Mike Ellerbrock Director - Center for Economic Education Agricultural & Applied Economics Dept College of Agriculture & Life Sciences, Virginia Tech	Commenter request that the Board require all high school students take a full course in economics and financial literacy as a requirement for graduation. Commenter states that the Virginia Council on Economic Education will train the Commonwealth's teachers.
276.	Dennis Winfree, CIC Horizon Insurance Services	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
277.	Helen Harman, Counseling Director, Counselor, Grades 10-12, A-G Pam Elmore, Counselor, Grades 10-12, H-M Lynn Briggman, Counselor, Grades 10-12, N-Z Jimmy Miller, Counselor, Grade 9 Spotswood High School	<p>Commenters are opposed to the addition of a new career and technical diploma option. Commenters feels that students will be faced with another decision to make at too young of an age. Commenters think it would be wise to encourage looking at the various options that currently exist without having to make a choice of diploma linked to that choice.</p> <p>Commenters believe the "tone" of the proposal is driving a wedge between those who are "college bound" and those who are on the "vocational track." Commenters believe adding these new diploma options waters down the Standard Diploma considerably. Commenters suggest that instead of adding a Technical Diploma, make the standards of receiving the Career and Technical Seal more rigorous.</p> <p>Commenters suggests that if the Assembly is adamant on adding the Technical Diplomas then maybe the CTE seal needs to be removed altogether. Commenters feel the Board has created diplomas without consulting people in charge at the local school level. Commenters assert that the two new diplomas will put more work on counseling staffs with many already overburdened due to budgetary cuts. Commenters request that the state make the technical diplomas a local option and give the localities and systems room to be flexible in modifying the courses that are needed to meet the definition of the Career and Technical diplomas.</p> <p>Commenters assert more guidance counselor staffing is needed to implement the proposed regulations. Commenters request that the state revisit the Standards of Quality as they relate to Guidance staffing. Right now, staffing is at 350:1 student:counselor ratio at the high school level.</p> <p>Commenters assert that with an increase in the rise of mental health-related issues in young people and the existing duties of counselors, the State should not expect a counseling staff to take on additional requirements without looking at adjusting this ratio.</p>

278.	Alison Ludwig	Commenter believes it would be a waste of time and money to develop and maintain a personal academic and career plan for each seventh- and eighth- grade student. Commenter asserts that most adults are not currently doing what they planned to do when they were in 7th grade, 9th grade, or even end up doing what they planned when they're 1 year out of high school.
279.	Glory Gill, RN, BSN, MPA HCS School Nurse Wythe Elementary	Commenter requests that the Board mandate having a school nurse in each school at a ratio of 1:750 students. The No Child Left Behind Act has increased the work of nurses including trach care, increased medication administration, feeding tube care, seizure monitoring and treatment, and care of asthmatics with inhalers and nebulizers.
280.	Jenna J. Konizer	<p>Commenter supports the Standard Technical Diploma because more students would benefit from taking advantage of the excellent opportunity to begin a technical career while in high school and to graduate with marketable skills. Commenter asserts that the state should provide its share of funding for the increased costs associated with this new diploma. Commenter believes 7th grade is too early to begin a formal program like the one proposed by the Academic and Career Plan. Commenter believes that in middle school time and resources would be better spent on career information and exploration. For the Graduation and Completion Index commenter thinks the proposal to reduce point value for students that take more than 4 years to graduate is too harsh.</p> <p>Commenter believes that schools should not be punished for circumstances that schools have no control over. The emphasis should be on working as hard as we can to help students graduate, no matter what it takes. Commenter suggests that a workable compromise would be to reduce point value if students take more than 5 years to graduate.</p>
281.	Jennifer G. Cornell Executive Director Timothy P. Schilling, Associate Director Kenneth T. Berents, Chairman, Board of Directors, Powell Center for Economic Literacy Collegiate School	Commenters support the amendment of Virginia's graduation requirements to require that all students in the state complete a course in economics and personal finance in order to earn a high school diploma. Commenters encourage the Board to consider enhancing Virginia's Social Science Standards of Learning to include more emphasis on economics and to teach economics to elementary and middle school students.
282.	Torey J Edmonds/Community Liaison and Scholar VCU Clark-Hill Institute for Positive Youth Development	Commenter states that youth must be prepared by age 21 and low graduation rates signal problems up and down the developmental continuum – from birth to young adulthood.

283.	Jen Martin Business and Information Technology Teacher Strasburg High School	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
284.	Steve Craig Acting Coordinator Adult HS Completion Programs Fairfax County Public Schools	<p>Commenter requests that the Board consider adding the External Diploma Program as an accreditation factor like the GED; implementing the adult high school diploma using standard credit because motivated students are being thrown out of schools when they reach their credit needs but have not passed the SOL; implementing the original approved language of the adult HS diploma again; allowing Adult HS safe harbor on the graduation rate number; giving alternative schools safe harbor on the graduation rate number; permitting Adult HS, adult GED, and EDP to pass back off time graduation points to the students last school before adult high school. To give the true picture of county success.</p>
285.	Carol Pariser (SOA Box)	<p>Commenter requests that the Board require a personal finance course for high school students to graduate.</p>
286.	James W. Brackesn, Jr. CPA	<p>Commenter is concerned that economics or personal finance would be offered as electives and that both subjects are not required. Commenter suggests that a course in economics and personal finance be required for all students to graduate.</p>
287.	J. Peter Clements President / CEO Bank of Southside Virginia	<p>Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.</p>

288.	Susan K. Floyd, CPA, MSA Faculty - Accounting College of Business JMU	<p>Commenter supports VSCPA's comments and requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics AND personal finance as a requirement for graduation for all Virginia high school students.</li> <li>• Any required credit (even electives) should include a course that incorporates both economics AND personal finance, not economics OR personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma.</li> </ul>
289.	Robert A. Blackburn Kathleen B. Blackburn	<p>Commenter urges the Board to require all students to take a high school economics and personal finance course.</p>
290.	Bernadette J. Stowe V. P. Finance/ Human Resources Treasurer Southwestern Virginia Gas Company	<p>Commenter urges the Board to require all students to take a high school personal finance course to graduate. Commenter suggests using the curriculum of the Ramsey group: <a href="http://www.daveramsey.com/school/">http://www.daveramsey.com/school/</a></p>
291.	Annette W. Paxton Counseling Director, Sharon Cunningham, Counselor, Matthew Kinman, Counselor Broadway High School	<p>Commenters are opposed to the implementation of these two new diplomas. The goal of having students concentrate in one area is already addressed by the Career and Technical Diploma Seal and the Advanced Math and Technology Diploma Seal. Commenters assert the development of these diplomas was prepared without the input of the Career and Technology faculty and supervisors; the current proposal fails to address the issues encountered in advising and guiding students in career fields. Commenters believe the two new diplomas will result in more time counselors, students and parents must spend on making sure requirements are being met and takes away from time spent on other issues involving the career, academic, and developmental growth of our high school students. Commenters support the proposal for every high school student to take a personal finance or economics class.</p>
292.	Arthur Auerbach, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course</li> </ul>

		<p>that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</p> <ul style="list-style-type: none"> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
293.	Terry Swain	<p>Commenter advocates for teaching pragmatic personal business skills such as a student bank. Commenter requests that the Board consider requiring financial education for all grade levels, eventually including not only personal finance but also global economics, business etiquette, and other real, practical information that will benefit the people who go straight to the work force as well as those who go on to higher education.</p>
294.	Edward Schmitz Hantzmon Wiebel LLP	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
295.	Susan B. Wright	<p>Commenter supports requiring all students to take personal finance.</p>
296.	James Maxstadt	<p>Commenter supports teaching financial literacy and economics as standard components of a government course and that separating them out and establishing them as a separate course would be a mistake.</p>
297.	Tim Maloney	<p>Commenter supports requiring all students to take personal finance to graduate.</p>

298.	Patricia C. Beeson Human Resources Director Arlington Virginia Federal Credit Union	Commenter supports requiring all students to take personal finance to graduate.
299.	David L. Cox, CPA, CMA, MBA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and</i> Personal Finance.”</li> </ul>
300.	Jon R. Maskell, CPA McPhillips, Roberts & Deans, PLC	<p>Commenter requests that the Board:</p> <p>Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</p>
301.	Gail Eisner Fisher, CPA Tax Manager PBGH, LLP	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For</li> </ul>

		consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i> ”
302.	Wright Aloba	Commenter believes the school curriculum is already loaded with finance courses and that all the schools need to do is incorporate "personal finance" chapter or chapters in the already two or three finance courses currently taught in many schools and required for accounting majors. Commenter believes additional courses are not needed.
303.	Jeffrey J. Bates, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
304.	Meg Gruber Earth Science Teacher Forest Park HS Prince William County Public Schools	<p>Commenter requests that the Board not implement the academic and career plan proposed in 8VAC20-131-140. Middle school aged students do not have a realistic view of what they want to be as an adult.</p> <p>Commenter fears that this tool when used by parents and their children will not be viewed as being flexible. At this age students should be exploring their options not developing a plan that many may feel they must adhere to no matter what. Commenter is concerned about who will do all of the paperwork. Teachers and guidance counselors have enough to do meeting the SOL standards in less than one school year to meet the tests, meeting local school systems requirements in testing and the data disaggregation of the county test and the resulting paperwork. Guidance</p>

		<p>counselors do not have time to work with students for all the paperwork and their responsibilities for testing and data disaggregation. This new requirement will over burden already over burdened teachers and guidance counselors. Commenter is very concerned about this unfunded mandate coming at a time, of decreasing revenue and attacks on salaries and benefits. Commenter fears that the burden of this unfunded mandate will come from her salary like everything else that the General Assembly and the Governor refuse to fund. Commenter asserts that this initiative will not better prepare our students for their future but it will overburden our already overburdened schools.</p>
305.	<p>Susan Messier, CPA Tax Partner Goodman &amp; Company</p>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
306.	<p>Marsha E. Frith, CPA Sells, Hogg &amp; Jones, CPAs, PC</p>	<p>Commenter supports a financial literacy program in the school system.</p>
307.	<p>Charles A. Bish, CPA Bish &amp; Haffey, PC (SOA Box)</p>	<p>Commenter urges the Board to require all students to take a high school personal finance and economics course to graduate.</p>
308.	<p>Nick Hecker Thompson, CPA Senior Consultant Veris Consulting, LLC</p>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma</li> </ul>

		<p>requirements.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
309.	Mallard & Mallard CPAs, LLC	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
310.	JoAnn M. Wicks, CPA Verizon Business - Finance	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p>

		<ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
311.	Donald R. Pinkleton, CPA	Commenter supports requiring all high school students to take a course in economics and personal finance.
312.	Joseph D. Thornton, CPA, ABV, PFS, CFP®, CVA <u>Mitchell, Wiggins &amp; Company LLP</u>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
313.	Jennifer Kulper	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students.</li> <li>• Include a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma.</li> </ul>
314.	Beverly C. Boyer, CPA Sherman, Spero & Safarino, Ltd.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing</li> </ul>

		<p>the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
315.	Theresa K. Noe VP Strategic Planning HCA Healthcare - Capital Division	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
316.	Brian Lee Christopher	Commenter supports requiring personal financial literacy for high school graduation.
317.	Patrice S. Elliott, CPA CIA   Assistant Controller   Department of General Services Commonwealth of Virginia (SOA Box)	Commenter supports requiring literacy (personal finance <i>AND</i> economics) as a criterion for a high school diploma.

318.	Michelle Calhoun CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
319.	Robert C. Makin, CPA CFO The Dragas Companies	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
320.	Forest Fowler Principal/CTE Director Giles County Technology Center	<p>Commenter supports comments submitted at the public hearing on behalf of the Region VI Career and Technical Education Administrators group. Commenter agrees:</p>

		<ul style="list-style-type: none"> <li>• The academic rigor of each diploma should be derived from the rigor required of the standard and advanced studies diplomas.</li> <li>• The technical rigor should be derived from the requirements for a student to be a CTE program completer with a minimum of 4 credits earned in a CTE program sequence.</li> <li>• That to eliminate confusion by students, parents, employers and post-secondary institutions the diplomas should be referred to as the Standard Diploma with a Technical Concentration and the Advanced Studies Diploma with a Technical Concentration.</li> </ul> <p>Commenter supports the requirement for a student to earn an industry certification, license or occupational competency assessment <i>but only after there are appropriate assessments available in all CTE program areas and these assessments and CTE competencies have been aligned.</i> Commenter does not support the proposal to require 2 years of foreign language to earn a Standard Technical Diploma.</p> <p>Commenter believes the proposed requirements of the Standard Diploma to earn 1 credit in foreign language, economics or personal finance is sufficient and the student may take a second year of foreign language as an elective credit if they so desire. Any increase in the number of required credits to graduate makes it more difficult to schedule students in smaller schools.</p>
321.	Alexander Diederich, CPA	<p>Commenter supports the VSCPA’s comments regarding adding a financial literacy component to Virginia high school curriculums</p>
322.	Jamie Wohlert, CPA, CFE Navigant Consulting, Inc.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard</li> </ul>

		<p>diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</p>
323.	<p>Melody Barackman Controller Virginia Housing Development Authority</p>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
324.	<p>Cameron W. Vaughan Chief Financial Officer The Wilton Companies</p>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>

325.	J. Chip Broadway, CPA, MBA Vice President & Treasurer Episcopal Church Schools in the Diocese of Virginia	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance</i>.”</li> </ul>
326.	Susie Irvine Karen Klugh	<p>The AFSA Education Foundation (AFSAEF), supports requiring students to pass a personal finance course to graduate. The organization supports use of its free MoneySKILL® course, a 34-module curriculum which teaches the basics and complexities of personal finance in the content areas of income, expenses, assets, liabilities and risk management. This personal finance education could be available immediately to students’ throughout the United States without any financial burden on the schools, teachers and students. Much more must be done. Schools should start teaching these personal finance concepts in the elementary grades. Commenter advocates for requiring an entire semester course be devoted to teaching these important life skills, starting in elementary school, continuing through middle school, and finishing in high school.</p>
327.	Chad Ratliff	<p>Commenter believes, at minimum, financial literacy should have the same level of importance as art, music, or physical education in our public schools. It’s not unreasonable, however, to argue that it should even be considered part of core curriculum and included in standards-based testing. Commenter requests that the Board include a standalone personal finance course in the revised requirements for graduation.</p>
328.	William Pouch Accounting Manager	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics</li> </ul>

	ION Healthcare Corporation	<p><i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and</i> Personal Finance.”</li> </ul>
329.	Vickie M Barrow Vice President - Investments Wachovia Securities	<p>Commenter supports Sarah Hopkins Finley’s article about a proposal for adding economic and personal finance classes for graduation requirements. Commenter supports school system having personal finance and economics as a core curriculum in all high schools</p>
330.	Audrey Thomson (SOA Box)	<p>Commenter supports changing Virginia's graduation requirements so that every student must pass a course in economics and personal finance as a condition of graduation.</p>
331.	Patti Quick	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard</li> </ul>

		technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i> ”
332.	Bobby Grohs	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
333.	Robert A Krueger, CPA Alexander Randolph	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. If a statewide graduation requirement in economics and personal finance is not feasible, for consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the VSCPA asks that language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul> <p>Commenter believes that an economics and personal finance course should be listed as an option to replace the 4<sup>th</sup> year of</p>

		math for students who are not interested in pursuing math and sciences further in their college or work careers.
334.	James E. Stewart, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and</i> Personal Finance.”</li> </ul>
335.	Darius A. Johnson SVP, Chief Lending Officer Consolidated Bank & Trust Co.	Commenter supports a requirement that all students complete a finance or economics class as part of their requirements for graduation
336.	Marsha S. Shuler Senior Vice President The Federal Reserve Bank of Richmond	Commenter urges the Board to <i>require all students</i> to earn a credit focused on both economics <i>and</i> personal finance.
337.	Mary Muldoon, CPA	Commenter supports a requirement that all students complete a finance class as part of their requirements for graduation
338.	Barry L. Thomas	Commenter urges the Board to adopt a mandate for an economic class for all students.
339.	Jeff Leopold	Commenter believes it is essential that the Board require an economics/personal finance course in high schools.
340.	Karla S. Moran Group Controller Moog, Inc. Components Group	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma</li> </ul>

		<p>requirements.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
341.	Susan Dewey, Executive Director, VA Housing Development Authority	Commenter urges the Board to make an economics and personal finance course a requirement for every high school student.
342.	Katherine Busser Executive Vice President Capital One Financial Corporation	Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.
343.	Walter Ayers	Commenter supports a mandated economics/financial literacy course.
344.	Maria Rivero	<p>Commenter stated “[t]here should be high expectations for all students, not just students who are going for the standard or advanced diploma. Commenter asserts that special needs students should receive individualized instruction.</p> <p>Commenter asserts that for special education students to be successful colleges and workplaces need to recognize the modified standard diploma as being just as valuable as the standard diploma. Commenter requests that the Board increase the target for the graduation index to at least 90 points, or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</p>
345.	Mark L Endries Controller, Luck Stone Corporation	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following</p>

		<p>changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
346.	Lorilei J. Roberts, CPA Manager PBGH, LLP	Commenter urges the Board to include as a requirement for graduation at least one credit that includes personal finance AND economics, and include such requirement for all graduates, those seeking advanced diplomas as well as those seeking the standard diploma.
347.	Carol B. Whitson College of William and Mary	Commenter supports Governor tying graduation rates to school accreditation. Commenter asserts that currently challenging special education students are counseled out of the high school graduation track. Commenter recommends that the formula be increased from 80 points to 90 points for the graduation index. Commenter believes that students earning Modified Standard Diplomas are not counted by the state as high school graduates because they do not obtain a standard high school diploma. Commenter asserts that high schools should be able to include these students as graduates, and these students should be included in the index. Commenter agrees, in theory, with the proposed plan for middle school personal academic and career plans. Commenter feels these plans, if successfully done, will require a degree of reflection, communication, and evaluation that may not be possible within the current infrastructure of public schools. Commenter asserts that it is imperative that this plan not become just another required form that does not have strong evaluative data to predict student interests or ability, nor the linkages (community-based employment/internship opportunities) which are integral to garnering long-term student and family commitment.
348.	Olin V. Hyde	Commenter supports the recommendation from the Virginia Council on Economic Education that every high school student in VA have courses in economics and personal finance.
349.	Christine W.Caskey, . Assistant Superintend Department of	Virginia Beach City Public Schools supports the proposed revisions to the regulations however, the division has concerns regarding the time-line for implementation of the

	<p>Curriculum and Instruction Virginia Beach City Public Schools</p>	<p>proposed diplomas and increased diploma requirements. The division asserts that the revisions will have a significant impact, including financial impacts, for school divisions. The proposed requirements for the technical diplomas will most likely result in an increase in teacher allocations for career and technical education, foreign language, personal finance, and economics courses. Most school divisions are currently finalizing budgets for the 2009-10 school year that are impacted by the economic downturn at the national, state, and local levels. Virginia Beach asserts that if implementation is required beginning next school year, then school divisions will have to make tough budgetary choices, despite the best interests of students, to comply with these new regulations. The proposed revision would also affect Virginia Beach's alternating A/B block schedule. The new diploma requirements would force the division to implement alternate scheduling options that ensure students are able to meet new state criteria for graduation. Revisions to the current high school schedule will have significant impacts that involve not only the instructional program, but other areas such as staffing and transportation.</p> <p>Virginia Beach City Public Schools is supportive of the new requirements for the Advanced Studies and Standard diplomas and the implementation of the Standard Technical and Advanced Technical diplomas. The division requests the state department to delay the implementation of these new requirements from the ninth-grade class of 2009-10 to the ninth-grade class of 2010-11. This delay will allow school divisions additional time to address the staffing, scheduling, and fiscal impacts.</p>
350.	<p>S. Buford Scott, Chairman, Scott &amp; Stringfellow, Inc.</p>	<p>Commenter urges the Board to require a course in economic and financial literacy for every student to graduate from high school.</p>
351.	<p>William C. Foote Officer  Aronson &amp; Company</p>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance,</li> </ul>

		<p>not economics <i>OR</i> personal finance.</p> <ul style="list-style-type: none"> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
352.	Rachel Powell	<p>Commenter urges the Board to add at least a semester long economic/personal finance course requirement for graduation.</p>
353.	Larry Hurt, CPA member VSCPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
354.	Timothy J. Kaczmariski Controller John C. Grimberg Co., Inc.	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> </ul>

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355.	Athena M. Robbins, CFP(R), CPA Carmines, Robbins & Company, PLC	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
356.	Gregory F. Lawson, CPA/ABV Senior Partner Goodman & Company, LLP	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard</li> </ul>

		technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i> ”
357.	Dan Salandro School of Business VCU	Commenter requests that the Board require a course in economics AND personal finance not a course in economics OR personal finance.
358.	Gray Rawlings Vice President Administration S&K Famous Brands, Inc.	Commenter is in favor of adding economics and personal finance requirements to the high school curriculum.
359.	Tricia Neale, CPA Thompson, Greenspon & Co. PC	Commenter encourages the Board to require courses in economics and personal finance for high school graduates.
360.	Gemma Kotula Director Christopher Newport University Center for Economic Education	Commenter feels that every student should be encouraged to have the basics of a sound financial future, and an understanding of how the economic forces of the world work. To benefit not only themselves but also every other citizen of the world.
361.	Catherine W. Howard, Ph.D. Vice Provost, Division of Community Engagement Associate Professor, Psychology Virginia Commonwealth University	Commenter encourages the Board to include a credit on economics AND personal finance. This course should be an integration of content not a choice between the two areas required for ALL students.
362.	Tammy C. Woodcock	Commenter believes that the SOL may have started out as a good idea in theory, believes “these test have become the do all and be all of our education system.” Commenter believes children are no longer taught to think but just to memorize information. Commenter advocates teaching economics and basic math. And feels this is not the case currently. Children believe the SOL and NCLB have their good points and bad points.
363.	Gladys Denzler	Commenter believes a course in economics and personal finance should be a high school graduation requirement.
364.	Paul F. Kline	Commenter emphasizes the need for financial education at the high school level. Regardless of the direction students take after high school they will need personal financial literacy and an understanding of the underlying economic principles that govern the way our entire financial system works. Commenter requests that the Board require economics and personal finance not finance OR economics

		option as a one credit course for all diplomas.
365.	Dr. Cecil Snead Director of Instruction Amy V. Cummings Coordinator of Social Studies Roanoke County Public Schools	It is the position of Roanoke County Public Schools that more time will be needed to implement the proposed standards, if approved, regarding Economics. The proposed Economics course would require the division to develop curriculum, review textbooks according to policy and procedure for doing so, and professional development for Social Studies staff in preparation for teaching the course effectively, all of which require the expenditure of funds which are short at this time. Roanoke recommends that more time be given before requiring an economics course for graduation to insure a thoughtful implementation.
366.	Steven Zanetti, NBCT Douglas S. Freeman High School	Commenter supports requiring a course in economics and/or personal finance be taught as requirement for graduation. Commenter feels it is important to require both a semester in economics and a semester in personal finance. Commenter requests that the General Assembly consider a bill that requires that all public high school students be required to pass both a semester in economics AND a semester in personal finance for graduation.
367.	Jason Mauney	Commenter urges the Board to require high school students to take at least one unit of credit in finance and economics.
368.	Dominique Way	Commenter is upset regarding how the points are distributed for different credentials for the graduation and completion index. Commenter strongly disagrees with the point values for the Certificate of Completion, GEDs, and with other point values for the Advanced and Standard diplomas being the same. Commenter suggests that the points differ significantly between Advanced and Standard Diplomas. Commenter is concerned that under the current proposal we will increase our school to prison pipeline. Students will graduate from high school and not further their education and not be able to find long-term careers; which then leads them to other means of surviving and then to our prisons. Commenter believes increasing the target to 90 points using the existing index will be a major step up for students graduating from high school.
369.	Katherine D. Smith, CPA State Controller USOncology	Commenter requests that the Board consider adding both an economics and personal finance course to the graduation requirements for high school students.
370.	Linda Rogus Executive Director Shannon Tackett Communications Officer Northwest Federal Credit	Commenter requests that the requirements for the advanced studies diploma be reworded from “economics or personal finance” to “economics and personal finance.” Commenter requests that the requirements for the standard diploma be changed from a single requirement for “foreign language,

	Union Foundation	economics, or personal finance” to two separate requirements for a foreign language and economics and personal finance.
371.	Denise J. Jones 2008-2009 President Virginia Counselors Association Heidi B. Davis, Ed.S. Executive Director, Virginia Counselors Association Virginia Career Development Association	Virginia Counselors Association (VCA), and Virginia Career Development Association (VCDA), supports the proposal to require the development and maintenance of a personal Academic and Career Plan (SLCP) for each 7th - and 8th-grade student. However, any requirement for plans should be accompanied by state or local funding to accommodate the additional staff or resources, including the professional development, required to support this process. Funding and placement of career counselors, career specialists or career coaches in all high schools is also essential to the success of the plans. Expanding this effort to the middle schools will require additional resources. Systematic training and professional development opportunities for counselors and other educators involved in the implementation are also essential.
372.	Jim Lee CPA/PFS	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
373.	Pompa Bose, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma</li> </ul>

		<p>requirements.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
374.	Monique T. Valentine, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
375.	Stephanie Saunders, CPA Chair, VSCPA Educational Foundation Board of Directors	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p>

		<ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
376.	Lisa M. Murphy Attorney at Law LeClair Ryan	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
377.	Dana B. Hamel	<p>Commenter supports the position of the Council on Economic Education and the article by Sarah Hopkins Finley about a proposal for adding economic and/or personal finance classes for graduation requirements.</p>
378.	Newport News Public School Career and Technical Education Department  Barbara Smith-White Career and Technical Education Instructional Supervisor	<p>Commenters support the amendments to the various diploma options that will ensure students are directed in the right pathways to college and/or pursue their career options including:</p> <ul style="list-style-type: none"> <li>• The need for economics and/or personal finance education</li> <li>• The need to allow students to put emphasis on the career of their choice, whether they are going to college by allowing them to take more electives and required CTE courses. This will provide a more focused and structured</li> </ul>

		<p>system for all students to excel in their career goals and continue to be successful in their academic courses regardless of their IEP, class ranking or college/career interest.</p> <ul style="list-style-type: none"> <li>• The changes and addition to the diplomas with the inclusion of industry certification will make students more marketable to industry, more attractive to colleges and more career-oriented.</li> </ul>
379.	Dr. Robert G. Smith Superintendent Arlington Public Schools	<p>Arlington Public Schools opposes changes to the Standard and Advanced Studies Diploma options related to foreign language, economics or personal finance, and the addition of the Standard and Advanced Technical Diplomas.</p> <p><b>Economics or Personal Finance Course</b> The Arlington social studies curriculum infuses the economic principles at both the middle and high school levels. Economics and financial literacy objectives and lessons are incorporated into the Grade 12 U.S. and Virginia Government course. Staff development was provided to every Arlington teacher of the U.S. and Virginia Government course. In addition, Arlington has a semester elective course, <i>Personal Finance/Money Management</i> and a full-year elective course, <i>Banking, Finance, and Investments</i>. The specific requirement of a personal finance or economics course as part of the 22 credits for the Standard Diploma and the additional requirement of a personal finance or economics course to increase the number of credits for an Advanced Studies Diploma is duplicative and does not best serve the needs of students. In addition, the creation of additional requirements in personal finance and economics will result in increased costs for textbooks, professional development, and staffing.</p> <p><b>Foreign Language Option</b> The suggested change of the option of a required foreign language elective in lieu of the personal finance or economics elective to the Standard Diploma, does not best meet the needs of students. The division is troubled by the recommendation to increase the number of required courses to the Standard Diploma and add additional graduation requirements to the Advanced Studies Diploma. Students with disabilities and students whose native language is other than English are at particular risk for not graduating on time or for dropping out due to the additional requirements.</p>

		<p><b>Standard and Advanced Technical Diploma</b></p> <p>The division does not support the addition of two new diploma options, especially when students who take the additional four Career and Technical sequential courses are already eligible to receive the Career and Technical Education Seal. The seal’s requirements are more rigorous than those of the proposed diploma. There are concerns around adding any additional diploma types in terms of the increased resources necessary to manage the multitude of diplomas and the potential for additional requests for other ‘special diplomas.’</p>
380.	Kenneth Stewart	Commenter believes that every high school student should have a curriculum requirement for a class that teaches basic economics and personal finance
381.	Howard B. Kiser Division Superintendent Gloucester County Public Schools	Gloucester County Public Schools is in opposition to the proposed changes to the graduation requirements. The division supports adding the Career Technical Diplomas within the confines of the existing requirements for a Standard and an Advanced Studies Diploma, but not if the requirements for the Advanced Studies Diploma are increased from 24 to 26. Especially now, when localities are faced with diminishing dollars to support current programs, it seems counterproductive to add mandates that will impact staffing, programs and overall costs to implement, especially since appropriate funding will not be provided to support the proposed changes. Requests that the Board postpone the proposed revisions specifically pertaining to graduation requirements until the financial outlook is better able to support costs for adding new courses. Students should be allowed to obtain CTE diplomas only within the confines of the elective requirements that are part of the current standards and advanced diplomas. Adding economics and personal finance is needed but increasing graduation requirements at this time will have an adverse impact on staffing and support costs.
382.	Barry D. Yost, Ed. D. Washington County Public Schools Supervisor Career & Technical Education, Adult Education, and Alternative Education	Commenter states that the addition of personal finance, economics, or foreign language as a graduation requirement would cause undo financial stress on some schools and school divisions if funds are not allocated for the additional courses and/or sections. Commenter asserts that the CTE diplomas should have a credential completion for the diplomas. This will also require allocated funding at the state and federal level. These are trying economic times, and the Board needs to give strong consideration to any new proposals that would be an expense to the locality.
383.	William M. Wright, II,	Commenter requests that the Board:

	<p>CPA President, Landmark Military Media, Inc.</p>	<ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and</i> Personal Finance.”</li> </ul>
384.	Steve Ritter	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and</i> Personal Finance.”</li> </ul>
385.	<p>Suzanne Gallagher, Director Center for Economic Education School of Business</p>	<p>Commenter encourages the Board to require all high school students take a course in economics <i>AND</i> personal finance.</p>

	Virginia Commonwealth University	
386.	Edward J. Grenier III President and CEO Amy Marcenaro Heckman Vice President, Education and Strategic Partnerships Junior Achievement of the National Capital Area	<p>Commenter urges the Board to:</p> <ul style="list-style-type: none"> <li>• Include, at a minimum, one unit of credit in economics and personal finance as a requirement for graduation</li> <li>• Any required credit (even electives) should include a course that incorporates both economics AND personal finance, not economics OR personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma.</li> </ul>
387.	Terry E. Zerwick CPA/PFS Zerwick & Associates PLLC	Commenter supports support of inclusion of a course on economics and/or personal finance as a required course for graduation
388.	Linda and Jim Greenhager	Commenter supports Sarah Hopkins Finley’s article about a proposal for adding economic and/or personal finance classes for graduation requirements.
389.	W. A. Dennison, Jr. City Manager City of Bristol	The graduation and completion index, the Academic and Career Plan for middle school students, and the increase in other accreditation requirements will require additional staff time and resources at a time when there are cuts in state funding for virtually all programs. It is unlikely the General Assembly will fund any of the new costs associated with the proposed revisions so the costs will be borne by the local governments and local taxpayers. Commenter requests the Board not increase requirements at this point unless it eliminates other programs to offset the increased costs of the revisions, relax other, less critical standards or ties implementation to funding increases in the Standards of Quality.
390.	Bonnie Johnson County Administrator County of Bath	The graduation and completion index, the Academic and Career Plan for middle school students, and the increase in other accreditation requirements will require additional staff time and resources at a time when there are cuts in state funding for virtually all programs. The new costs associated with the regulations will be borne by the local governments and local taxpayers. Commenter requests the Board not increase requirements at this point unless it eliminates other programs to offset the increased costs of the revisions, relax other, less critical standards or ties implementation to funding increases in the Standards of Quality.
391.	Ronald Lovelace, CPA Lovelace, Norvelle, Mathews, & Crews	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for</li> </ul>

		<p>all Virginia high school students.</p> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
392.	John Denison Cherry, Bekaert & Holland	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance.</i>”</li> </ul>
393.	Toby Ellison Cherry, Bekaert & Holland	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p>

		<ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
394.	Wesley Watkins Cherry, Bekaert & Holland	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
395.	William T. Berry, Jr. Cherry, Bekaert & Holland	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement</li> </ul>

		<p>verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or <i>Economics and Personal Finance</i>.”</p>
396.	<p>Kurt D. Hodgen City Manager City of Harrisonburg</p>	<p>The graduation and completion index, the Academic and Career Plan for middle school students, and the increase in other accreditation requirements will require additional staff time and resources at a time when there are cuts in state funding for virtually all programs. It is unlikely the General Assembly will fund any of the new costs associated with the proposed revisions so the costs will be borne by the local governments and local taxpayers. Commenter requests the Board not increase requirements at this point unless it eliminates other programs to offset the increased costs of the revisions, relax other, less critical standards or ties implementation to funding increases in the Standards of Quality.</p>
397.	<p>James D. Campbell Executive Director Virginia Association of Counties</p> <p>R. Michael Amyx Executive Director Virginia Municipal League</p>	<p>The graduation and completion index, the Academic and Career Plan for middle school students, and the increase in other accreditation requirements will require additional staff time and resources at a time when there are cuts in state funding for virtually all programs. It is unlikely the General Assembly will fund any of the new costs associated with the proposed revisions so the costs will be borne by the local governments and local taxpayers. Commenter requests the Board not increase requirements at this point unless it eliminates other programs to offset the increased costs of the revisions, relax other, less critical standards or ties implementation to funding increases in the Standards of Quality.</p>
398.	<p>Dawn. C. Lindley, Director of Marketing and Financial Literacy, Virginia Credit Union League</p>	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> </ul>

		<ul style="list-style-type: none"> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
399.	Locke Trigg Regulatory Compliance Analyst Bureau of Financial Institutions	Commenter urges the Board to amend the proposal to require all students, not just advanced studies students to earn a credit focused on both economics <i>and</i> personal finance not economics or personal finance.
400.	Ward R. Scull, III Michael H. Lane Virginians Against Payday Lending	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance, not economics <i>OR</i> personal finance.</li> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
401.	Bradley S. Haun, CPA	<p>Commenter requests that the Board:</p> <ul style="list-style-type: none"> <li>• Include, at the minimum, one unit of credit in economics <i>and</i> personal finance as a requirement for graduation for all Virginia high school students. Commenter states that this new requirement can be accomplished by reducing the number of required electives proposed for students by one unit of credit under the proposed diploma requirements.</li> </ul> <p>If a statewide graduation requirement in economics and personal finance is not feasible, then consider the following changes to the electives in the current proposal:</p> <ul style="list-style-type: none"> <li>• Include in any required credit (even electives) a course that incorporates both economics <i>AND</i> personal finance,</li> </ul>

		<p>not economics <i>OR</i> personal finance.</p> <ul style="list-style-type: none"> <li>• Include “personal finance” in the elective requirement verbiage for the advanced studies technical diploma. For consistency with the elective proposals in the standard diploma, advanced studies diploma and standard technical diploma, the language be amended for the advanced studies technical diploma to read “Fine Arts or Economics <i>and Personal Finance.</i>”</li> </ul>
402.	Bobbie Gilbert – Business Teacher and CTE Team Leader, Waynesboro Public Schools	<p>Commenter appreciated the support for the two new diploma options. Believed the Board needs to support the administrative tasks that will be involved with the new diplomas, i.e. recordkeeping, staff, and funding for the tracking of the diploma requirements. Concerned about the consistency of the course title needed for the Advanced CTE Diploma with the Economics course. Requested that it be called Economics and Personal Finance.</p>
403.	Tom Garner – Virginia Bankers Association	<p>Commenter wanted to put a “face” to the comments that had been provided by the Virginia Bankers Association. Supported the association’s request that the Board of Education include a course on economics and personal finance in all diploma tracks instead of just the Advanced Diploma curriculum so that all students take the course.</p>
404.	Sue Wright – Coordinator of Elementary Instruction, Waynesboro Public Schools	<ul style="list-style-type: none"> <li>• Expressed support for the proposed changes to the SOA, but stated that she did not believe they will have an impact on leading Virginia’s students into the 21<sup>st</sup> Century.</li> <li>• Stated that students need to be bilingual and that language instruction needs to be a standard at the elementary level.</li> <li>• Stated that if students have an academic and career plan at the middle school level, but graduate without the imagination and creativity to solve tomorrow’s problems, the plan will be futile.</li> <li>• Proposed that all students become proficient in a musical instrument, or as part of a vocal ensemble, that students are allowed to show mastery of the SOL in an artistic form.</li> <li>• Also believed that students should be required to respond to instruction using technologies that would widen their audience by allowing interested students to submit an electronic project to the department based on a world problem. The student inventors or creators should be awarded a verified credit for their project and their solution should be shared.</li> <li>• Stated that public educators should evaluate the skills that students need for the problems that do not yet exist</li> </ul>

		<p>and put their energies there.</p> <ul style="list-style-type: none"> <li>• Stated that the proposed changes to the SOA will take money and time from educators and asked whether they will make a significant step in creating a public school system that can respond to the needs of the world.</li> </ul>
405.	Christa Pierpont – Restorative Community Foundation	<ul style="list-style-type: none"> <li>• Supported Virginia’s efforts to make graduation rates a priority for Virginia high schools.</li> <li>• Requested that the Board of Education adjust the graduation and completion index so that it gives schools more points for Standard and Advanced Diplomas and fewer points for all alternative diplomas and other credentials.</li> <li>• Requested that the board provide incentives to school systems to examine their graduation rates for each class of students (by gender, ethnicity, social economic indicators, the educational level of parents, etc.) and a strategic plan to raise all classes of students to the same graduation rate level as the most successful class of students and in keeping with the new SOA.</li> <li>• Requested that prevention grants for evidence-based practices be provided to help schools meet the standards.</li> <li>• Encouraged the Board to provide leadership in a state commissioned study and provide funding for grassroots leaders in each school to learn more about restorative practices for both prevention and addressing disciplinary matters so that model projects could be undertaken and shared with the department.</li> </ul>
406.	Laurie McCullough – Director of Instruction, Waynesboro Public Schools	<ul style="list-style-type: none"> <li>• Concerned that the required academic and career plan would divert already scarce resources away from time spent in conversation and consultation with students and their families at a time when the students are getting to know themselves as independent people with their own talents and interests and most need support, guidance and mentoring.</li> <li>• Encouraged the Board to let go of this proposed mandate and give attention instead to helping schools meet the goal of a qualified career coach in every high school in the valley.</li> <li>• Believed having a consistent graduation rate is a positive step, but encouraged the Board to make needed adjustments in the formula so that schools are not punished when they work hard to help hardworking students who want to succeed.</li> </ul>
407.	Don Blanchard – ESL Teacher, Waynesboro Public Schools	<ul style="list-style-type: none"> <li>• Opposed establishing a graduation and completion index that all schools with a graduating class would be required to meet in order to be fully accredited.</li> </ul>

		<ul style="list-style-type: none"> <li>• Requested the provision of more resources for children living in poverty in order to improve the graduation rate instead of spending money to implement the graduation and completion index.</li> <li>• Requested the allocation of more resources for children in the low socioeconomic group to give them more educational opportunities, more access to books, and increased assistance in the primary grades.</li> <li>• Requested the provision of more early intervention programs from birth through elementary school to help guide parents and their children to make informed decisions about health care, diet, and the importance of reading.</li> <li>• Remember there are a wide variety of reasons students fall behind. Don't lose sight of the bigger picture. Knowledge is most important, not how many years it took someone to graduate.</li> <li>• Supported measures to seriously address the dropout problem and advocates measures to help poor-performing students. Simply assigning an arbitrary point scale for accreditation will not solve the problem. Intervention measures are needed long before a student enters high school. Proposals focused at the high school level should reward schools for finding innovative ways to encourage students to stay in school.</li> <li>• Stated that to improve the graduation rate, the Board should focus its efforts on improving the lives of children.</li> </ul>
408.	<p>Martin Auville –  Director of Career and  Technical Education and  Director of Guidance,  Rockingham County  Public Schools</p>	<ul style="list-style-type: none"> <li>• Believed the proposal for an academic and career plan is an admirable one. However, this will require more guidance services. So if this standard is implemented, it should come with additional state funding for additional counseling staff.</li> <li>• Difficult for CTE administrators and counselors to support the Standard Technical Diploma and the Advanced Technical Diploma for four reasons: <ul style="list-style-type: none"> <li>○ Technical diplomas will be viewed as vocational track and the Advanced Studies Diploma will be described as the college bound track, thus continuing the barrier between vocational and college bound programs of studies.</li> <li>○ The addition of two new diplomas will create more issues for counselors in terms of explaining the diploma options and tracking student progress toward meeting the requirements for each. With</li> </ul> </li> </ul>

		<p>the addition of these two diplomas, there will be nine choices for the completion of high school.</p> <ul style="list-style-type: none"><li>○ Additional diplomas will require more services from school counselors who are already overburdened.</li><li>○ It will be extremely difficult, if not impossible, for students who attend a regional technical center for three periods a day to schedule the required courses for the Advanced Technical Diploma.</li><li>● There is no need for the two new diplomas. The current Standard and Advanced diplomas, with the CTE seal, offer the same result. If technical diplomas must be offered, consider awarding them to the students who meet the current requirements for earning a CTE seal on the other diplomas, and then eliminate the seal.</li></ul>
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409.	<p>Billie-Jo Grant –          Doctoral student at UVA          doing research for Just          Children</p>	<ul style="list-style-type: none"> <li>• Believed that the GED point value gives too much weight to credentials that do not give students a fighting chance for future education and the work force.</li> <li>• Not advocating eliminating the GED and alternative credentials, but believes these credentials are far less valuable to students when it comes to college and workplace readiness and should not be given a point value set so close to our goals for Virginia education. 75 points is not an accurate point value for the GED on the Graduation and Completion Index.</li> <li>• Supports JustChildren’s platform and recommendations for improving the proposed graduation and completion index to ensure that we are striving to meet the highest standard possible.</li> <li>• Schools should get full credit only for Standard and Advanced Diplomas.</li> <li>• GEDs should remain options for students who would otherwise drop out, and schools should be given some credit for helping students achieve the GED. But, the final target for schools should be closer to the value of a diploma than to a GED.</li> <li>• Setting the target (80) points so close to the value of a GED (75) points may have the unintended consequence of tracking students into GED programs and less valuable diplomas who could earn a Standard diploma with the right supports and services.</li> <li>• The standard needs to be set at 95% to ensure that schools are encouraging students to graduate instead of settling for a GED.</li> <li>• Increase the target to 95 to promote diploma graduates and eliminate graduation gaps among student subgroups and/or lower the value of all non-diploma options to reflect the diminished opportunities they offer students.</li> </ul>
410.	<p>Petition          209in support          Note- Seven individuals          were listed twice as          petition signers and 27 of          the signatories also          submitted individual          written comments and/or          spoke at one or the          public hearings.</p>	<p>209 signatures were provided to support the comments of Just Children requesting that the Board:</p> <ul style="list-style-type: none"> <li>• Increase the target to at least 90 points using the existing index and change the index to add incentives for schools to support students to reach for Standard or Advanced diplomas; or</li> <li>• Keep the target at 80 points, but also change the index to add incentives for schools to support students to reach for Standard or Advanced diplomas; and</li> <li>• Change the index to reduce the points awarded to schools for GEDs. The final target (80 points) is closer to the points awarded for a GED (75 points) than a Standard or Advanced Diploma (100 points); and</li> </ul>

		<ul style="list-style-type: none"> <li>• Change the index to significantly reduce points awarded to schools for certificates of program completion and</li> <li>• Require high schools to reach the goals, or make significant and sustained progress, for economically disadvantaged students, students with disabilities, students with limited English proficiency, and minority students.</li> </ul>
411.	Julia Branch	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced diplomas and fewer points for all alternative diplomas or other credentials.</li> <li>• Provide dropout prevention programs and more help for students to reach the goal of a Standard or Advanced diploma.</li> <li>• Hold schools accountable for the number of low-income students, children of color, and students with disabilities or limited English proficiency who achieve a diploma.</li> </ul>
412.	Anjernette Bowens	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced diplomas and fewer points for all alternative diplomas or other credentials.</li> <li>• Provide dropout prevention programs and more help for students to reach the goal of a Standard or Advanced diploma.</li> <li>• Hold schools accountable for the number of low-income students, children of color, and students with disabilities or limited English proficiency who achieve a diploma.</li> </ul>
413.	Mary Hopson	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced diplomas and fewer points for all alternative diplomas or other credentials.</li> <li>• Provide dropout prevention programs and more help for students to reach the goal of a Standard or Advanced diploma.</li> <li>• Hold schools accountable for the number of low-income students, children of color, and students with disabilities or limited English proficiency who achieve a diploma.</li> </ul>
414.	Antoinett Reed	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the graduation and completion index so that it gives schools more points for Standard and Advanced diplomas and fewer points for all alternative diplomas or other</li> </ul>

		<p>credentials.</p> <ul style="list-style-type: none"> <li>• Provide dropout prevention programs and more help for students to reach the goal of a Standard or Advanced diploma.</li> <li>• Hold schools accountable for the number of low-income students, children of color, and students with disabilities or limited English proficiency who achieve a diploma.</li> </ul>
415.	Sabrina Jefferson	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
416.	Sarah Chappelle	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
417.	Lshaunda Caisi	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
418.	Pia Irby	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> </ul>

		<ul style="list-style-type: none"> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
419.	James Bullock	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
420.	Tamara Henry	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
421.	Dionne Wilson	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
422.	Robin Ballard	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas</li> </ul>

		<p>and weight all other options according to the value to the student after high school</p> <ul style="list-style-type: none"> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
423.	Angela May,	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
424.	Shanah James	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
425.	Tomorrow Page	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>• Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
426.	Janine Scott	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>• Provide dropout prevention programs.</li> <li>• Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the</li> </ul>

		<p>student after high school</p> <ul style="list-style-type: none"> <li>Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
427.	Antoinette Smith	<ul style="list-style-type: none"> <li>Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>Provide dropout prevention programs.</li> <li>Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
428.	Cora Hayes	<ul style="list-style-type: none"> <li>Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</li> <li>Provide dropout prevention programs.</li> <li>Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</li> <li>Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</li> </ul>
429.	Denton Hayes	<p>Increase the target to at least 90 points or adjust the index so that it gives schools more points for Standard and Advanced diplomas and fewer points for alternative diplomas and other credentials.</p> <p>Provide dropout prevention programs.</p> <p>Give full credit for the Standard and Advanced diplomas and weight all other options according to the value to the student after high school</p> <p>Disaggregate graduation data in order to increase graduation rates for all of Virginia’s most vulnerable students.</p>
430.	Joy Jackson – Public Housing Association of Residents (PHAR)	<ul style="list-style-type: none"> <li>Supported Just Children’s platform to improve the numbers of Virginia’s high school students who graduate with a diploma.</li> <li>Recommended that the new state standards encourage prevention programs and early help, such as tutoring and mentoring programs.</li> <li>Recommended stronger school and family partnerships.</li> <li>Expressed a need for fairness and stated that 13% fewer African-Americans are receiving diplomas and that</li> </ul>

		<p>white students are twice as likely as black students to receive Advanced Diplomas.</p> <ul style="list-style-type: none"> <li>• Urged the Board to make sure that all students have improved graduation rates by setting targets for each of the at-risk groups and making sure that all students have the opportunities they deserve. If schools are not required to disaggregate data, then the overall performance of the full group often hides the graduation gaps for specific sub-groups.</li> </ul>
431.	Emily Dreyfus – Just Children, Parent	<ul style="list-style-type: none"> <li>• Supports the Just Children platform and recommends strengthening the current graduation rate index. By enacting a more rigorous graduation index, the Board can help remedy the following problems: <ul style="list-style-type: none"> <li>○ About one in five students doesn't earn a diploma after 4 years of high school.</li> <li>○ There are intolerable racial and economic disparities in graduation rates and in the types of diplomas awarded to students in the NCLB sub-groups.</li> <li>○ White students are about twice as likely as black students to earn an advanced diploma in four years.</li> <li>○ Fewer than half of the students with disabilities earn Standard or Advanced Diplomas, even though the majority of them do not have intellectual disabilities.</li> </ul> </li> <li>• Recommend including a rigorous graduation index to help encourage more students towards Standard and Advanced diplomas, which will facilitate more collaboration between families and schools.</li> </ul>
432.	Robin Crowder, Division Superintendent, Waynesboro Public Schools	<ul style="list-style-type: none"> <li>• Recommended that the Board consider providing an online course in personal finance for no credit that students could take without having to fit it into their regular class schedule. Students would receive a certificate upon completion of the course. This program has worked well in Waynesboro.</li> <li>• No additional support staff members are offered to assist with the finance class. Does not believe there will be enough funds for local school divisions to hire an additional staff member to teach personal finance. Therefore, requested that this provision be postponed at this time.</li> <li>• Guidance counselors have knowledge about students going to college, but do not know as much about students going into the world of work. Recommended that the Board begin considering career coaches who</li> </ul>

		could also assist parents and students who do not know how to access the educational system.
433.	Sarah Martin – CTE Administrator	The proposed Technical Diplomas lack rigor in the validation of knowledge and skills related to content and lack the rigor of the current Standard Diploma with a CTE seal. What is missing is a means to validate the students’ knowledge and skills. She recommends that the Standard Technical Diploma requires students, at minimum, to maintain a “B” average or better in the CTE courses and obtain an industry credential related to content.
434.	John Ledgerwood – Virginia Association of Career and Technical Education	When the bill was signed, it was stated that the Technical Diploma should meet or exceed the current diploma requirements. The proposed Technical Standard Diploma does not. He recommends that the Board of Education (BOE) infuse the quality and validation insurances that currently exist with a CTE seal on a Standard Diploma. Also recommends restoring the six electives that are in the current Standard Diploma to the Standard Technical Diploma by requiring 23 credits overall. This would allow students to complete a two-three credit foreign language sequence and a career pathway.
435.	David Holleran – Superintendent for Mathews County	Educators in Virginia have met and exceeded the goals the BOE has established with inadequate State funding and a teacher work force with salaries well below the national average. As budget cuts as high as 20 percent are predicted for school districts, he urged the BOE not to pass any new mandates and relax others. Otherwise, education in Virginia will stall chasing unfunded mandates instead of focusing on instruction for the state’s children.
436.	Jessica Thompson – Just Children	There are unacceptable performance gaps in Virginia’s graduation rates. Despite a 2008 overall on-time graduation rate of 81%, only 69.3% of disadvantaged students graduated on time. Minorities also graduated below the overall levels. There is a nearly 13 percentage point gap between White and Black students and a 15.3 percentage point gap between White and Latino students. She recommends raising the target to at least 90 points.
437.	Sarah Geddes – Just Children	Encourages the BOE to raise the target for full accreditation from 80 points to 90 points and to reconsider the index to add incentives for schools to plan early and support students in achieving their full potential. She also submitted Just Children recommendations: <ul style="list-style-type: none"> <li>• Increase the target to at least 90 points using the existing index; and</li> <li>• Change the index to add incentives for schools to support students to reach for Standard or Advanced</li> </ul>

		<p>Diplomas;</p> <ul style="list-style-type: none"> <li>• Or</li> <li>• Keep the target at 80 points; but also</li> <li>• Change the index to add incentives for schools to support students to reach for Standard and Advanced Diplomas; and</li> <li>• Change the index to reduce the points awarded to schools for GEDs. The final target (80 points) is closer to the points awarded for a GED (75 points) than a Standard or Advanced Diploma (100 points); and</li> <li>• Change the index to significantly reduce points awarded to schools for certificates of program completion; and</li> <li>• Require high schools to reach the goal, or make significant and sustained progress, for economically disadvantaged students, students with disabilities, students with limited English proficiency, and minority students.</li> </ul>
438.	Joyce Beamon – Norfolk Public Schools	<p>On behalf of Norfolk Public Schools, she supports the following recommendations of the Virginia Association for Career and Technical Education:</p> <ul style="list-style-type: none"> <li>• That Technical Diploma options include the requirements for a CTE seal and opportunities for dual enrollment credit with community colleges.</li> <li>• That, whenever possible and appropriate, work force readiness skills and industry credentials or assessments are a recognized component of the Technical Diploma and Advanced Technical Diploma.</li> </ul>
439.	Lynne Mallory-Winter Edgewater Asset Management and board member of VCEE	<p>Urged the Board to make an economics and personal finance course required for high school graduation as these are skills that will change students’ lives. Students will have the opportunity to protect themselves and increase their own productivity in whatever endeavor they set for themselves. Most states have a required course for high school graduation.</p>
440.	Joseph Johnson - New Horizons Regional Education Center	<p>Supports the development of the technical diplomas. He suggests that we clarify “CTE courses” by changing it to read “credits in CTE courses.” He also suggests that we change “CTE concentration” to “career pathway.”</p>
441.	Glen Birch - Virginia Credit Union	<p>Implement a one credit requirement for all Virginia high school students in Economics <u>and</u> Personal Finance. Too many citizens are misinformed about finances. Economics and personal finance go together and should be mandatory for all students.</p>
442.	Linwood Christian - Petersburg Advocates for Children/Parent	<p>Many parents in Petersburg care passionately about the future of their children and attention to graduation rates is long overdue. Supports the Just Children recommendations:</p>

		<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points using the existing index; and</li> <li>• Change the index to add incentives for schools to support students to reach for Standard or Advanced Diplomas;</li> <li>• Or</li> <li>• Keep the target at 80 points; but also</li> <li>• Change the index to add incentives for schools to support students to reach for Standard and Advanced Diplomas; and</li> <li>• Change the index to reduce the points awarded to schools for GEDs. The final target (80 points) is closer to the points awarded for a GED (75 points) than a Standard or Advanced Diploma (100 points); and</li> <li>• Change the index to significantly reduce points awarded to schools for certificates of program completion; and</li> <li>• Require high schools to reach the goal, or make significant and sustained progress, for economically disadvantaged students, students with disabilities, students with limited English proficiency, and minority students.</li> <li>• Require achievement in at-risk subgroups and eliminate the graduation gaps.</li> </ul>
443.	Tarrika Brown (Letter) - Student, Petersburg High School	Glad the Board is proposing to add graduation rates to the SOA but needs to do more. Way too many students in Petersburg are being told they should just get a GED. GEDs are good for some students but they should not be the main option. Certificates of completion are practically useless. The proposal sends a message that it is OK for large numbers of students to leave school without a diploma. That's not right.
444.	John M. Carter - Parent/Virginia Council on Economic Education (Public Hearing)	Implement a one credit requirement (year-long course) for all Virginia high school students in Economics <u>and</u> Personal Finance. Too many citizens are misinformed about finances. Economics and personal finance go together and should be mandatory for all students.
445.	Tina Lambert - Virginia Society of CPAs/Virginia JumpStart	Implement a one credit requirement for all Virginia high school students in Economics <u>and</u> Personal Finance. Too many citizens are misinformed about finances. Economics and personal finance go together and should be mandatory for all students. Include personal finance as an elective for the advanced technical diploma.
446.	Frances Patterson - Substitute Teacher/Petersburg	Wants to start a non-profit organization to support students in danger of dropping out. Supports the Just Children proposals to:

		<ul style="list-style-type: none"> <li>• Change the index to add incentives for schools to support students to reach for Standard and Advanced Diplomas; and</li> <li>• Change the index to reduce the points awarded to schools for GEDs. The final target (80 points) is closer to the points awarded for a GED (75 points) than a Standard or Advanced Diploma (100 points); and</li> <li>• Change the index to significantly reduce points awarded to schools for certificates of program completion;</li> </ul>
447.	Andrew Schoeneman - Just Children Legal Aid Justice Center	<ul style="list-style-type: none"> <li>• Increase the target to at least 90 points using the existing index; and</li> <li>• Change the index to add incentives for schools to support students to reach for Standard or Advanced Diplomas;</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>• Keep the target at 80 points; but also</li> <li>• Change the index to add incentives for schools to support students to reach for Standard and Advanced Diplomas; and</li> <li>• Change the index to reduce the points awarded to schools for GEDs. The final target (80 points) is closer to the points awarded for a GED (75 points) than a Standard or Advanced Diploma (100 points); and</li> <li>• Change the index to significantly reduce points awarded to schools for certificates of program completion; and</li> <li>• Require high schools to reach the goal, or make significant and sustained progress, for economically disadvantaged students, students with disabilities, students with limited English proficiency, and minority students.</li> </ul>
448.	Courtney Fleming - Virginia Bankers Association	Implement a one credit requirement (year-long course) for all Virginia high school students in Economics <u>and</u> Personal Finance. Too many citizens are misinformed about finances. Economics and personal finance go together and should be mandatory for all students.
449.	Linda Moore - A Voice for GAP Kids	<p>The SOA draft doesn't go far enough. It doesn't address:</p> <p>Drop-out prevention – schools should be rewarded for keeping students engaged in school.</p> <p>Diplomas – gives full credit for credentials that don't offer full opportunities. GEDs, certificates, special diplomas and modified standard diplomas are not as highly valued in the world of work. Only standard and advanced studies diplomas should carry full credit. Other options should be weighted according to their value to the student.</p> <p>Disaggregation – disaggregating graduation data about Virginia's most vulnerable students is key to ensuring</p>

		success for all.
450.	Elle Merkele - The P.L.A.C.E. Group (Parent Leaders Advocating for Children's Education)	<p>Would like to see the new standards address:</p> <p>Drop-out prevention – schools should be rewarded for keeping students engaged in school.</p> <p>Diplomas – gives full credit for credentials that don't offer full opportunities. GEDs, certificates, special diplomas and modified standard diplomas are not as highly valued in the world of work. Only standard and advanced studies diplomas should carry full credit. Other options should be weighted according to their value to the student.</p> <p>Disaggregation – disaggregating graduation data about Virginia's most vulnerable students is key to ensuring success for all.</p> <p>Also, recommends adoption of the Just Children proposal.</p>
451.	Tarcis White - Legal Aid Justice Center	<p>Would like the Board to take a stronger stand on promoting graduation by:</p> <p>Reward schools that keep students engaged and implement retention programs to reduce dropouts.</p> <p>Do not give full credit for credentials that do not offer full opportunities (i.e., GED, Certificates of Program Completion, Special Diplomas, and Modified Standard Diplomas.)</p> <p>Help increase graduation rates for Virginia's most vulnerable students and disaggregate graduation data for these students.</p> <p>Expressed concern for students of low-income parents.</p> <p>Supports Just Children proposal.</p>
452.	Sean McKenna, Pediatrician - Legal Aid Justice	<p>Supported comments from the Legal Aid Justice Center.</p> <p>Also, cited statistics that show a correlation between health, insurance rates, income and gaps in on-time graduation rates and drop-out rates.</p>
453.	Emma Yackso (Letter) Charlottesville High School Student	<p>The Board's current proposal endorses low expectations. Schools could encourage students into lower-achieving programs and still meet the graduation targets. She has witnessed many students because they were not encouraged by the school system, have not lived up to their academic potential. Also, the proposal includes no plan to close the gap in graduation rates for racial and socioeconomic groups. The draft must be amended in order to provide each student with the best academic experience possible.</p>
454.	John Vincie, III, CPA Virginia Society of Certified Public Accountants	<p>The requirements for graduation should include, at a minimum, one unit of credit in economics <u>and</u> personal finance. Any required credit should include course that incorporates both economics and personal finance. Personal finance should be reflected in the elective requirements for</p>

		the Advanced Studies diploma.
455.	Jack D. Dale, Superintendent Fairfax County Public Schools	<p>The addition of the economics or personal finance option will place a burden on school divisions during a time of unprecedented budget reductions. There could be an additional burden placed on Advanced Placement (AP) or International Baccalaureate (IB) diplomas. The financial literacy objectives could be blended with Fairfax County’s existing American Government course to alleviate this burden.</p> <p>The proposed requirements for the technical diplomas are less rigorous than the requirements of the Career and Technical Education Seal that is currently available. Because of the absence of rigor and because of the short-term and long-term ramifications of adding two new diplomas, Fairfax County Public Schools (FCPS) cannot support the two technical diplomas.</p> <p>There are concerns regarding the 26 credit requirement for the Advanced Studies diplomas. FCPS high school students currently operate on a seven-period day, which allows students to earn up to 28 credits. With budget constraints, this situation and other instructional areas may be scrutinized. If FCPS had to return to a six-period day, then only students enrolled in high-school courses at the middle-school level could earn the 26 credits.</p>
456.	Byron Hinton, Chairman – Stafford Career and Technical Education Committee	The proposed Technical Diplomas lack rigor. This is not the time to “dummy down” expectations, given that more students are seeking technical backgrounds and given the emphasis on Science, Technology, Engineering, and Mathematics (STEM). The committee supports the proposal put forward by the Virginia Association of Career and Technical Education, which supports higher mathematics, history, social sciences, and foreign languages.
457.	Cecilia Kuhn – Representing Self	The commenter supports education in personal finance and economics. Financial literacy is needed for youth.
458.	Joe Clement – Representing Self	Economics education is important. An easy answer to providing economics education is to have an end-of-course Government test that incorporates economics principles. Commenter supports Dr. Dale’s comment to blend government coursework with financial literacy. There is room for providing a semester of economics in existing government courses.
459.	Dorothy Schoeneman Representing self	Commenter support for the Just Children proposal. Commenter supports the use of a graduation and completion index. Diplomas, not credentials, lead to higher achievement.

460.	Nancy Tubbs – Legal Services of Northern Virginia (LSNV)	LSNV supports the graduation and completion index proposed by the Virginia Board of Education. LSNV requests that the Board reconsider its target of 80 points and/or the index. The target is set too low relative to the point values of various diploma options. The target should be raised from 80 to 90 or the mix of points needed to achieve the target should be changed. LSNV also requests that the Board require high schools to make significant yearly progress in raising the graduation rate for every at-risk subgroup of students.
461.	Elizabeth Schneider – Representing Self	Commenter supports the graduation and completion index. The proposal would bring greater alignment to state accreditation and federal accountability systems. Commenter cited the Louisiana Board of Education’s adoption of a Graduation Index as an example of a system that rewards schools for keeping all students enrolled and ensuring that they graduate and do not drop out. Because of unintended consequences, the commenter has asked the Virginia Board of Education to give additional thought to some of the details of the index. Disaggregation by subgroup is needed so that there are incentives for students to succeed. The commenter supports the Just Children proposal to modify the index to give less weight to GEDs.
462.	Liane Rozzell – Families and Allies for Virginia’s Youth	The assignment of 75 points to the GED in the proposed graduation and completion index gives schools an incentive to track students toward a GED, even when they could earn a diploma. Expectations and incentives for diplomas should be raised. The accreditation standards should require schools to disaggregate graduate data. This will give schools a greater ability to target supports to struggling students. The current graduation and completion index sets expectations too low.
463.	Jennifer Platt – Representing Self	Commenter supports an economics/personal finance requirement in high school. Commenter urges careful consideration of the graduation and completion index and college preparatory programs because of the implications toward mediocrity influencing the under-achieving student subgroups.
464.	Edgar Aranda – Legal Aid Justice Center	Commenter supports the concept of the graduation and completion index. The graduation rate data need to be disaggregated by subgroup as an incentive for schools to raise graduation rates. The graduation and completion index gives too much weight to GED and Certificates of Completion. The commenter supports the Just Children platform.

<p>465.</p>	<p>Brenda Long- Virginia Association for Career and Technical Education (VACTE)</p>	<p>The proposed Standard Technical Diploma requirements do not exceed the Standard Diploma requirements. It should not be a lesser than diploma.</p> <p>With the proposed Standard Technical Diploma a student with such a diploma enrolling in a community college would likely be required to enroll in remedial math courses to meet placement requirements.</p> <p>The proposed Standard Technical Diploma requires four CTE credits but does not require a career concentration or specialization. VACTE recommends the diploma include course requirements that meet a CTE concentration or specialization, requirements for the CTE seal, requirements for an industry, credential or assessment, and that the student become a CTE completer.</p> <p>VACTE recommends the following credit requirements for the Standard Technical Diploma:</p> <ul style="list-style-type: none"> <li>English – 4 standard credits; 2 verified credits</li> <li>Mathematics - 3 standard credits;1 verified credit</li> <li>History and social science – 3 standard credits; 1 verified credit</li> <li>Health and physical education - 2 standard credits</li> <li>Foreign language – 2 standard credits with curriculum based on conversational language for work force readiness.</li> <li>Science – 3 standard credits; 1 verified credit; courses include chemistry, biology, and the third science related to the CTE pathway.</li> <li>CTE – 4 standard credits; courses must include a career concentration or specialization. For concentrations that require less than four courses students must complete additional courses that are related to the career concentration. Students must complete a CTE program sequence and pass an examination or occupational competency assessment in a CTE field that confers certification or an occupational competency credential from a recognized industry or trade or professional association or acquire a professional license in a CTE field.</li> <li>Electives – 2 standard credits</li> <li>Student selected assessment – 1 verified credit</li> </ul> <p>CTE seal would be required and would be awarded to students who earn either the Standard Technical Diploma or Advanced Technical Diploma.</p> <p>Advanced Math or Technology seal would be awarded to students who earn Standard Technical Diploma or Advanced Technical Diploma.</p>
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		<p>Dual credit with post secondary where applicable Academic Career Plans would utilize career pathways beginning in middle school to high school to post secondary.</p> <p>Standard credits total = 23; Verified credits total = 6</p> <p>VACTE recommends the following credit requirements for the Standard Technical Diploma:</p> <p>English – 4 standard credits; 2 verified credits</p> <p>Mathematics - 4 standard credits; 2 verified credit</p> <p>History and social science – 3 standard credits; 2 verified credit</p> <p>Health and physical education - 2 standard credits</p> <p>Foreign language – 3 standard credits with curriculum based on conversational language for work force readiness.</p> <p>Science – 4 standard credits; 2 verified credit; courses include chemistry, biology, and the third science related to the CTE pathway.</p> <p>CTE – 4 standard credits; courses must include a career concentration or specialization. For concentrations that require less than four courses students must complete additional courses that are related to the career concentration. Students must complete a CTE program sequence and pass an examination or occupational competency assessment in a CTE field that confers certification or an occupational competency credential from a recognized industry or trade or professional association or acquire a professional license in a CTE field.</p> <p>Electives – 2 standard credits</p> <p>Student selected assessment – 1 verified credit</p> <p>CTE seal would be required and would be awarded to students who earn either the Standard Technical Diploma or Advanced Technical Diploma.</p> <p>Advanced Math or Technology seal would be awarded to students who earn Standard Technical Diploma or Advanced Technical Diploma.</p> <p>Dual credit with post secondary where applicable Academic Career Plans would utilize career pathways beginning in middle school to high school to post secondary.</p> <p>Standard credits total = 23; Verified credits total = 6</p>
466.	Barbara Taylor-Center for Economic Education at Virginia Tech	<p>The proposed revisions should require that all students take economics and personal finance not just students seeking an advanced diploma.</p> <p>The proposed revisions should require a year long</p>

		<p>economics and personal finance course. The language should not provide for economics or personal finance. Supports Sarah Hopkins Finley’s article about a proposal for adding economic and personal finance classes for graduation requirements.</p>
467.	Melinda Robinett – Director of Special Education for Wythe County Public Schools	<p>For special education students, IEP teams, not schools determine the student’s diploma tracks. The weighted points for diplomas penalize schools that do not make the diploma track decision.</p> <p>Special education students have an emphasized role in transition planning. The weighted points for diplomas penalize schools that do not make the diploma track decision. The weighting of diploma status also creates an unnecessary tension with other DOE identified initiatives. The IEP does not dictate testing modifications and accommodations for the GED. Separate justification must be submitted to GED test officials who make the decision about allowable test accommodations.</p> <p>The weighted points penalize schools for student and family choices.</p> <p>GEDs should not be weighted less than the Standard Diploma.</p> <p>For the state special education performance plan only standard or advanced studies diplomas are terminal degrees. This means all other exit degrees are counted as zeros and factored into the indicator percentage report as zeros. The result is the calculation for the indicator is artificially lowered. The 75 points for GEDS is an additional penalty for the same “perceived crime.”</p>
468.	LaDonna Meade – Director of Instruction, Wythe County Public Schools	<p>A GED is not a perfect solution but it may be the only solution for some kids, and some parents insist on a GED despite being advised of the importance of a diploma. Schools should not be penalized for GEDs as under the proposed revisions.</p> <p>The GED changed in 2002 and is now harder. Reconsider 75 points for GED earners, and view them as diploma earners at 100 points.</p>
469.	Rick Weaver – CTE supervisor, Montgomery County Public Schools	<p>To make the new diploma options attractive to students and parents and to ensure they are understood by colleges, universities, and business and industry the diplomas should be referred to as the Standard Diploma with a Technical Concentration and Advanced Studies Diploma with a Technical concentration. Also adding the name of the CTE concentration to the diploma would add further value.</p> <p>The academic rigor of the technical diplomas should mirror the Standard and Advanced diplomas.</p>

		Asking parents to choose between an Advanced Studies Diploma and an Advanced Technical Diploma is not wise, and will continue to advance the notion that technical education and academics are an “either or” proposition rather than a combination for success.
470.	Buckey Boone – Southwest Virginia Legal Aid Society	<p>Raise the 80 point base on the graduation and completion index in the near future to challenge schools to do better. Examine the weighted points for GEDs and Certificates of Completion because they may encourage schools to channel students into these options. If the percentage of GEDs and Certificates of Completion increase after the change is implemented then the weight should be lowered.</p> <p>Make greater use of the data that is now available to evaluate schools, to not only analyze schools’ performance by the type of diploma but also by categories of students. Schools should be pushed to graduate more students with an advanced studies diploma and encourage them to succeed with all groups of students.</p> <p>The Board should develop a formula that will encourage and reward schools that not only improve their graduation rates but also improve the rate of advanced studies diplomas and decrease the discrepancy between the overall rates and the rates for low income students or students with disabilities. Reconsider the requirement for three years of foreign language for the Advanced Technical Diploma. This requirement may preclude some students from attempting this degree even though they are taking rigorous CTE programs because they do not have the academic time or inclination to take a foreign language.</p>
471.	Hank Bostwick-Legal Aid Society of Roanoke Valley.	<p>Concurs with Melinda Robinette’s comments.</p> <p>The primacy on IEP team decisions on diplomas and the points of the index may be contrary to that decision making authority.</p> <p>Revise the points for GEDs. The proposed points will cause students to be diverted into GED tracks.</p> <p>Certificates of completion preclude rural and inner city kids from joining the military.</p>
472.	Curtis Hicks – Region IV CTE Administrators, Virginia Association of Career and Technical Administrators	<p>To make the new diploma options attractive to students and parents and to ensure they are understood by colleges, universities, and business and industry the diplomas should be referred to as the Standard Diploma with a Technical Concentration and Advanced Studies Diploma with a Technical concentration. Also adding the name of the CTE concentration to the diploma would add further value.</p> <p>The academic rigor of the technical diplomas should be derived from the rigor required in the Standard and</p>

		<p>Advanced diplomas. The technical rigor should be derived from the requirements for a student to be a completer in a CTE area in addition to the requirements for certification in their area of specialization.</p> <p>Asking parents to choose between an Advanced Studies Diploma and an Advanced Technical Diploma is not wise, and will continue to advance the notion that technical education and academics are an “either or” proposition rather than a combination for success.</p>
473.	C. Wayne Adkins Member City of Salem School Board	<p>Commenter urges the Board to require all students to take a high school economics and personal finance course and include such a course in all diploma tracks.</p> <p>All students should be required to complete at least a semester course in financial literacy basics prior to graduation.</p> <p>Financial literacy and economics should not be an elective. School divisions should have flexibility in meeting financial literacy requirements by including in the regulations a one credit unit course in economics and personal finance, a one-half credit unit in economics and a one-half credit unit in personal finance or a one-half credit unit in personal finance and a one-half credit unit in an advanced study of personal finance.</p>
474.	Alan Siebert – Superintendent, Salem City Public Schools	<p>Requests that identical language is used regarding the requirements in each diploma type.</p> <p>Requests that flexibility in meeting financial literacy requirements be granted as to whether a one credit course or a combination of one-half credit courses be permitted to meet the requirement.</p> <p>Requests that for new requirements there be flexibility regarding teacher licensure codes permitted to teach these courses.</p> <p>Financial literacy skills should be required for all children; provided with a coherent course sequence; and that local school divisions should have reasonable flexibility in establishing, naming, and staffing courses.</p>
475.	Alan Hawthorne – Executive Director, Joint Industrial Development Authority of Wythe County (Did not speak at the hearing but provided written comment.)	<p>Supports the efforts of the Board to enhance CTE through development of the technical diplomas that enhance the value of technical education and ensure rigor in the preparation for a technical career.</p> <p>Encourages the inclusion of a credit requirement that includes the option for economics or personal finance courses.</p>

The following comments were received after the close of the official comment period. However, due to growing budgetary concerns they have been included:

	<b>Commenter</b>	<b>Comment</b>
476	Poquoson City Public Schools-Kerry Knowlton Chair of School Board	The division recognizes the value of the revisions. Requests postponement of the new regulatory requirements until the 2009-2010 fiscal year. Expressed concern about finding funds for new courses and the additional work for staff during a difficult period. A reduction in force may become necessary due to budget cuts resulting in staff having larger work loads in addition to adding the work of new regulatory requirements. With limited staff and limited resources existing programs may be at risk. The new regulations will add costs to school divisions both in terms of dollars and staff time. It does not make sense to add to the current budget crisis by asking school divisions to do more with less funding.
477	Alleghany County Public Schools – Randall Tucker, Chair of School Board	Requests the Board of Education to work with the General Assembly to postpone approval and/or implementation of the revised SOA, and to evaluate the appropriateness of all SOA requirements in light of budget reductions. Those regulations that provide sanctions against school divisions should be suspended until the state is able to fulfill its obligation to support at least 50 percent of the prevailing costs for all requirements. While it supports the revisions, the division notes that they will require additional staff time and resources at a time of significant state reductions in basic aid to public education. Without new funding the revisions result in unfunded mandates. Also requests postponement of the revised mathematics Standards of Learning until 2010 or until adequate funding is provided for staff development and new text materials. Requests the Board to send a letter to the U.S. Secretary of Education requesting an executive order suspending the No Child Left Behind’s four point increase in average measurable objectives.
478	Wesley Robinson	Objects to the revisions to the Special Education Regulations.0
479	Kevin Carey	Supports a course in economics and financial literacy.
480	R. Darryl Holland, President Virginia Association of Agricultural Educators	Supports adding units, lessons, or competencies in economics and personal finance into existing curriculum rather than requiring a new one credit course. If a new course is required commenter suggests including “all aspects of industry” in such a course and removing it from the career and technical education area.
481	William Brune	Supports a course requirement in economics and personal finance.
482	Tammy Greggs	Objects to the lack of funding for public education in

		Gloucester County.
483	King William County Public Schools- Mark Jones, Superintendent	Requests that the Board postpone the proposed revisions specifically pertaining to graduation requirements until the financial outlook is better able to support costs for adding new courses. Students should be allowed to obtain CTE diplomas only within the confines of the elective requirements that are part of the current standards and advanced diplomas. Adding economics and personal finance is needed but increasing graduation requirements at this time will have an adverse impact on staffing and support costs. The division also objects to increasing the credit requirements for the Advanced Diploma from 24 to 26.
484	Roanoke County Superintendent, Lorraine Lange, Superintendent	Requests that the Board postpone the proposed revisions specifically pertaining to graduation requirements until the financial outlook is better able to support costs for adding new courses. Students should be allowed to obtain CTE diplomas only within the confines of the elective requirements that are part of the current standards and advanced diplomas. Adding economics and personal finance is needed but increasing graduation requirements will have an adverse impact on staffing and support costs.
485	Superintendents' Study Group Region 2- Isle of Wight, Accomack, Franklin, Newport News, Poquoson, Southampton, Virginia Beach, York, Chesapeake, Hampton, Norfolk, Northampton, Portsmouth, Suffolk, and Williamsburg-James City.	The superintendents of the Region 2 school divisions request that the board delay proposed changes to the Standards of Accreditation and the Standards of Quality that are not being fully funded by the General Assembly. The superintendents support additional positions and increased rigor but request that the proposal be delayed until the economy improves. They request postponement of implementation of any unfunded mandates until the General Assembly provides sufficient funding to enable divisions to meet increased accountability standards.
486	Newport News Public Schools – Ashby Kilgore, Superintendent	The proposed amendments will require additional staff time and resources when, due to the revenue shortfall it is unlikely the state will provide its share of funding for new programs. Adding new requirements with budget reductions may cause effective programs to be lost. The question of costs needs to be answered before proceeding any further with the proposal. The division urges the Board to take great care in establishing another requirement for accreditation such as the graduation and completion index. Students who stay in school should receive more points than a student that earns a GED.
487	Danville Regional Foundation Board of Directors	Supports economics and financial literacy for all students.





***REGULATIONS ESTABLISHING  
STANDARDS FOR ACCREDITING  
PUBLIC SCHOOLS IN VIRGINIA***

***8 VAC 20-131.***

***(REVISIONS FOR CONSIDERATION BY THE BOARD OF EDUCATION –  
FEBRUARY 19, 2009)***

***Adopted by the Board of Education  
May 24, 2006  
Effective September 7, 2006***

## TABLE OF CONTENTS

8 VAC 20-131-5. Definitions.....	2
Part I.....	5
Purpose.....	5
8 VAC 20-131-10. Purpose.....	5
Part II.....	6
Philosophy, Goals, and Objectives.....	6
8 VAC 20-131-20. Philosophy, goals, and objectives.....	6
Part III.....	7
Student Achievement.....	7
8 VAC 20-131-30. Student achievement expectations.....	7
8 VAC 20-131-40. Literacy Passport Tests. (Repealed.).....	9
8 VAC 20-131-50. Requirements for graduation.....	10
8 VAC 20-131-60. Transfer students.....	19
Part IV.....	23
School Instructional Program.....	23
8 VAC 20-131-70. Program of instruction and learning objectives.....	23
8 VAC 20-131-80. Instructional program in elementary schools.....	24
8 VAC 20-131-90. Instructional program in middle schools.....	25
8 VAC 20-131-100. Instructional program in secondary schools.....	26
8 VAC 20-131-110. Standard and verified units of credit.....	28
8 VAC 20-131-120. Summer school.....	30
8 VAC 20-131-130. Elective courses.....	31
8 VAC 20-131-140. College and career preparation programs and opportunities for postsecondary credit.....	32
8 VAC 20-131-150. Standard school year and school day.....	34
8 VAC 20-131-160. (Repealed.).....	35
8 VAC 20-131-170. Family Life Education.....	36
8 VAC 20-131-180. Off-site instruction.....	37
8 VAC 20-131-190. Library media, materials and equipment.....	38
8 VAC 20-131-200. Extracurricular and other school activities, recess.....	39
Part V.....	40
School and Instructional Leadership.....	40
8 VAC 20-131-210. Role of the principal.....	40
8 VAC 20-131-220. Role of professional teaching staff.....	42
8 VAC 20-131-230. Role of support staff.....	43
8 VAC 20-131-240. Administrative and support staff; staffing requirements.....	44
8 VAC 20-131-250. (Repealed.).....	46
Part VI.....	47
School Facilities and Safety.....	47
8 VAC 20-131-260. School facilities and safety.....	47
Part VII.....	49
School and Community Communications.....	49
8 VAC 20-131-270. School and community communications.....	49
Part VIII.....	51
School Accreditation.....	51
8 VAC 20-131-280. Expectations for school accountability.....	51
8 VAC 20-131-290. Procedures for certifying accreditation eligibility.....	54
8 VAC 20-131-300. Application of the standards.....	56
8 VAC 20-131-310. Action requirements for schools that are Accredited with Warning or [Accreditation <del>Withheld/Improving School Near Accreditation</del> Provisionally Accredited-Graduation Rate.].....	60
8 VAC 20-131-315. Action requirements for schools that are denied accreditation.....	62
8 VAC 20-131-320. Provisional accreditation benchmarks. (Repealed.).....	64
8 VAC 20-131-325. Recognitions and rewards for school and division accountability performance.....	65
8 VAC 20-131-330. Waivers. (Repealed.).....	66
8 VAC 20-131-340. Special provisions and sanctions.....	67
8 VAC 20-131-350. Waivers.....	68
8 VAC 20-131-360. Effective date.....	69

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-5. Definitions.

The following words and terms apply only to these regulations and do not supersede those definitions used for federal reporting purposes or for the calculation of costs related to the Standards of Quality (§§ 22- 253.13:1 et seq. of the Code of Virginia). When used in these regulations, these words shall have the following meanings, unless the context clearly indicates otherwise:

“Accreditation” means a process used by the Virginia Department of Education (hereinafter “department”) to evaluate the educational performance of public schools in accordance with these regulations.

“Additional test” means a test, including substitute tests approved by the Board of Education that students may use in lieu of a Standards of Learning test to obtain verified credit.

“Class period” means a segment of time in the school day that is approximately 1/6 of the instructional day.

“Combined school” means a public school that contains any combination of or all of the grade levels from kindergarten through grade 12. This definition does not include those schools defined as elementary, middle, or secondary schools.

“Elementary school” means a public school with any grades kindergarten through five.

“Eligible students” means the total number of students of school age enrolled in the school at a grade or course for which a Standards of Learning test is required unless excluded under the provisions of 8 VAC 20-131-30 F and 8 VAC 20-131-280 D relative to limited English proficient (LEP) students.

“Enrollment” means the act of complying with state and local requirements relative to the registration or admission of a child for attendance in a school within a local school division. This term also means registration for courses within the student’s home school or within related schools or programs.

“First time” means the student has not been enrolled in the school at any time during the current school year (for purposes of 8 VAC 20-131-60 with reference to students who transfer in during the school year).

“Four core areas” or “four core academic areas” means English, mathematics, science, and history and social science for purposes of testing for the Standards of Learning.

“Graduate” means a student who has earned a Board of Education recognized diploma, which includes the Advanced Studies, Advanced Technical, Standard, Standard Technical, Modified Standard, Special, and General Achievement diplomas.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

“Homebound instruction” means academic instruction provided 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 a licensed clinical psychologist.

“Locally awarded verified credit” means a verified unit of credit awarded by a local school board in accordance with 8 VAC 20-131-110.

“Middle school” means a public school with any grades 6 through 8.

“Planning period” means one class period per day or the equivalent unencumbered of any teaching or supervisory duties.

“Recess” means a segment of free time exclusive of time provided for meals during the standard school day in which students are given a break from instruction.

“Reconstitution” means a process that may be used to initiate a range of accountability actions to improve pupil performance, curriculum, and instruction to address deficiencies that caused a school to be rated Accreditation Denied that may include, but not be limited to, restructuring a school’s governance, instructional program, staff or student population.

“School” means a publicly funded institution where students are enrolled for all or a majority of the instructional day and:

1. Those students are reported in fall membership at the institution; and
2. At a minimum, the institution meets the pre-accreditation eligibility requirements of these regulations as adopted by the Board of Education.

“Secondary school” means a public school with any grades 9 through 12.

“Standard school day” means a calendar day that averages at least five and one-half instructional hours for students in grades 1 through 12, excluding breaks for meals and recess, and a minimum of three instructional hours for students in kindergarten.

“Standard school year” means a school year of at least 180 teaching days or a total of at least 990 teaching hours per year.

“Standard unit of credit” or “standard credit” means credit awarded for a course in which the student successfully completes 140 clock hours of instruction and the requirements of the course. Local school boards may develop alternatives to the requirement for 140 clock hours of instruction as provided for in these regulations at 8 VAC 20-131-110.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

“Standards of Learning” (SOL) tests means those criterion referenced assessments approved by the Board of Education for use in the Virginia assessment program that measure attainment of knowledge and skills required by the Standards of Learning.

“Student” means a person of school age as defined by § 22.1-1 of the Code of Virginia, a child with disabilities as defined in § 22.1-213 of the Code of Virginia, and a person with limited English proficiency in accordance with § 22.1-5 of the Code of Virginia.

“Student periods” means the number of students a teacher instructs per class period multiplied by the number of class periods taught.

“Verified unit of credit” or “verified credit” means credit awarded for a course in which a student earns a standard unit of credit and achieves a passing score on a corresponding end-of-course SOL test or an additional test approved by the Board of Education as part of the Virginia assessment program.

“Virginia assessment program” means a system used to evaluate student achievement that includes Standards of Learning tests and additional tests which may be approved from time to time by the Board of Education.

Part I  
Purpose

8 VAC 20-131-10. Purpose.

The foremost purpose of public education in Virginia is to provide children with a quality education giving them opportunities to meet their fullest potential in life. The standards for the accreditation of public schools in Virginia are designed to ensure that an effective educational program is established and maintained in Virginia's public schools. The mission of the public education system is to educate students in the essential academic knowledge and skills in order that they may be equipped for citizenship, work, and a private life that is informed and free. The accreditation standards:

1. Provide an essential foundation of educational programs of high quality in all schools for all students.
2. Encourage continuous appraisal and improvement of the school program for the purpose of raising student achievement.
3. Foster public confidence.
4. Assure recognition of Virginia's public schools by other institutions of learning.
5. Establish a means of determining the effectiveness of schools.

Section 22.1-253.13:3 B of the Code of Virginia requires the Virginia Board of Education (hereinafter "board") promulgate regulations establishing standards for accreditation.

The statutory authority for these regulations is delineated in § 22.1-19 of the Code of Virginia, which includes the requirement that the board shall provide for the accreditation of public elementary, middle and secondary schools in accordance with regulations prescribed by it.

These regulations govern public schools operated by local school boards providing instruction to students as defined in 8 VAC 20-131-5. Other schools licensed under other state statutes are exempt from these requirements.

Part II  
Philosophy, Goals, and Objectives

8 VAC 20-131-20. Philosophy, goals, and objectives.

A. Each school shall have a current philosophy, goals, and objectives that shall 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 the creation and review of the biennial school plan.
2. The school's philosophy, goals and objectives shall be consistent with the Standards of Quality.
3. The goals and objectives shall (i) be 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 of the Standards of Learning (SOL), to improve student and staff attendance, to reduce student drop-out rates, to increase graduation rates, and to increase the quality of instruction through professional staff development and licensure.
4. The school staff and community representatives shall review annually the extent to which the school has met its prior goals and objectives, analyze the school's student performance data including data by grade level or academic department as necessary, and report these outcomes to the division superintendent and the community in accordance with local school board policy. This report shall be in addition to the school report card required by 8 VAC 20-131-270 B.

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

Part III  
Student Achievement

8 VAC 20-131-30. Student achievement expectations.

A. Each student should learn the relevant grade level/course subject matter before promotion to the next grade. The division superintendent shall certify to the Department of Education that the division's promotion/retention policy does not exclude students from membership in a grade, or participation in a course, in which SOL tests are to be administered. Each school shall have a process, as appropriate, to identify and recommend strategies to address the learning, behavior, communication, or development of individual children who are having difficulty in the educational setting.

B. In kindergarten through eighth grade, where the administration of Virginia assessment program tests are required by the Board of Education, each student shall be expected to take the tests; students who are accelerated ~~should shall~~ take the ~~test tests~~ of the grade-level enrolled or the tests for the grade level of the content received in instruction. ~~No student shall be required to take more than one test in any single content area in any tested grade each year.~~ Schools shall use the Virginia assessment program test results in kindergarten through eighth grade as part of a set of multiple criteria for determining the promotion or retention of students. Students promoted to high school from eighth grade should have attained basic mastery of the Standards of Learning in English, history and social science, mathematics, and science and should be prepared for high school work. Students shall not be required to retake the Virginia assessment program tests unless they are retained in grade and have not previously passed the related tests.

C. In kindergarten through grade 12, students may participate in a remediation recovery program as established by the board in English (Reading) or mathematics or both.

D. The board recommends that students in kindergarten through grade 8 not be required to attend summer school or weekend remediation classes solely based on failing a SOL test in science or history/social science.

E. Each student in middle and secondary schools shall take all applicable end-of-course SOL tests following course instruction. Students who achieve a passing score on an end-of-course SOL test shall be awarded a verified unit of credit in that course in accordance with the provisions of 8 VAC 20-131-110. Students may earn verified units of credit in any courses for which end-of-course SOL tests are available. Middle and secondary schools may consider the student's end-of-course SOL test score in determining the student's final course grade. However, no student who has failed an end-of-course SOL test but passed the related course shall be prevented from taking any other course in a content area and from taking the applicable end-of-course SOL test. The board may approve additional tests to verify student achievement in accordance with guidelines adopted for verified units of credit described in 8 VAC 20-131-110.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

F. Participation in the Virginia assessment program by students with disabilities shall be prescribed by provisions of their Individualized Education Program (IEP) or 504 Plan. All students with disabilities shall be assessed with appropriate accommodations and alternate assessments where necessary.

G. All students identified as limited English proficient (LEP) shall participate in the Virginia assessment program. A school based committee shall convene and make determinations regarding the participation level of LEP students in the Virginia assessment program. In kindergarten through eighth grade, limited English proficient students may be granted a one-time exemption from SOL testing in the areas of writing, science, and history and social science.

H. Students identified as foreign exchange students taking courses for credit shall be required to take the relevant Virginia assessment program tests. Foreign exchange students who are auditing courses and who will not receive a standard unit of credit for such courses shall not be required to take the Standards of Learning tests for those courses.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-40. Literacy Passport Tests. (Repealed.)

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-50. Requirements for graduation.

A. The requirements for a student to earn a diploma and graduate from a Virginia high school shall be those in effect when that student enters the ninth grade for the first time. Students shall be awarded a diploma upon graduation from a Virginia high school.

When students below the ninth grade successfully complete courses offered for credit in grades 9 through 12, credit shall be counted toward meeting the standard units required for graduation provided the courses are equivalent in content and academic rigor as those courses offered at the secondary level. To earn a verified unit of credit for these courses, students must meet the requirements of 8 VAC 20-131-110.

The following requirements shall be the only requirements for a diploma, unless a local school board has prescribed additional requirements that have been approved by the Board of Education. All additional requirements prescribed by local school boards that have been approved by the Board of Education remain in effect until such time as the local school board submits a request to the Board to amend or discontinue such requirements.

B. Requirements for a Standard Diploma.

1. Beginning with the ninth-grade classes class of ~~2003-04~~ ~~[2009-2010~~ 2010-2011] and beyond, students shall earn the required standard and verified units of credit described in subdivision 2 of this subsection.

2. Credits required for graduation with a Standard Diploma.

Discipline Area	Standard Units of Credit Required	Verified Credits Required
English	4	2
Mathematics <sup>1</sup>	3	1
Laboratory Science <sup>2,6</sup>	3	1
History and Social Sciences <sup>3,6</sup>	3	1
Health and Physical Education	2	
<del>Foreign Language</del> , Fine Arts or Career and Technical Education <sup>7</sup>	<del>1</del> 2	
<del>Foreign Language, Economics</del> <del>or</del> and ] Personal Finance	1	
Electives <sup>4</sup>	<del>6</del> 5 4	
Student Selected Test <sup>5</sup>		1
Total	22	6

<sup>1</sup> Courses completed to satisfy this requirement shall be at or above the level of algebra and shall include at least two different course selections from among: Algebra I, Geometry, Algebra, Functions, and Data Analysis, Algebra II, or other mathematics courses above the level of algebra and geometry-Algebra II. The board may shall approve additional courses to satisfy this requirement.

<sup>2</sup> Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry, or physics [ or completion of the sequence of science courses required for the International Baccalaureate Diploma. ] The board may shall approve additional courses to satisfy this requirement.

<sup>3</sup> Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either world history or geography or both. The board may shall approve additional courses to satisfy this requirement.

<sup>4</sup> Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.

<sup>5</sup> A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics, or other areas as prescribed by the board in 8 VAC 20-131-110.

<sup>6</sup> 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.

<sup>7</sup> Pursuant to Section 22.1-253.13:4, Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education.

Students completing the requirements for the Standard Diploma may be eligible to receive an honor deemed appropriate by the local school board as described in subsection ~~L~~ K of this section.

C. Requirements for a Standard Technical Diploma.

[1. Beginning with the ninth-grade class of 2010-2011 and beyond, students shall earn the required standard and verified units of credit described in subdivision 2 of this subsection.]

[2.] Credits required for graduation with a Standard Technical Diploma.

<u>Discipline Area</u>	<u>Standard Units of Credits Required</u>	<u>Verified Credits Required</u>
<u>English</u>	<u>4</u>	<u>2</u>
<u>Mathematics<sup>1</sup></u>	<u>3</u>	<u>1</u>
<u>Laboratory Science<sup>2,5</sup></u>	<u>3</u>	<u>1</u>
<u>History &amp; Social Sciences<sup>3,5</sup></u>	<u>3</u>	<u>1</u>
<u>Health and Physical Education</u>	<u>2</u>	
<u>Fine Arts, [ or ] Foreign Language, <del>Economics or Personal Finance</del></u>	<u>1</u>	
<u>[Economics and Personal Finance]</u>	<u>[1]</u>	
<u>Career and Technical Education<sup>4</sup></u>	<u>4</u>	
<u>Electives</u>	<u>[2-1]</u>	
<u>Student Selected<sup>6</sup></u>		<u>1</u>
<u>Total</u>	<u>22</u>	<u>6</u>

<sup>1</sup> Courses completed to satisfy this requirement shall include at least three [different] course selections from among: Algebra I, Geometry, Algebra Functions and Data Analysis, or Algebra II or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement.

<sup>2</sup> Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics, or completion of the sequence of science courses required for the International Baccalaureate Diploma. The board shall approve courses to satisfy this requirement.

<sup>3</sup> Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either world history or geography or both. The board shall approve courses to satisfy this requirement.

<sup>4</sup> Courses completed to satisfy this requirement must include a career concentration as approved by the board. ~~For concentrations that require less than four courses students must complete additional courses that are related to the student's career concentration. If a career concentration includes a specific assessment approved by the board and the student is eligible to take the assessment, then the student must take this assessment.]~~

<sup>5</sup> 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 as an additional test to verify student achievement. ~~[ If a career concentration includes a specific assessment approved by the board and the student is eligible to take the assessment, then the student must take this assessment.]~~

<sup>6</sup> A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics or other areas as prescribed by the board in 8 VAC 20-131-110.

Students completing the requirements for the Standard Technical Diploma may be eligible to receive an honor deemed appropriate by the local school board as described in subsection K of this section.

**C. D. Requirements for an Advanced Studies Diploma.** [~~Contingent upon passage of the VDOE legislative proposal~~] Any student who meets the requirements for both the Advanced Studies and the Advanced Technical diploma may choose between these two diplomas.)

**[1. Beginning with the ninth-grade class of 2010-2011 and beyond, students shall earn the required standard and verified units of credit described in subdivision 2 of this subsection.]**

**[2.] Credits required for graduation with an Advanced Studies Diploma.**

Discipline Area	Standard Units of Credit Required	Verified Credits Required
English	4	2
Mathematics <sup>1</sup>	4	2
Laboratory Science <sup>2</sup>	4	2
History and Social Sciences <sup>3</sup>	4	2
Foreign Language <sup>4</sup>	3	
Health and Physical Education	2	
Fine Arts or Career and Technical Education	1	
<b>Economics [or and] Personal Finance</b>	<b>1</b>	
<b>Electives</b>	<b>2-3</b>	
Student Selected Test <sup>5</sup>		1
<b>Total</b>	<b>24 26</b>	<b>9</b>

<sup>1</sup> Courses completed to satisfy this requirement shall be at or above the level of algebra and shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The board may shall approve additional courses to satisfy this requirement.

<sup>2</sup> Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. The board may shall approve additional courses to satisfy this requirement.

<sup>3</sup> Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and two courses in either world history or geography or both. The board may shall approve additional courses to satisfy this requirement.

<sup>4</sup> Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.

<sup>5</sup> A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education, economics, or other areas as prescribed by the board in 8 VAC 20-131-110.

Students completing the requirements for the Advanced Studies Diploma may be eligible to receive an honor deemed appropriate by the local school board as described in subsection **[K]** of this section.

**E. Requirements for an Advanced Technical Diploma.** [~~Contingent upon passage of the VDOE legislative proposal~~] Any student who meets the requirements for both the Advanced Studies and the Advanced Technical diploma may choose between these two diplomas.)

[1. Beginning with the ninth-grade class of 2010-2011 and beyond, students shall earn the required standard and verified units of credit described in subdivision 2 of this subsection.]

[2.] Credits required for graduation with an Advanced Technical Diploma.

Discipline Area	Standard Units of Credit Required	Verified Credits Required
English	4	2
Mathematics <sup>1</sup>	4	2
Laboratory Science <sup>2</sup>	4	2
History and Social Sciences <sup>3</sup>	4	2
Foreign Language <sup>4</sup>	3	
Health and Physical Education	2	
[Economics and Personal Finance]	[1]	
Fine Arts [ or Economics Career and Technical Education]	1	
Career and Technical Education <sup>5</sup>	[4-3]	
Student Selected Test <sup>5,6</sup>		1
<b>Total</b>	<b>26</b>	<b>9</b>

<sup>1</sup> Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement.

<sup>2</sup> Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. The board shall approve courses to satisfy this requirement.

<sup>3</sup> Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and two courses in either world history or geography or both. The board shall approve courses to satisfy this requirement.

<sup>4</sup> Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.

~~<sup>5</sup> Courses completed to satisfy this requirement must include a career concentration as approved by the board. For concentrations that require less than four courses, students must complete additional courses that are related to the student's career concentration. If a career concentration includes a specific assessment approved by the board, then the student must take this assessment to fulfill this requirement.~~

<sup>5</sup> Courses completed to satisfy this requirement must include a career concentration as approved by the board. If a career concentration includes a specific assessment approved by the board and the student is eligible to take the assessment, then the student must take this assessment.

<sup>5, 6</sup> A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education, economics, or other areas as prescribed by the board in 8 VAC 20-131-110.

Students completing the requirements for the Advanced Technical Diploma may be eligible to receive an honor deemed appropriate by the local school board as described in subsection K of this section.

~~D- F.~~ Requirements for the Modified Standard Diploma.

1. Every student shall be expected to pursue a Standard Diploma ~~or~~, Standard Technical Diploma, Advanced Studies Diploma, or Advanced Technical Diploma, or. The Modified Standard Diploma program is intended for certain students at the secondary level who have a disability and are unlikely to meet the credit requirements for a Standard Diploma. Eligibility and participation in the Modified Standard Diploma program shall be determined by the student's Individualized Education

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

Program (IEP) team including the student, where appropriate, at any point after the student's eighth grade year.

2. The school must secure the informed written consent of the parent/guardian and the student to choose this diploma program after review of the student's academic history and the full disclosure of the student's options.

3. The student who has chosen to pursue a Modified Standard Diploma shall also be allowed to pursue the Standard Diploma, ~~or Standard Technical Diploma~~, Advanced Studies Diploma ~~or Advanced Technical Diploma~~ at any time throughout that student's high school career, and the student must not be excluded from courses and tests required to earn a Standard or Advanced Studies Diploma.

4. Students pursuing the Modified Standard Diploma shall pass literacy and numeracy competency assessments prescribed by the board.

5. Credits required for graduation with a Modified Standard Diploma.

Discipline Area	Standard Units of Credit Required
English	4
Mathematics <sup>1</sup>	3
Science <sup>2</sup>	2
History and Social Sciences <sup>3</sup>	2
Health and Physical Education	2
Fine Arts or Career and Technical Education	1
Electives <sup>4</sup>	6
Total	20

<sup>1</sup> Courses completed to satisfy this requirement shall include content from among applications of algebra, geometry, personal finance, and ~~probability and~~ statistics in courses that have been approved by the board.

<sup>2</sup> Courses completed shall include content from at least two of the following: applications of earth science, biology, chemistry, or physics in courses approved by the board.

<sup>3</sup> Courses completed to satisfy this requirement shall include one unit of credit in U.S. and Virginia History and one unit of credit in U.S. and Virginia Government in courses approved by the board.

<sup>4</sup> Courses to satisfy this requirement shall include at least two sequential electives in the same manner required for the Standard Diploma.

6. The student must meet any additional criteria established by the Board of Education.

**E.G.** In accordance with the requirements of the Standards of Quality, students with disabilities who complete the requirements of their Individualized Education Program (IEP) and do not meet the requirements for other diplomas shall be awarded Special Diplomas.

**F.H.** In accordance with the requirements of the Standards of Quality, students who complete prescribed programs of studies defined by the local school board but do not qualify for Standard, ~~Standard Technical~~, Advanced Studies, ~~Advanced Technical~~, Modified Standard, Special, or General Achievement diplomas shall be awarded

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

Certificates of Program Completion. The requirements for Certificates of Program Completion are developed by local school boards in accordance with the Standards of Quality. Students receiving a general achievement diploma shall comply with 8 VAC 20-680, *Regulations Governing the General Achievement Diploma*.

**G. I.** In accordance with the provisions of the compulsory attendance law and 8 VAC 20-360, *Regulations Governing General Education Development Certificates*, students who do not qualify for diplomas may earn a high school equivalency credential.

**H. J.** At a student's request, the local school board shall communicate or otherwise make known to institutions of higher education, potential employers, or other applicable third parties, in a manner that the local school board deems appropriate, that a student has attained the state's academic expectations by earning a Virginia diploma and that the value of such a diploma is not affected in any way by the accreditation status of the student's school.

**I. K.** Awards for exemplary student performance. Students who demonstrate academic excellence and/or outstanding achievement may be eligible for one or more of the following awards:

1. Students who complete the requirements for an Advanced Studies Diploma or Advanced Technical Diploma with an average grade of "B" or better, and successfully complete college-level coursework that will earn the student at least nine transferable college credits in Advanced Placement (AP), International Baccalaureate (IB), Cambridge, or dual enrollment courses shall receive the Governor's Seal on the diploma.
2. Students who complete the requirements for a Standard Diploma ~~or~~ Standard Technical Diploma, Advanced Studies Diploma or Advanced Technical Diploma with an average grade of "A" shall receive a Board of Education Seal on the diploma.
3. The Board of Education's Career and Technical Education Seal will be awarded to students who earn a Standard ~~or~~ Diploma, Standard Technical Diploma, Advanced Studies Diploma or Advanced Technical 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 an occupational competency assessment in a career and technical education concentration or specialization that confers certification or 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 of Education shall approve all professional licenses and examinations used to satisfy these requirements.
4. The Board of Education's Seal of Advanced Mathematics and Technology will be awarded to students who earn either a Standard ~~or~~ Diploma, Standard Technical

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

**Diploma [ , ]** Advanced Studies Diploma **or Advanced Technical Diploma** and (i) satisfy all of the mathematics requirements for the Advanced Studies Diploma **or Advanced Technical 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.

5. The Board of Education's Seal for Excellence in Civics Education will be awarded to students who earn either a Standard **or Diploma, Standard Technical Diploma, Advanced Studies Diploma [ , ] or Advanced Technical Diploma** and: (i) complete Virginia and United States History and Virginia and United States Government courses with a grade of "B" or higher; and, (ii) have good attendance and no disciplinary infractions as determined by local school board policies and, (iii) complete 50 hours of voluntary participation in community service or extracurricular activities. Activities that would satisfy the requirements of clause (iii) of this subdivision include: (a) volunteering for a charitable or religious organization that provides services to the poor, sick or less fortunate; (b) participating in Boy Scouts, Girl Scouts, or similar youth organizations; (c) participating in JROTC; (d) participating in political campaigns or government internships, or Boys State, Girls State, or Model General Assembly; or (e) participating in school-sponsored extracurricular activities that have a civics focus. Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement.

6. Students may receive other seals or awards for exceptional academic, career and technical, citizenship, or other exemplary performance in accordance with criteria defined by the local school board.

**J. L.** Students completing graduation requirements in a summer school program shall be eligible for a diploma. The last school attended by the student during the regular session shall award the diploma unless otherwise agreed upon by the principals of the two schools.

**K. M.** Students who complete Advanced Placement courses, college-level courses, or courses required for an International Baccalaureate Diploma shall be deemed to have completed the requirements for graduation under these standards provided they have earned the standard units of credit and earned verified units of credit in accordance with the requirements of subsections B and C of this section.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

L.N. Students shall be counseled annually regarding the opportunities for using additional tests for earning verified credits as provided in accordance with the provisions of 8 VAC 20-131-110, and the consequences of failing to fulfill the obligations to complete the requirements for verified units of credit.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-60. Transfer students.

A. The provisions of this section pertain generally to students who transfer into Virginia high schools. Students transferring in grades K-8 from Virginia public schools or nonpublic schools accredited by one of the approved accrediting constituent members of the Virginia Council for Private Education shall be given recognition for all grade-level work completed. The academic record of students transferring from all other schools shall be evaluated to determine appropriate grade placement in accordance with policies adopted by the local school board. The State Testing Identifier (STI) for students who transfer into a Virginia public school from another Virginia public school shall be retained by the receiving school.

B. For the purposes of this section, the term "beginning" means within the first 20 hours of instruction per course. The term "during" means after the first 20 hours of instruction per course.

C. Standard or verified units of credit earned by a student in a Virginia public school shall be transferable without limitation regardless of the accreditation status of the Virginia public school in which the credits were earned. Virginia public schools shall accept standard and verified units of credit from other Virginia public schools [ Virginia's virtual learning program, Virtual Virginia,] and state operated programs. Standard units of credit also shall be accepted for courses satisfactorily completed in accredited colleges and universities when prior written approval of the principal has been granted or the student has been given credit by the previous school attended.

D. A secondary school shall accept credits toward graduation received from Virginia nonpublic schools accredited by one of the approved accrediting constituent members of the Virginia Council for Private Education (VCPE). The Board of Education will maintain contact with the VCPE and may periodically review its accrediting procedures and policies as part of its policies under this section.

Nothing in these standards shall prohibit a public school from accepting standard units of credit toward graduation awarded to students who transfer from all other schools when the courses for which the student receives credit generally match the description of or can be substituted for courses for which the receiving school gives standard credit, and the school from which the child transfers certifies that the courses for which credit is given meet the requirements of 8 VAC 20-131-110 A.

Students transferring into a Virginia public school shall be required to meet the requirements prescribed in 8 VAC 20-131-50 to receive a Standard, Standard Technical, Advanced Studies, Advanced Technical or Modified Standard Diploma, except as provided by subsection G of this section. To receive a Special Diploma or Certificate of Program Completion, a student must meet the requirements prescribed by the Standards of Quality.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

E. The academic record of a student transferring from other Virginia public schools shall be sent directly to the school receiving the student upon request of the receiving school in accordance with the provisions of the 8 VAC 20-150-10, Management of the Student's Scholastic Records in the Public Schools of Virginia. [The State Testing Identifier (STI) for students who transfer into a Virginia public school from another Virginia public school shall be retained by the receiving school.]

F. The academic record of a student transferring into Virginia public schools from other than a Virginia public school shall be evaluated to determine the number of standard units of credit that have been earned, including credit from schools outside the United States, and the number of verified units of credit needed to graduate in accordance with subsection G of this section. Standard units of credit also shall be accepted for courses satisfactorily completed in accredited colleges and universities when the student has been given credit by the previous school attended.

Students transferring above the tenth grade from schools or other education programs that do not require or give credit for health and physical education shall not be required to take these courses to meet graduation requirements.

G. Students entering a Virginia public high school for the first time after the tenth grade shall earn as many credits as possible toward the graduation requirements prescribed in 8 VAC 20-131-50. However, schools may substitute courses required in other states in the same content area if the student is unable to meet the specific content requirements of 8 VAC 20-131-50 without taking a heavier than normal course load in any semester, by taking summer school, or by taking courses after the time when he otherwise would have graduated. In any event, no such student shall earn fewer than the following number of verified units, nor shall such students be required to take SOL tests or additional tests as defined in 8 VAC 20-131-110 for verified units of credit in courses previously completed at another school or program of study, unless necessary to meet the requirements listed in subdivisions 1 and 2 of this subsection:

1. For a Standard Diploma or Standard Technical Diploma:

- a. Students entering a Virginia high school for the first time during the ninth grade or at the beginning of the tenth grade shall earn credit as prescribed in 8 VAC 20-131-50;
- b. Students entering a Virginia high school for the first time during the tenth grade or at the beginning of the eleventh grade shall earn a minimum of four verified units of credit: one each in English, mathematics, history, and science. Students who complete a career and technical education program sequence may substitute a certificate, occupational competency credential or license for either a science or history and social science verified credit pursuant to 8 VAC 20-131-50; and

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

c. Students entering a Virginia high school for the first time during the eleventh grade or at the beginning of the twelfth grade shall earn a minimum of two verified units of credit: one in English and one of the student's own choosing.

2. For an Advanced Studies Diploma or Advanced Technical Diploma:

a. Students entering a Virginia high school for the first time during the ninth grade or at the beginning of the tenth grade shall earn credit as prescribed in 8 VAC 20-131-50;

b. Students entering a Virginia high school for the first time during the tenth grade or at the beginning of the eleventh grade shall earn a minimum of six verified units of credit: two in English and one each in mathematics, history, and science and one of the student's own choosing; and

c. Students entering a Virginia high school for the first time during the eleventh grade or at the beginning of the twelfth grade shall earn a minimum of four verified units of credit: one in English and three of the student's own choosing.

H. Students entering a Virginia high school for the first time after the first semester of their eleventh grade year must meet the requirements of subdivision G 1 c or G 2 c of this section. Students transferring after 20 instructional hours per course of their senior or twelfth grade year shall be given every opportunity to earn a Standard, Advanced Studies, or Modified Standard Diploma. If it is not possible for the student to meet the requirements for a diploma, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified unit of credit requirements may be available to the student. The Department of Education may grant such waivers upon request by the local school board in accordance with guidelines prescribed by the Board of Education.

I. Any local school division receiving approval to increase its course credit requirements for a diploma may not deny either the Standard, Advanced Studies, or Modified Standard Diploma to any transfer student who has otherwise met the requirements contained in these standards if the transfer student can only meet the division's additional requirements by taking a heavier than normal course load in any semester, by taking summer school, or by taking courses after the time when he otherwise would have graduated.

J. The transcript of a student who graduates or transfers from a Virginia secondary school shall conform to the requirements of 8 VAC 20-160-10, *Regulations Governing Secondary School Transcripts*.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

K. The accreditation status of a high school shall not be included on the student transcript provided to colleges, universities, or employers. The board expressly states that any student who has met the graduation requirements established in 8 VAC 20-131-50 and has received a Virginia diploma holds a diploma that should be recognized as equal to any other Virginia diploma of the same type, regardless of the accreditation status of the student's high school. It is the express policy of the board that no student shall be affected by the accreditation status of the student's school. The board shall take appropriate action, from time to time, to ensure that no student is affected by the accreditation status of the student's school.

Part IV  
School Instructional Program

8 VAC 20-131-70. Program of instruction and learning objectives.

A. Each school shall provide a program of instruction that promotes individual student academic achievement in the essential academic disciplines and shall provide additional instructional opportunities that meet the abilities, interests, and educational needs of students. Each school shall establish learning objectives to be achieved by students at successive grade levels that meet or exceed the knowledge and skills contained in the Standards of Learning for English, mathematics, science, and history/social science adopted by the board and shall continually assess the progress of each student in relation to the objectives.

B. Instruction shall be designed to accommodate all students, including those identified with disabilities in accordance with the Individuals with Disabilities Education Act or § 504 of the Rehabilitation Act, as amended, those identified as gifted/talented, and those who have limited English proficiency. Each school shall provide students identified as gifted/talented with instructional programs taught by teachers with special training or experience in working with gifted/talented students. Students with disabilities shall have the opportunity to receive a full continuum of education services, in accordance with 8 VAC 20-80, *Regulations Governing Special Education Programs for Children with Disabilities in Virginia* and other pertinent federal and state regulations.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-80. Instructional program in elementary schools.

A. The elementary school shall provide each student a program of instruction that corresponds to the Standards of Learning for English, mathematics, science, and history/social science. In addition, each school shall provide instruction in art, music, and physical education and health and shall require students to participate in a program of physical fitness during the regular school year in accordance with guidelines established by the Board of Education.

B. In kindergarten through grade 3, reading, writing, spelling, and mathematics shall be the focus of the instructional program. Schools shall maintain ~~in a manner prescribed by the Board of Education,~~ an early skills and knowledge achievement record in reading and mathematics for each student in grades kindergarten through grade 3 to monitor student progress and to promote successful achievement on the third grade SOL tests. This record shall be included with the student's records if the student transfers to a new school.

C. To provide students with sufficient opportunity to learn, a minimum of 75% 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, which may include summer school.

D. Elementary schools are encouraged to provide instruction in foreign languages.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-90. Instructional program in middle schools.

A. The middle school shall provide each student a program of instruction which corresponds to the Standards of Learning for English, mathematics, science, and history/social science. In addition, each school shall provide instruction in art, music, foreign language, physical education and health, and career and technical exploration and shall require students to participate in a program of physical fitness during the regular school year in accordance with guidelines established by the Board of Education.

B. The middle school shall provide a minimum of eight courses to students in the eighth grade. English, mathematics, science, and history/social science shall be required. Four elective courses shall be available: level one of a foreign language, one in health and physical education, one in fine arts, and one in career and technical exploration.

C. Level one of a foreign language and an Algebra I course shall be available to all eighth grade students. For any high school credit-bearing course taken in middle school, parents may request that grades be omitted from the student's transcript and the student not earn high school credit for the course in accordance with policies adopted by the local school board. Notice of this provision must be provided to parents with a deadline and format for making such a request. Nothing in these regulations shall be construed to prevent a middle school from offering any other credit-bearing courses for graduation.

D. 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. Sixth grade students may receive an alternative schedule of instruction provided each student receives at least 560 total clock hours of instruction in the four academic disciplines.

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

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-100. Instructional program in secondary schools.

A. The secondary school shall provide each student a program of instruction in the academic areas of English, mathematics, science, and history/social science that enables each student to meet the graduation requirements described in 8 VAC 20-131-50 and shall offer opportunities for students to pursue a program of studies in foreign languages, fine arts, and career and technical areas including:

1. Career and technical education choices that prepare the student as a career and technical education program completer in one of three or more occupational areas and that prepare the student for technical or preprofessional postsecondary programs;
2. Coursework and experiences that prepare the student for college-level studies including access to at least three Advanced Placement (AP) courses, college-level courses for degree credit, International Baccalaureate (IB) courses, Cambridge courses, or any combination thereof;
3. Preparation for college admissions tests; and
4. Opportunities to study and explore the fine arts and foreign languages.

B. Minimum course offerings for each secondary school shall provide opportunities for students to meet the graduation requirements stated in 8 VAC 20-131-50 and must include:

English	4
Mathematics	4
Science (Laboratory)	4
History and Social Sciences	4
Foreign Language	3
Electives	[4-3]
Career and Technical Education	11
[Economics and Personal Finance]	[1]
Fine Arts	2
Health and Physical Education	2
Total Units	38

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

C. 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.

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

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-110. Standard and verified units of credit.

A. The standard unit of credit for graduation shall be based on a minimum of 140 clock hours of instruction and successful completion of the requirements of the course. When credit is awarded in less than whole units, the increment awarded must be no greater than the fractional part of the 140 hours of instruction provided. If a school division elects to award credit on a basis other than the 140 clock hours of instruction required for a standard unit of credit defined in this subsection, the local school division shall develop a written policy approved by the superintendent and school board which ensures:

1. That the content of the course for which credit is awarded is comparable to 140 clock hours of instruction; and
2. That upon completion, the student will have met the aims and objectives of the course.

B. A verified unit of credit for graduation shall be based on a minimum of 140 clock hours of instruction, successful completion of the requirements of the course, and the achievement by the student of a passing score on the end-of-course SOL test for that course or additional tests as described in this subsection. A student may also earn a verified unit of credit by the following methods:

1. In accordance with the provisions of the Standards of Quality, students may earn a standard and verified unit of credit for any elective course in which the core academic SOL course content has been integrated and the student passes the related end-of-course SOL test. Such course and test combinations must be approved by the Board of Education.
2. Upon the recommendation of the division superintendent and demonstration of mastery of course content and objectives, qualified students may receive a standard unit of credit and be permitted to sit for the relevant SOL test to earn a verified credit without having to meet the 140-clock-hour requirement.
3. Beginning with the ninth grade class of 2003-2004 and beyond students who do not pass Standards of Learning tests in science or history and social science may receive locally awarded verified credits from the local school board in accordance with criteria established in guidelines adopted by the Board of Education.

C. The Board of Education 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;

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

2. The test must be knowledge based;
3. The test must be administered on a multistate 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.

The Board of Education will set the score that must be achieved to earn a verified unit of credit on the additional test options.

D. With such funds as are appropriated by the General Assembly, the Board of Education will provide opportunities for students who meet criteria adopted by the board to have an expedited retake of a SOL test to earn verified credit or to meet literacy and numeracy requirements for the Modified Standard Diploma.

8 VAC 20-131-120. Summer school.

A. The courses offered and the quality of instruction in the summer school program shall be comparable to that offered during the regular school term. At the middle and secondary school levels, credit for courses taken for credit toward graduation other than a repeat course shall be awarded in accordance with the requirements of 8 VAC 20-131-110. Students must also meet the requirements for SOL testing if appropriate.

B. At the middle and secondary school levels, credit for repeat courses ordinarily will be granted on the same basis as that for new courses; however, with prior approval of the principal, students may be allowed to enroll in repeat courses to be completed in no less than 70 clock hours of instruction per unit of credit. Students must also meet the requirements for SOL testing if appropriate.

C. Summer school instruction at any level, which is provided as part of a state-funded remedial program, shall be designed to improve specific identified student deficiencies. Such programs shall be conducted in accordance with regulations adopted by the board.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-130. Elective courses.

Locally developed elective courses offered for credit toward high school graduation shall be approved by the division superintendent and local school board.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-140. College and career preparation programs and opportunities for postsecondary credit.

Each middle and secondary school shall provide for the early identification and enrollment of students in a college preparation program with a range of educational and academic experiences in and outside the classroom, including an emphasis on experiences that will motivate disadvantaged and minority students to attend college.

Beginning in the middle school years, students shall be counseled on opportunities for beginning postsecondary education and opportunities for obtaining industry certifications, occupational competency credentials, or professional licenses in a career and technical education field prior to high school graduation. Such opportunities shall include access to at least three Advanced Placement courses or three college-level courses for degree credit pursuant to 8 VAC 20-131-100. Students taking advantage of such opportunities shall not be denied participation in school activities for which they are otherwise eligible. Wherever possible, students shall be encouraged and afforded opportunities to take college courses simultaneously for high school graduation and college degree credit (dual enrollment), under the following conditions:

1. Written approval of the high school principal prior to participation in dual enrollment must be obtained;
2. The college must accept the student for admission to the course or courses; and
3. The course or courses must be given by the college for degree credits (no remedial courses will be accepted).

Schools that comply with this standard shall not be penalized in receiving state appropriations.

Beginning with the [ 2009-2010 2010-2011 ] academic year, all [ middle ] schools shall [ develop and maintain begin development of ] a personal Academic and Career Plan for each [ seventh- and eighth- grade seventh-grade student with completion by the fall of the student's eighth-grade year. that includes specific components established by the Board of Education. Beginning with the 2010 2011 academic year, students Students who transfer from other than a Virginia public school into the eighth-grade shall have the Plan developed as soon as practicable following enrollment. Beginning with the 2011-2012 academic year, students] who transfer into a Virginia public school after their eighth-grade year shall have an Academic and Career Plan developed upon enrollment. The components of the Plan shall include, but not be limited to, the student's [educational goals and ] program of study for high school graduation and a postsecondary career pathway based on the student's academic and career interests. The Academic and Career Plan shall be developed [in accordance with guidelines established by the Board of Education] and signed by the student, student's parent or guardian, and school official(s)

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

designated by the principal. The Plan shall be included in the student's record and shall be reviewed and updated, if necessary, before the student enters the ninth and eleventh grades. The school shall have met its obligation for parental involvement if it makes a good faith effort to notify the parent or guardian of the responsibility for the development and approval of the Plan. [Any personal academic and career plans prescribed by local school boards for students in grades 7-12 and in effect as of June 30, 2009, are approved to continue without further action by the Board.]

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-150. Standard school year and school day.

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

B. All students in grades 1 through 12 shall maintain a full day schedule of classes (5-1/2 hours), unless a waiver is granted in accordance with policies defined by the local school board.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-160. (Repealed.)

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-170. Family Life Education.

Each school may implement the Standards of Learning for the Family Life Education program promulgated by the Board of Education or a Family Life Education program consistent with the guidelines developed by the board, which shall have the goals of reducing the incidence of pregnancy and sexually-transmitted diseases and substance abuse among teenagers.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-180. Off-site instruction.

A. 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 8 VAC 20-131-110 have been met.

B. Students may enroll in and receive a standard and verified unit of credit for supervised correspondence courses with prior approval of the principal. Standard units of credit shall be awarded for the successful completion of such courses when the course is equivalent to that offered in the regular school program and the work is done under the supervision of a licensed teacher, or a person eligible to hold a Virginia license, approved by the local school board. Verified units of credit may be earned when the student has passed the SOL test associated with the correspondence course completed. The local school board shall develop policies governing this method of instruction in accordance with the provisions of 8 VAC 20-131-110 and the administration of required SOL tests prescribed by 8 VAC 20-131-30.

C. Schools are encouraged to pursue alternative means to deliver instruction to accommodate student needs through emerging technologies and other similar means. Standard units of credit shall be awarded for successful completion of such courses when the course is equivalent to that offered in the regular school program and the work is done under the supervision of a licensed teacher, or a person eligible to hold a Virginia teaching license and approved by the local school board. Verified units of credit may be earned when the student has successfully completed the requirements and passed the SOL test associated with the course. The local school board shall develop policies governing this method of delivery of instruction that shall include the provisions of 8 VAC 20-131-110 and the administration of required SOL tests prescribed by 8 VAC 20-131-30.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-190. Library media, materials and equipment.

A. Each school shall maintain an organized library media center as the resource center of the school and provide a unified program of media services and activities for students and teachers before, during, and after school. The library media center shall contain hard copy, electronic technological resources, materials, and equipment that are sufficient to meet research, inquiry, and reading requirements of the instructional program and general student interest.

B. Each school shall provide a variety of materials and equipment to support the instructional program.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-200. Extracurricular and other school activities, recess.

A. School sponsored extracurricular activities shall be under the 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. Extracurricular activities shall not be permitted to interfere with the student's required instructional activities. Extracurricular activities and eligibility requirements shall be established and approved by the superintendent and the school board.

B. Competitive sports of a varsity nature (scheduled league games) shall be prohibited as a part of the elementary school program.

C. Each elementary school shall provide students with a daily recess during the regular school year as determined appropriate by the school.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

## Part V

## School and Instructional Leadership

## 8 VAC 20-131-210. Role of the principal.

A. The principal is recognized as the instructional leader of the school and is responsible for effective school management that promotes positive student achievement, a safe and secure environment in which to teach and learn, and efficient use of resources. As a matter of policy, the board, through these standards, recognizes the critically important role of principals to the success of public schools and the students who attend those schools and recommends that local school boards provide principals with the maximum authority available under law in all matters affecting the school including, but not limited to, instruction and personnel, in a manner that allows the principal to be held accountable in a fair and consistent manner for matters under his direct control.

B. As the instructional leader, the principal 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. Ensure that the school division's student code of conduct is enforced and seek to maintain a safe and secure school environment;
3. Analyze the school's test scores annually, by grade and by discipline, to:
  - a. Direct and require appropriate prevention, intervention, and/or remediation to those students performing below grade level or not passing the SOL tests;
  - b. 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; and
  - c. Analyze classroom practices and methods for improvement of instruction;
4. Ensure that students' 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;
5. Monitor and evaluate the quality of instruction, provide staff development, provide support that is designed to improve instruction, and seek to ensure the successful attainment of the knowledge and skills required for students by the SOL tests;

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

6. Maintain records of students who drop out of school, including their reasons for dropping out and actions taken to prevent these students from dropping out; and
7. Notify the parents of rising eleventh-grade and twelfth-grade students of:
  - a. the number of standard and verified units of credit required for graduation; and
  - b. the remaining number of such units of credit the individual student requires for graduation.

8. Notify the [parents parent or guardian] of students removed from class for disciplinary reasons for two or more consecutive days in whole or in part.

C. As the school manager, the principal shall:

1. Work with staff to create an atmosphere of mutual respect and courtesy and to facilitate constructive communication by establishing and maintaining a current handbook of personnel policies and procedures;
2. Work with the community to involve parents and citizens in the educational program and facilitate communication with parents by maintaining and disseminating a current student handbook of policies and procedures that includes the school division's standards of student conduct and procedures for enforcement, along with other matters of interest to parents and students;
3. Maintain a current record of licensure, endorsement, and in-service training completed by staff; and
4. Maintain records of receipts and disbursements of all funds handled. These records shall be audited annually by a professional accountant approved by the local school board.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-220. Role of professional teaching staff.

The professional teaching staff shall be responsible for providing instruction that is educationally sound in an atmosphere of mutual respect and courtesy, which is conducive to learning, and in which all students are expected to achieve the objectives of the Standards of Learning for the appropriate grade level or course. The staff shall:

1. Serve as role models for effective oral and written communication with special attention to the correct use of language and spelling;
2. Strive to strengthen the basic skills of students in all subjects;
3. Establish teaching objectives to achieve the following:
  - a. Identify what students are expected to learn; and
  - b. Inform students of the achievement expected and keep them engaged in learning tasks;
4. Provide for individual differences of students through the use of differentiated instruction, varied materials, and activities suitable to their interests and abilities; and
5. Assess the progress of students and report promptly and constructively to them and their parents.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-230. Role of support staff.

The school's support staff shall work with the principal and professional teaching staff to promote student achievement and successful attainment of the school's goals.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-240. Administrative and support staff; staffing requirements.

A. Each school shall have at a minimum the staff as specified in the Standards of Quality with proper licenses and endorsements for the positions they hold.

B. The principal of each middle and secondary school shall be employed on a 12-month basis.

C. Each secondary school with 350 or more students and each middle school with 400 or more students shall employ at least one member of the guidance staff for 11 months. Guidance counseling shall be provided for students to ensure that a program of studies contributing to the student's academic achievement and meeting the graduation requirements specified in 8 VAC 20-131-50 is being followed.

D. The counseling program for elementary, middle, and secondary schools shall provide a minimum of 60% of the time for each member of the guidance staff devoted to counseling of students.

E. The middle school classroom teacher's standard load shall be based on teaching no more than 5/6 of the instructional day with no more than 150 student periods per day or 30 class periods per week. Beginning with the academic year 2008-2009 a middle school classroom teacher's standard load shall be based on teaching no more than 5/6 of the instructional day with no more than 150 student periods per day or 25 class periods per week.

F. The secondary classroom teacher's standard load shall be based on teaching no more than 5/6 of the instructional day with no more than 150 student periods per day or 25 class periods per week. Teachers of block programs that encompass more than one class period with no more than 120 student periods per day may teach 30 class periods per week. Teachers who teach very small classes may teach 30 class periods per week, provided the teaching load does not exceed 75 student periods per day. If a classroom teacher teaches 30 class periods per week with more than 75 student periods per day, an appropriate contractual arrangement and compensation shall be provided.

G. Middle or secondary school teachers shall teach no more than 750 student periods per week; however, physical education and music teachers may teach 1,000 student periods per week.

H. Notwithstanding the provisions of subsections E, F, and G each full-time middle and secondary classroom teacher shall be provided one planning period per day or the equivalent, unencumbered of any teaching or supervisory duties.

I. Staff-student ratios in special and career and technical education classrooms shall comply with regulations of the Board of Education.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

J. Student services personnel as defined in the Standards of Quality shall be available as necessary to promote academic achievement and to provide support services to the school.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-250. (Repealed.)

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

Part VI

School Facilities and Safety

8 VAC 20-131-260. School facilities and safety.

A. Each school shall be maintained in a manner ensuring compliance with the Virginia Statewide Building Code (13 VAC 5-63) In addition, the school administration shall:

1. Maintain a physical plant that is accessible, barrier free, safe, and clean;
2. Provide for the proper outdoor display of flags of the United States and of the Commonwealth of Virginia;
3. Provide suitable space for classrooms, administrative staff, pupil personnel services, library and media services, and for the needs and safety of physical education;
4. Provide adequate, safe, and properly-equipped laboratories to meet the needs of instruction in the sciences, technology, fine arts, and career and technical programs; and
5. Provide facilities for the adequate and safe administration and storage of student medications.

B. Each school shall maintain records of regular safety, health, and fire inspections that have been conducted and certified by local health and fire departments. The frequency of such inspections shall be determined by the local school board in consultation with the local health and fire departments. In addition, the school administration shall:

1. Equip all exit doors with panic hardware as required by the Virginia Statewide Building Code (13 VAC 5-63); and
2. Conduct fire drills at least once a week during the first month of school and at least once each month for the remainder of the school term. Evacuation routes for students shall be posted in each room. Additionally, at least one simulated lock-down and crisis emergency evacuation activity should be conducted early in the school year.

C. Each school shall have contingency plans for emergencies that include staff certified in cardiopulmonary resuscitation (CPR), the Heimlich maneuver, and emergency first aid. In addition, the school administration shall ensure that the school has:

1. Written procedures to follow in emergencies such as fire, injury, illness, allergic reactions, and violent or threatening behavior. The plan shall be outlined in the student handbook and discussed with staff and students during the first week of each school year;

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

2. Space for the proper care of students who become ill;
3. A written procedure, in accordance with guidelines established by the local school board, for responding to violent, disruptive or illegal activities by students on school property or during a school sponsored activity ; and
4. Written procedures to follow for the safe evacuation of persons with special physical, medical, or language needs who may need assistance to exit a facility.

Part VII  
School and Community Communications

8 VAC 20-131-270. School and community communications.

A. Each school shall promote communication and foster mutual understanding with parents and the community. Each school shall:

1. Involve parents, citizens, community agencies, and representatives from business and industry in developing, disseminating, and explaining the biennial school plan; on advisory committees; in curriculum studies; and in evaluating the educational program.

2. Provide annually to the parents and the community the School Performance Report Card in a manner prescribed by the board. The information contained therein will be for the most recent three-year period. Such information shall include but not be limited to:

a. Virginia assessment program results including the percentage of students tested, as well as the percentage of students not tested. Virginia assessment program results by percentage of participation and proficiency and disaggregated by student subgroups.

~~[b. Performance of student subgroups on the Virginia assessment program as appropriate.]~~

~~[be.]~~ The accreditation rating awarded to earned by the school.

~~[ce.]~~ Attendance rates for students.

~~[de.]~~ Information related to school safety to include, but not limited to, incidents of crime and physical violence ~~[(including fighting and other serious offenses), possession of firearms, and possession of other weapons].~~

~~[ef.]~~ Information related to qualifications and experience educational attainment of the teaching staff ~~[including the percentage of the school's teachers endorsed in the area of their primary teaching assignment].~~

~~[fg.]~~ In addition, secondary schools' School Performance Report Cards shall include the following:

(1) Advanced Placement (AP) information to include percentage of students who take AP courses and percentage of those students who take AP tests;

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

- (2) International Baccalaureate (IB) and Cambridge course information to include percentage of students who are enrolled in IB or Cambridge programs and percentage of students who receive IB or Cambridge Diplomas;
  - (3) College-level course information to include percentage of students who take college-level courses including dual enrollment courses;
  - (4) ~~[Number and Pp]~~percentage of (i) graduates by diploma type as prescribed by the Board of Education, (ii) certificates awarded to the senior class including GED credentials, and (iii) students who do not complete high school;
  - (5) ~~[Information on the The]~~ number of students obtaining industry certifications, and passing state licensure examinations and occupational competency assessments while still in high school; and
  - (6) ~~[Number and Pp]~~percentage of drop-outs.
3. Cooperate with business and industry in formulating career and technical educational programs and conducting joint enterprises involving personnel, facilities, training programs, and other resources.
  4. Encourage and support the establishment and/or continuation of a parent-teacher association or other organization and work cooperatively with it.
- B. At the beginning of each school year, each school shall provide to its students' parents or guardians information on the availability of and source for receiving:
1. The learning objectives developed in accordance with the provisions of 8 VAC 20-131-70 to be achieved at their child's grade level or, in high school, a copy of the syllabus for each of their child's courses, and a copy of the school division promotion, retention, and remediation policies;
  2. The Standards of Learning applicable to the child's grade or course requirements and the approximate date and potential impact of the child's next SOL testing; and
  3. An annual notice to students in all grade levels of all requirements for Standard, **Standard Technical**, Advanced Studies, **Advanced Technical** and Modified Standard Diplomas, and the board's policies on promotion and retention as outlined in 8 VAC 20-131-30.

The division superintendent shall report to the department compliance with this subsection through the pre-accreditation eligibility procedures in 8 VAC 20-131-290.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

## Part VIII

## School Accreditation

8 VAC 20-131-280. Expectations for school accountability.

A. Schools will be accredited annually based on compliance with pre-accreditation eligibility requirements and achievement of the school accountability requirements of 8 VAC 20-131-300 C.

B. Each school shall be accredited based, primarily, on achievement of the criteria established in 8 VAC 20-131-30 and in 8 VAC 20-131-50 as specified below:

1. The percentage of students passing the Virginia assessment program tests in the four core academic areas administered in the school, with the accreditation rating calculated on a trailing three-year average that includes the current year scores and the scores from the two most recent years in each applicable academic area, or on the current year's scores, whichever is higher.

2. The percentage of students graduating from or completing high school based on a graduation and completion index prescribed by the Board of Education. The accreditation rating of any school with a twelfth grade shall be determined based on achievement of required SOL pass rates and percentage points on the board's graduation and completion index. School accreditation shall be determined by the school's current year index points or a trailing three-year average of index points that includes the current year and the two most recent years, whichever is higher. The Board of Education's graduation and completion index shall include weighted points for diploma graduates (100 points), GED recipients (75 points), students not graduating but still in school (70 points), and students earning certificates of program completion ([60-25] points). The Board of Education's graduation and completion index shall account for all students in the graduating class's ninth-grade cohort, plus students transferring in, minus students transferring out and deceased students. Those students who are not included in one of the preceding categories [~~i.e. students who dropout~~] will also be included in the index.

2.3. The number of students who successfully complete a remediation recovery program.

3.4. Schools, with grade configurations that do not house a grade or offer courses for which SOL tests or additional tests approved by the Board of Education as outlined in 8 VAC 20-131-110 are administered, will be paired with another school in the division housing one or more of the grades in which SOL tests are administered. The pairing of such schools will be made upon the recommendation of the local superintendent. The schools should have a "feeder" relationship and the grades should be contiguous.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

C. Subject to the provisions of [8 VAC 20-131-330-350], the governing school board of special purpose schools such as those provided for in § 22.1-26 of the Code of Virginia, Governor's schools, special education schools, alternative schools, or career and technical schools that serve as the student's school of principal enrollment may seek approval of an alternative accreditation plan from the Board of Education. Schools offering alternative education programs and schools with ~~[an enrollment~~ a graduation cohort of] 50 or fewer students ~~[in the ninth grade cohort as defined by the graduation rate formula adopted by the Board]~~ may request that the Board ~~[of Education]~~ approve an alternative accreditation plan to meet the graduation and completion index benchmark. Special purpose schools with alternative accreditation plans shall be evaluated on standards appropriate to the programs offered in the school and approved by the board prior to August 1 of the school year for which approval is requested. Any student graduating from a special purpose school with a Standard, Advanced Studies, or Modified Standard Diploma must meet the requirements prescribed in 8 VAC 20-131-50.

D. When calculating the passing rates on Virginia assessment program tests for the purpose of school accreditation, the following tolerances for limited English proficient (LEP) and transfer students will apply:

1. The scores of LEP students enrolled in Virginia public schools fewer than 11 semesters may be removed from the calculation used for the purpose of school accreditation required by 8 VAC 20-131-280 B and 8 VAC 20-131-300 C. Completion of a semester shall be based on school membership days. Membership days are defined as the days the student is officially enrolled in a Virginia public school, regardless of days absent or present. For a semester to count as a completed semester, a student must have been in membership for a majority of the membership days of the semester. These semesters need not be consecutive.
2. In accordance with the provisions of 8 VAC 20-131-30, all students who transfer into Virginia public schools are expected to take and pass all applicable SOL tests in the content areas in which they receive instruction.
3. All students who transfer within a school division shall have their scores counted in the calculation of the school's accreditation rating. Students who transfer into a Virginia school from home instruction, or from another Virginia school division, another state, or another country, in grades kindergarten through 8 shall be expected to take all applicable SOL tests or additional tests approved by the board as outlined in 8 VAC 20-131-110. If the transfer takes place after the 20th instructional day following the opening of school, the scores on these tests may be used in calculating school accreditation ratings.
4. Students who transfer into a Virginia middle or high school from home instruction, or from another state or country, and enroll in a course for which there is an end-of-course SOL test, shall be expected to take the test or additional tests for that course approved by the board as outlined in 8 VAC 20-131-110. If the transfer takes place

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

after 20 instructional hours per course have elapsed following the opening of school or beginning of the semester, if applicable, the scores on those tests may be used in calculating school accreditation ratings in the year the transfer occurs.

5. Students who enroll on the first day of school and subsequently transfer to a school outside of the division for a total amount of instructional time equal to or exceeding 50 percent of a current school year or semester, whether the transfer was a singular or multiple occurrence, and return during the same school year shall be expected to take any applicable SOL test. The scores of those tests may be used in calculating the school accreditation rating in the year in which the transfers occur.

~~6. The board may alter the inclusions and exclusions from the accreditation calculations by providing adequate notice to local school boards.~~

E. The Board of Education may adopt special provisions related to the administration and use of any Virginia assessment program test in a content area ~~as applied to these regulations.~~ The Board of Education may also adopt special provisions related to the administration and use of the graduation and completion index, as prescribed by the Board. The Board of Education may also alter the inclusions and exclusions from the accreditation calculations by providing adequate notice to local school boards. [The Board may add new tests or discontinue the use of existing tests in the Virginia Assessment Program by providing adequate notice to local school boards.]

F. As a prerequisite to the awarding of an accreditation rating as defined in 8 VAC 20-131-300, each new or existing school shall document, in a manner prescribed by the board, the following: (i) the division's promotion/retention policies developed in accordance with the requirements of 8 VAC 20-131-30, (ii) compliance with the requirements to offer courses that will allow students to complete the graduation requirements in 8 VAC 20-131-50, (iii) the ability to offer the instructional program prescribed in 8 VAC 20-131-70 through 8 VAC 20-131-100, (iv) the leadership and staffing requirements of 8 VAC 20-131-210 through 8 VAC 20-131-240, and (v) the facilities and safety provisions of 8 VAC 20-131-260. The division superintendent shall report to the department compliance with this subsection through the pre-accreditation eligibility procedures in 8 VAC 20-131-290.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-290. Procedures for certifying accreditation eligibility.

A. Schools will be accredited under these standards annually based, in part, on compliance with the pre-accreditation eligibility requirements described in 8 VAC 20-131-280 F.

B. To be eligible for accreditation, the principal of each school and the division superintendent shall report to the Department of Education:

1. The extent to which each school continues to meet standards reported as met in the previous year described in 8 VAC 20-131-280 F.
2. That the SOL have been fully incorporated into the school division's curriculum in all accreditation-eligible schools and the SOL material is being taught to all students eligible to take the SOL tests. This shall be certified by each school division superintendent as part of the pre-accreditation eligibility determination process.
3. Actions taken to correct any noncompliance issues cited in the previous year.
4. Compliance with subsection B of 8 VAC 20-131-270.

The principal of each school and the division superintendent shall submit pre-accreditation eligibility reports in a manner prescribed by the board to the Department of Education. Failure to submit the reports on time will constitute grounds for denying accreditation to the school.

C. In keeping with provisions of the Standards of Quality, and in conjunction with the six-year long range comprehensive plan of the division, each school shall prepare and implement a biennial school plan which shall be available to students, parents, staff, and the public. Each biennial school plan shall be evaluated as part of the development of the next biennial plan. Schools may use other plans to satisfy the requirement for the biennial plan with prior written approval from the Department of Education.

D. With the approval of the local school board, local schools seeking to implement experimental or innovative programs, or both, that are not consistent with these standards shall submit a waiver request, on forms provided, to the board for evaluation and approval prior to implementation. The request must include the following:

1. Purpose and objectives of the experimental/innovative programs;
2. Description and duration of the programs;
3. Anticipated outcomes;

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

4. Number of students affected;
5. Evaluation procedures; and
6. Mechanisms for measuring goals, objectives, and student academic achievement.

Except as specified below, the board may grant, for a period up to five years, a waiver of these regulations that are not mandated by state or federal law or designed to promote health or safety. The board may grant all or a portion of the request. Waivers of requirements in 8 VAC 20-131-30, 8 VAC 20-131-50, 8 VAC 20-131-70, and 8 VAC 20-131-280 through 8 VAC 20-131-340 shall not be granted, and no waiver may be approved for a program which would violate the provisions of the Standards of Quality.

8 VAC 20-131-300. Application of the standards.

A. Schools that meet the pre-accreditation eligibility requirements prescribed in 8 VAC 20-131- 280 F shall be assigned one of the following ratings as described in this section:

1. Fully Accredited;
2. Accredited with Warning in (specified academic area or areas and/or in achievement of the minimum threshold for the graduation and completion index);
3. Accreditation Denied;
4. Conditionally Accredited;

~~[5. Accreditation Withheld/Improving School Near Accreditation (rating shall not be awarded after academic year ending in 2007, based on tests administered in 2005-2006). Provisionally Accredited-Graduation Rate];~~

B. Compliance with the student academic achievement expectations shall be documented to the board directly through the reporting of the results of student performance on SOL tests and other alternative means of assessing student academic achievement as outlined in 8 VAC 20-131-110. To facilitate accurate reporting of the graduation and completion index, the State Testing Identifier (STI) for students who transfer into a Virginia public school from another Virginia public school shall be retained by the receiving school. Compliance with other provisions of these regulations will be documented in accordance with procedures prescribed by the Board of Education.

C. Accreditation ratings defined. Accreditation ratings awarded in an academic year are based upon Virginia assessment program scores from the academic year immediately prior to the year to which the accreditation rating applies. Accreditation ratings are defined as follows:

1. Fully accredited.

~~a. With tests administered in the academic year 2005-2006 for the accreditation ratings awarded for academic year 2006-2007, a school will be rated Fully Accredited when its eligible students meet the pass rate of 70% in each of the four core academic areas, except the pass rates required shall be 75% in third grade and fifth grade English and 50% in third grade science and history/social science.~~

~~b a.~~ With tests administered in the academic years 2006-2007, 2007-2008, and 2008-2009 [ , and 2009-2010 ] for the accreditation ratings awarded for academic years 2007-2008, 2008-2009, and 2009-2010 [ , and 2010-2011 ] respectively, a school will be rated Fully Accredited when its eligible students meet the pass rate of

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

70% in each of the four core academic areas except, the pass rates required shall be 75% in third-grade through fifth-grade English and 50 percent in third-grade science and history/social science.

**e b.** For schools housing grade configurations where multiple pass rates apply, the results of the tests may be combined in each of the four core academic areas for the purpose of calculating the school's accreditation rating provided the school chooses to meet the higher pass rate.

**d c.** With tests administered beginning in the academic year ~~[2009-10 2010-2011]~~ for the accreditation ratings awarded for school year ~~[2010-11-2011-2012]~~ and beyond a school will be rated Fully Accredited when its eligible students meet the pass rate of 75% in English and the pass rate of 70% in mathematics, science, and history and social science. Additionally, each school with a graduating class shall achieve a minimum of [ 80 85 ] percentage points on the Board of Education's graduation and completion index, as described in 8 VAC 20-131-280 B. 2, to be rated Fully Accredited.

**e d.** For accreditation purposes, the pass rate will be calculated as single rates for each of the four core academic areas by combining all scores of all tests administered in each subject area.

2. Accredited with Warning (in specific academic ~~area or areas~~ areas and/or in achievement of the minimum threshold for the graduation and completion index). A school will be Accredited with Warning (in specific academic ~~area or areas~~ areas and/or in achievement of the minimum threshold for the graduation and completion index) if it has failed to achieve Fully Accredited status. Such a school may remain in the Accredited with Warning status for no more than three consecutive years.

3. Accreditation Denied. Based on a school's academic performance ~~during academic years ending in 2006 and beyond,~~ and/or achievement of the minimum threshold for the graduation and completion index a school shall be rated Accreditation Denied if it fails to meet the requirements to be rated Fully Accredited [or Provisionally Accredited-Graduation Rate], for the preceding three consecutive years or for three consecutive years anytime thereafter.

In any school division in which one-third or more of the schools have been rated Accreditation Denied, the superintendent shall be evaluated by the local school board with a copy of such evaluation submitted to the Board of Education no later than December 1 of each year in which such condition exists. In addition, the Board of Education may take action against the local school board as permitted by the Standards of Quality due to the failure of the local board to maintain accredited schools.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

~~4. Accreditation Withheld/Improving School Near Accreditation. A school that has never met the requirements to be rated Fully Accredited by the academic year ending in 2006 and subject to being awarded a rating of Accreditation Denied may apply to the board for this accreditation designation for 2006-2007. To be eligible, the school must meet each of the following criteria:~~

~~a. With assessments administered in 2005-2006 at least 70% of its students must have passed the applicable English SOL tests except at third and fifth grade where the requirement is 75%.~~

~~b. With assessments administered in 2005-2006, a combined pass rate of 60% of its students must have passed the Virginia assessment program tests in the other three core academic areas.~~

~~c. In each academic area in which the pass rate is below the rate required to be rated Fully Accredited, the school's pass rate must have increased by at least 25 percentage points as compared to the pass rates on tests taken during the academic year ending in 1999.~~

~~This rating shall not be awarded after the 2006-2007 academic year.~~

~~5~~ 4. Conditionally Accredited. New schools that are comprised of students from one or more existing schools in the division will be awarded ~~[this a Conditionally Accredited-New]~~ status for one year pending an evaluation of the school's eligible students' performance on SOL tests or additional tests approved by the Board of Education to be rated Fully Accredited. ~~[This A Conditionally Accredited-Reconstituted]~~ rating may ~~[also]~~ be awarded to a school that is being reconstituted in accordance with the provisions of 8 VAC 20-131-340 upon approval by the Board of Education. A school awarded this rating under those circumstances will revert to a status of Accreditation Denied if it fails to meet the requirements to be rated Fully Accredited by the end of the agreed upon term or if it fails to have its annual application for such rating renewed.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

5. Provisionally Accredited-Graduation Rate. With tests administered in the academic years ~~[2009-2010,]~~ 2010-2011, 2011-2012, 2012-2013, 2013-2014~~[, 2014-2015]~~ for the accreditation ratings awarded for academic years ~~[ 2010-2011, ]~~ 2011-2012, 2012-2013, 2013-2014, ~~[and] 2014-2015[~~, and 2015-2016~~]~~ respectively, a school will be rated Provisionally Accredited ~~[ -Graduation Rate ]~~ when its eligible students meet SOL pass rates to be rated Fully Accredited but fails to achieve a minimum of ~~[80 85]~~ percentage index points on the Board of Education's graduation and completion index, but achieve the following minimum benchmarks for each year:

Graduation and Completion Index Benchmarks for Provisionally Accredited Ratings		
Academic Year	Accreditation Year	Index Percentage Points
<del>[ 2009-2010 2010-2011 ]</del>	<del>[ 2010-2011 2011- 2012 ]</del>	<del>[75 80]</del>
<del>[ 2010-2011 2011-2012 ]</del>	<del>[ 2011-2012 2012- 2013 ]</del>	<del>[76 81]</del>
<del>[ 2011-2012 2012-2013 ]</del>	<del>[ 2012-2013 2013- 2014 ]</del>	<del>[77 82]</del>
<del>[ 2012-2013 2013-2014 ]</del>	<del>[ 2013-2014 2014- 2015 ]</del>	<del>[78 83]</del>
<del>[ 2013-2014 2014-2015 ]</del>	<del>[ 2014-2015 2015- 2016 ]</del>	<del>[79 84]</del>

The last year in which this rating shall be awarded is the ~~[2014-2015 2015-2016]~~ accreditation year, based on tests administered in the ~~[2013-2014 2014-2015]~~ academic year.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-310. Action requirements for schools that are Accredited with Warning or ~~Accreditation Withheld/Improving School Near Accreditation~~ Provisionally Accredited-Graduation Rate.]

A. With such funds as are appropriated by the General Assembly, the Department of Education shall develop a school academic review process and monitoring plan designed to assist schools rated as Accredited with Warning. All procedures and operations for the academic review process shall be approved and adopted by the board.

Schools rated Accredited with Warning or ~~Accreditation Withheld/Improving School Near Accreditation~~ Provisionally Accredited-Graduation Rate must undergo an academic review in accordance with guidelines adopted by the board and prepare a school improvement plan as required by subsection F of this section.

B. Any school that is rated Accredited with Warning in English or mathematics shall adopt a research-based instructional intervention that has a proven track record of success at raising student achievement in those areas as appropriate.

C. The superintendent and principal shall certify in writing to the Board of Education that such an intervention has been adopted and implemented.

D. The board shall publish a list of recommended instructional interventions, which may be amended from time to time.

E. Adoption of instructional interventions referenced in subsections B and D of this section shall be funded by eligible local, state, and federal funds.

F. A three-year School Improvement Plan must be developed and implemented, based on the results of an academic review of each school that is rated Accredited with Warning or ~~Accreditation Withheld/Improving School Near Accreditation~~ Provisionally Accredited-Graduation Rate upon receipt of notification of the awarding of this rating and receipt of the results of the academic review. The plan:

1. Shall be developed with the assistance of parents and teachers and made available to the public;
2. Must include the components outlined in subsection G of this section; and
3. Must be approved by the division superintendent and the local school board and be designed to assist the school in meeting the student achievement standard to be Fully Accredited as outlined in 8 VAC 20-131-300.

G. The improvement plan shall include the following:

1. A description of how the school will meet the requirements to be Fully Accredited, for each of the years covered by the plan;
2. Specific measures for achieving and documenting student academic improvement;
3. A description of the amount of time in the school day devoted to instruction in the core academic areas;
4. Instructional practices designed to remediate students who have not been successful on SOL tests;
5. Intervention strategies designed to prevent further declines in student performance [and graduation rates];
6. Staff development needed;
7. Strategies to involve and assist parents in raising their child's academic performance;
8. The need for flexibility or waivers to state or local regulations to meet the objectives of the plan; and
9. A description of the manner in which local, state, and federal funds are used to support the implementation of the components of this plan.

As part of its approval of the school improvement plan, the board may grant a local school board a waiver from the requirements of any regulations promulgated by the board when such a waiver is available.

H. The school improvement plan and related annual reports submitted to the board shall provide documentation of the continuous efforts of the school to achieve the requirements to become rated Fully Accredited. The board shall adopt and approve all policies and formats for the submission of annual reports under this section. The reports shall be due no later than October 1 of the school year.

8 VAC 20-131-315. Action requirements for schools that are denied accreditation.

A. Any school rated Accreditation Denied in accordance with 8 VAC 20-131-300 shall be subject to actions prescribed by the Board of Education and shall provide parents of enrolled students and other interested parties with the following:

1. Written notice of the school's accreditation rating within 30 calendar days of the notification of the rating from the Department of Education;
2. A copy of the school division's proposed corrective action plan, including a timeline for implementation, to improve the school's accreditation rating; and
3. An opportunity to comment on the division's proposed corrective action plan. Such public comment shall be received and considered by the school division prior to finalizing the school's corrective action plan and a Board of Education memorandum of understanding with the local school board.

B. Any school rated Accreditation Denied in accordance with 8 VAC 20-131-300 shall be subject to actions prescribed by the Board of Education and affirmed through a memorandum of understanding between the Board of Education and the local school board. The local school board shall submit a corrective action plan to the Board of Education for its consideration in prescribing actions in the memorandum of understanding within 45 days of the notification of the rating. The memorandum of understanding shall be entered into no later than November 1 of the academic year in which the rating is awarded.

The local board shall submit status reports detailing implementation of actions prescribed by the memorandum of understanding to the Board of Education. The status reports shall be signed by the school principal, division superintendent, and the chair of the local school board. The school principal, division superintendent, and the chair of the local school board may be required to appear before the Board of Education to present status reports.

The memorandum of understanding may also include but not be limited to:

1. Undergoing an educational service delivery and management review. The Board of Education shall prescribe the content of such review and approve the reviewing authority retained by the school division.
2. Employing a turnaround specialist credentialed by the state to address those conditions at the school that may impede educational progress and effectiveness and academic success.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

C. As an alternative to the memorandum of understanding outlined in subsection B of this section, a local school board may choose to reconstitute a school rated Accreditation Denied and apply to the Board of Education for a rating of Conditionally Accredited. The application shall outline specific responses that address all areas of deficiency that resulted in the Accreditation Denied rating and may include any of the provisions of subsection B of this section.

If a local school board chooses to reconstitute a school, it may annually apply for an accreditation rating of Conditionally Accredited as provided for in 8 VAC 20-131-300 C 5. The Conditionally Accredited rating may be granted for a period not to exceed three years if the school is making progress toward a rating of Fully Accredited in accordance with the terms of the Board of Education's approval of the reconstitution application. The school will revert to a status of Accreditation Denied if it fails to meet the requirements to be rated Fully Accredited by the end of the three-year term or if it fails to have its annual application for such rating renewed.

D. The local school board may choose to close a school rated Accreditation Denied or to combine such school with a higher performing school in the division.

E. A local school board that has any school with the status of Accreditation Denied shall annually report each school's progress toward meeting the requirements to be rated Fully Accredited to the Board of Education. The local board shall submit such report in a manner prescribed by the Board of Education no later than October 1 of each year. Such reports on each school's progress shall be included in the Board of Education's annual report on the condition and needs of public education to the Governor, and the General Assembly submitted on November 15 of each year.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-320. Provisional accreditation benchmarks. (Repealed.)

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-325. Recognitions and rewards for school and division accountability performance.

A. Schools and divisions may be recognized by the Board of Education in accordance with guidelines it shall establish [for the Virginia Index of Performance (VIP) incentive program]. Such recognition may include:

1. Public announcements recognizing individual schools and divisions;
2. Tangible rewards;
3. Waivers of certain board regulations;
4. Exemptions from certain reporting requirements; or
5. Other commendations deemed appropriate to recognize high achievement.

In addition to board recognition, local school boards shall adopt policies to recognize individual schools through public announcements, media releases, participation in community activities for input purposes when setting policy relating to schools and budget development, as well as other appropriate recognition.

B. A school that maintains a passing rate on Virginia assessment program tests or additional tests approved by the board as outlined in 8 VAC 20-131-110 of 95% or above in each of the four core academic areas for two consecutive years may, upon application to the Department of Education, receive a waiver from annual accreditation. A school receiving such a waiver shall be Fully Accredited for a three-year period. However, such school shall continue to annually submit documentation in compliance with the pre-accreditation eligibility requirements described in 8 VAC 20-131-280 F.

C. Schools may be eligible to receive the Governor's Award for Outstanding Achievement. This award will be given to schools rated Fully Accredited that significantly increase the achievement of students within student subgroups in accordance with guidelines prescribed by the Board of Education.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-330. Waivers. (Repealed.)

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-340. Special provisions and sanctions.

A. Any school in violation of these regulations shall be subject to appropriate action by the Board of Education including, but not limited to, the withholding or denial of a school's accreditation.

B. A school's accreditation rating may be withheld by action of the Board of Education for any school found to be in violation of test security procedures pursuant to § 22.1-19.1 of the Code of Virginia. Withholding of a school's accreditation rating shall not be considered an interruption of the three-consecutive-year period for purposes of receiving an Accreditation Denied status pursuant to 8 VAC 20-131-300.

C. The Board of Education may exercise its authority to seek school division compliance with school laws pursuant to relevant provisions of the Code of Virginia when any school within a division is rated Accreditation Denied.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

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.

REGULATIONS ESTABLISHING STANDARDS FOR  
ACCREDITING PUBLIC SCHOOLS IN VIRGINIA – 2009  
8 VAC 20-131

8 VAC 20-131-360. Effective date.

[The provisions in 8 VAC 20-131-30 B. relating to double testing and the provisions in 8 VAC 20-131-60 C. relating to Virtual Virginia shall become effective upon final adoption in accordance with the Administrative Process Act.] Unless otherwise specified, [the remainder of] these regulations shall be effective for the ~~2006-2007~~ [2009-2010-2010-2011] academic year.



Section 22.1-253.13:1.D.8 of the *Standards of Quality* requires local school boards to provide educational alternatives for students whose needs are not met in programs prescribed elsewhere in these standards. Such students shall be counted in average daily membership (ADM) in accordance with the regulations of the Board of Education. Regulations governing programs such as this are found in the accrediting standards, which permit alternative accreditation plans and allow the Board to grant waivers to certain provisions of the standards.

### **Summary of Major Elements:**

Key Center School provides a progressive learning environment for students, ages 5 to 22 years, with moderate-to-severe disabilities, autism, and multiple disabilities. The educational curriculum focuses on community based instruction, functional life skills, vocational training, academic skills, communication, and gross motor skills.

Concurrent conditions occur with most if not all Key Center students; these may include motorical or physical challenges, medical needs, and behavioral issues. Some students require full-time private nursing supports during the school day which is approved through the county health department. Some students are building resistance and/or endurance for the school day, therefore, they attend on a part-time basis until their strength or condition improves. Student health conditions often develop over the course of the school year that may require extended absences; this includes surgical needs and/or hospitalizations. Consequently, the school has a full-time homebound teacher to provide homebound services as needed.

Students are grouped within classroom settings based on needs and supports for their educational programming. Center-based classrooms have seven to eight students within a classroom supported by a classroom teacher, a public health training assistant, and a public health attendant. In addition, Key Center has a reduced ratio group of classes titled "Transition Program" for the purpose of offering intensive behavioral interventions. These students have demonstrated frequent and intense challenges to their previous classroom settings and require specific behavior plans and supports. The classroom teams have the same staffing for personnel to more adequately address the needs of these students. The overall goal is to assist these students to manage their skill and/or communication deficits to return to the school-based settings when the student is ready to return to the challenge.

Parent involvement and participation is both encouraged and expected with regard to educational programming. Parents attend annual individualized education program (IEP) meetings and advocate for students needs. Additional parent meetings or IEPs are often held throughout the school year to address changes in student performance or to discuss concerns about a student's involvement in their educational program. In addition to teachers and parents attending these meetings, specialists, clinical team members, and administrative presence is also noted--offering multiple perspectives and variety of resources for student benefit. Parent groups and trainings are often held throughout the school year to expand parental expertise, as well as to inform families of additional resources for students and/or families.

Each student has an opportunity to undergo a full evaluation every three years. The school psychologist performs psychological testing when needed, and the social worker completes an adaptive skill review, as well as updates to the family socio-cultural information. In addition, classroom teachers perform yearly educational testing in order to consistently reflect student performance in all areas.

Students may demonstrate a more consistent response to their educational programming at Key Center

School; therefore, requiring a review of their educational setting and transitions are discussed and/or initiated to review alternative options for school settings. Additional resources are accessed to help make a transition positive for the student and include additional Fairfax County Public Schools (FCPS) staff members. Parents visit and observe these recommended settings so that they may also ensure that adequate supports will be in place to facilitate a smooth transition and successful educational setting for the student.

Key Center School has a highly qualified staff. Most classroom teachers have received a master's degree or are in the process of earning one. Many have also reached the status of 'highly qualified' and/or have an additional endorsement in severe disabilities. Teachers who have not yet reached the status of highly qualified or completed their endorsement, are actively pursuing the status and are anticipating its completion by the end of this school year. Teachers are teamed by grade level to offer common planning time to meet, discuss lessons, and to brainstorm curricular challenges. The planning time is offered as students participate in two of four options each day, these include: music therapy, adapted physical education, and Learning is New Knowledge (LINK). The LINK class is unique to the school, yet it serves as another opportunity to promote individual skills such as task completion, following directions, and expressive and receptive language development. LINK also fosters many group skills as well, including wait time and turn taking. Students have art class weekly in order to access additional sensory and multi-modal experiences.

In addition to the many classroom-based and related service staff, Key Center's clinical team is composed of the principal, assistant principal, social worker, the school nurse, the Fairfax County public health nurse, two school psychologists, vocational coordinator, and two behavior specialists. The team meets weekly to address schoolwide, classroom-based, and individual student issues and concerns. Each clinical topic is reviewed, needed actions are determined and a clinical team member is designated to follow-up and report back on progress. Additional resources are also located in the school on a very frequent basis, including an audiologist, itinerants for vision and hearing, speech/language clinicians, occupational therapists, and physical therapists. These staff members support additional schools yet are located in the school as a base for their services and are often in the building over the course of the school day. Key Center School also has an English for Speakers of Other Languages (ESOL) teacher who supports students directly and is involved with the Parents as Educational Partners (PEP) program.

Key Center School offers a functional life skill curriculum with opportunities for academics, communication building, and social skill building all weaved within the curricular focus. The school has received full accreditation and has met Annual Yearly Progress (AYP) each year as a result of Virginia Alternate Assessment Program (VAAP) submissions. Students participate in the VAAP-based on the school district testing schedule, as required by law. This includes testing for all third through eighth graders and the students entering eleventh grade for the first time. The school improvement plan (SIP) reveals the commitment to addressing academic, life skills and responsibility to the community through various activities which focus on promoting student independence through functional activities.

Students participate in a variety of educational opportunities to enhance individual skills and to promote social skills. Each student will have IEP goals to include mathematics and reading skills, in addition to specific life skills the student is addressing. This offers the students experiences to parallel portions of the VAAP that align to the Standards of Learning (SOL), yet skills are task analyzed or broken down into increments to best meet their learning needs. The aligned SOL are described to equate to student performance at the 60-month level and are therefore too difficult for the students to address, much less

master due to their cognitive deficits.

The student's goals and objectives are established and agreed upon by parents, teachers and related service personnel at the annual IEP meeting. These IEP goals and objectives are reported to parents on a quarterly basis. Teachers and related staff determine a score for each objective and goal based on a compilation of information from various sources. With the goals and objectives individualized, the method of data collection has to be individualized and one standard form would not meet everyone's needs. All teachers use some variation of data sheets. They may be data sheets provided by specific sources (ABA data sheet adaptation), probe data sheets provided by administrators, or excel documents created by the teachers and therapists based on individual needs. Some of the variations of data sheets are: frequency data, prompting data, reinforcement data, and task/trial data.

Re-evaluations are completed every three years; this includes testing by the classroom teacher, the school psychologist, and school social worker. In addition, all students are given the Brigance Inventory of Early Development on a pre- and post-school year assessment schedule.

The school meets the pre-accreditation eligibility requirements outlined in 8 VAC 20-131-280.F of the Standards of Accreditation.

The Key Center is asking for a waiver for accreditation purposes for 8 VAC 20-131-280.B which bases accreditation on the percentage of students passing Virginia assessment program tests in core academic areas as follows:

- B. Each school shall be accredited based, primarily, on achievement of the criteria established in 8 VAC 20-131-30 as specified below:
1. The percentage of students passing the Virginia assessment program tests in the four core academic areas administered in the school, with the accreditation rating calculated on a trailing three-year average that includes the current year scores and the scores from the two most recent years in each applicable academic area, or on the current year's scores, whichever is higher.
  2. The number of students who successfully complete a remediation recovery program.
  3. Schools, with grade configurations that do not house a grade or offer courses for which SOL tests or additional tests approved by the Board of Education as outlined in 8 VAC 20-131-110 are administered, will be paired with another school in the division housing one or more of the grades in which SOL tests are administered. The pairing of such schools will be made upon the recommendation of the local superintendent. The schools should have a "feeder" relationship and the grades should be contiguous.

All students will be assessed in the VAAP as determined by the IEP process. Eligibility is based on educational, classroom performance, progress on individual goals and objectives from their IEP's and psychological testing. The VAAP identifies Aligned Standards of Learning (ASOL) which begins at the third-grade level, with some identified skills as low as the kindergarten level. There is a significant gap between the functioning level of the students at Key Center, and the lowest levels of the VAAP, which make it extremely difficult for students to demonstrate proficiency in the ASOL and therefore require a different manner to determine if they are making sufficient progress in their instructional programs.

The Key Center proposes an alternative accreditation plan. All students will participate in the VAAP for the purpose of determining progress and meeting the requirements of the No Child Left Behind Act. To determine the state’s accreditation rating, scores from the VAAP will be the first measure used, as well as consideration of alternative criteria based upon data from the VAAP and other measures of student progress.

If student scores on the VAAP meet the regular accreditation criteria for Standard 8 VAC 20-131-280, then no adjustment is necessary. If a core academic area fails to meet accreditation standards, then the following alternative system will be used:

Scores for each content area will be assigned a certain number of points, based on the “cut score” from VAAP for that content area. Scores for students at all grade levels tested will be combined for a composite score for each content area (because of the small pool of students at each grade level).

Content Area:

Cut Score:

Performance Level	Number of Students	Number of Points	Total Points
Pass Advanced		125	
Pass Proficient		100	
1 point below cut score		90	
More than 1 point below cut score		0	
TOTAL			

For each content area of the VAAP, student scores must average at least 70 points to achieve Virginia Department of Education (VDOE) accreditation for the identified content area. If a score of 70 is not achieved, the following accreditation adjustments will be applied:

- Student scores will be excluded from the accreditation rating calculation based on the adjustments allowed by current policy determined by the VDOE.
- Scores for students who are not in attendance for 75 percent of the total number of instructional days during which evidence is being collected for the VAAP will be excluded from the accreditation rating calculation. This period of time is generally from the first day of school until May 1, which is approximately 150 days. Thus, students must be present for at least 112 days (75 percent) of instruction from the start of the school year to May 1 for their scores to be included.

The final step in implementing the alternative accreditation plan will be to determine a composite average by averaging the “final” scores of all areas assessed.

Performance Level	Reading Number of Students	Mathematics Number of Students	Science Number of Students	Social Studies Number of Students	Total Number of Students	Number of Points	Total Points
Pass Advanced						125	
Pass Proficient						100	
1 point below VAAP cut scores						90	
More than 1 point below VAAP cut scores						0	
TOTAL							

Calculation: Total Points/Total Number of Students = Accreditation Rating

Three points will be added to the composite score for successful achievement of each of the following Achievement Indicators:

- 75 percent of all students will participate in the vocational training program over opportunities per week to develop and reinforce skills. Data will be collected via teachers and submitted monthly (October through April data).
- 90 percent of all students who are present on days for scheduled travel will participate in monthly Community-Based Instruction with appropriate or successful interactions over monthly probes.
- 75 percent of all students will utilize a personalized communication system over weekly trials. Data will be collected via teachers and submitted monthly (October through April data).

**Superintendent's Recommendation:** The Superintendent of Public Instruction recommends that the Board of Education accept for first review the alternative accreditation plan from Fairfax County Public Schools for the Key Center.

**Impact on Resources:** There is no impact on the resources of the Department of Education.

**Timetable for Further Review/Action:** Final review on March 26, 2009.

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF EDUCATION  
RICHMOND, VIRGINIA

REQUEST FOR APPROVAL OF AN ALTERNATIVE ACCREDITATION PLAN

*Regulations Establishing Standards for Accrediting Public Schools in Virginia*, (8 VAC 20-131-10 et. seq.) set the minimum standards public schools must meet to be accredited by the Board of Education. Accreditation of public schools is required by the Standards of Quality ( 22.1-253.13:1 et. seq.). The annual accrediting cycle for public schools is July 1 through June 30. This cover sheet, with the supporting documentation, must be submitted to the Department of Education for review and recommendation to the Board at least 90 days prior to August 1 of the school year in which the plan is to be implemented.

8 VAC 20-131-280 of the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* states (in part): *Special purpose schools such as regional, special education, alternative, or career and technical schools that serve as the student's school of principal enrollment shall be evaluated on standards appropriate to the programs offered in the school and approved by the Board prior to August 1 of the school year for which approval is requested. Any student graduating from a special purpose school with a Standard, Advanced Studies, or Modified Standard Diploma must meet the requirements prescribed in 8 VAC 20-131-50.*

The Board of Education, in its *Guidelines Governing the Implementation of Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia*, states:

*Schools described in this section are those that serve as a student's school of principal enrollment and where students are reported in fall membership for the school. Fall membership determines whether or not these schools are subject to the provisions of the accrediting standards; therefore, schools reporting fall membership are subject to the provisions of the standards. These schools may or may not administer Standards of Learning (SOL) tests.*

*In accordance with the provisions of 8 VAC 20-131-330 of the standards, local school boards may seek waivers of provisions of the standards to address the unique needs of these special purpose schools. Such requests may include an alternative accreditation plan. Applications must be submitted to the Board for consideration at least ninety days prior to August 1 of the school year. Requests for consideration must be accompanied by information that documents the need for approval of the request.*

We, the undersigned, submit this request for review and approval by the Board of Education and understand that we are expected to appear before the Board to discuss the program and respond to questions raised.

1/28/09

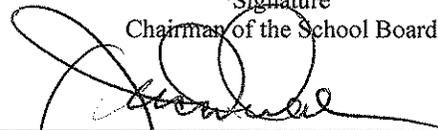
Date Approved  
by the Local School Board

1/28/09

Submission Date



Signature  
Chairman of the School Board



Signature  
Division Superintendent

*ALTERNATIVE ACCREDITATION PLAN*

<b>School Name</b>	<u>Key Center School</u>	<b>Division</b>	<u>Fairfax County Public Schools</u>
<b>School Address</b>	<u>6404 Franconia Road</u> <u>Springfield, VA 22150</u>		
<b>Contact Person</b>	<u>Tom Flick</u>	<b>Phone</b>	<u>703-313-4000</u>
<b>Fax</b>	<u>703-313-3945</u>	<b>E-mail Address</b>	<u>Thomas.Flick@fcps.edu</u>
<b>Proposed Duration of the Plan</b>	<u></u>		
<b>Grade Levels Served</b>	<u>Students with ages from 5 to 22 years of age</u>		
<b>No. Students Enrolled by Grade Level</b>	<u>115</u>		

*NOTE: The space provided will expand to accommodate the description if the form is prepared in Word.*

*I. Describe the mission and purpose of the school.*

**VISION**

Key Center School provides individualized educational programming to maximize the potential of each and every student. This programming provides the skills necessary for the student to participate to the best of his/her ability across all environments (home, work, school, community).

**MISSION**

Key Center School provides a progressive learning environment for students, ages 5 to 22 years, with moderate-to-severe disabilities, autism, and multiple disabilities. Our educational curriculum focuses on: community based instruction, functional life skills, vocational training, academic skills, communication, and gross motor skills.

**Key Center Staff:**

- collaborates to develop individualized educational programs
- welcomes and facilitates parent involvement and participation
- participates in opportunities for community based instruction, vocational training, and community outreach
- offers unique services and learning programs
- provides access to technology to enhance student learning and communication

**KEY CENTER SCHOOL—CORE VALUES/BELIEFS**

- All students are capable of learning.
- Learning occurs across all domains of a student's life—family, community, school.
- The teacher's role is to provide a positive learning environment with high student expectations
- We value the unique differences that our staff and students bring to our school community.

***II. Describe the Characteristics of the Student Population Served by the School. Include demographic information that identifies the subgroups attending the school, the criteria used to determine the students' placement in this school, and the policies governing parental involvement in determining the placement.***

Students attending Key Center School are between five (5) and twenty-two years of age (22). Areas of eligibility for students include: mental retardation, moderate retardation, severe disabilities, autism, and traumatic brain injury. Forty percent (40%) of Key Center families are on free or reduced status for school meals. Families who attend Key Center may live as far as a half hour to forty minutes within our half of the Fairfax County School District.

Concurrent conditions occur with most if not all Key Center students; these may include motorical or physical challenges, medical needs, and behavioral issues. Some students require full time private nursing supports during the school day which is approved through the county health department. Some students are building resistance and/or endurance for the school day, therefore they attend on a part-time basis until their strength or condition improves. Student health conditions often develop over the course of the school year that may require extended absences; this includes surgical needs and/or hospitalizations. Consequently, the school has a full time homebound teacher to provide homebound services as needed.

Students are grouped within classroom settings based on needs and supports for their educational programming. Center based classrooms have seven to eight students within a classroom supported by a classroom teacher, a Public Health Training Assistant, and a Public Health Attendant. In addition, Key Center has a reduced ratio group of classes titled "Transition Program" for the purpose of offering intensive behavioral interventions. These students have demonstrated frequent and intense challenges to their previous classroom settings and require specific behavior plans and supports. The classroom teams have the same staffing for personnel to more adequately address the needs of these students. The overall goal is to assist these students to manage their skill and/or communication deficits to return to the school based settings when the student is ready to return to the challenge.

Parent involvement and participation is both encouraged and expected with regard to educational programming. Parents attend annual IEP meetings and advocate for students needs. Additional parent meetings or IEPs are often held throughout the school year to address changes in student performance or to discuss concerns about a student's involvement in their educational program. In addition to teachers and parents attending these meetings, specialists, clinical team members, and administrative presence is also noted-offering multiple perspectives and variety of resources for student benefit. Parent groups and trainings are often held throughout the school year to expand parental expertise, as well as to inform families of additional resources for students and/or families.

Each student has an opportunity to undergo a full evaluation every three years. The school psychologist performs psychological testing when needed, and the social worker completes an adaptive skill review, as well updates to the family socio-cultural information. In addition, classroom teachers perform yearly educational testing in order to consistently reflect student performance in all areas.

Students may demonstrate a more consistent response to their educational programming at Key Center School, therefore requiring a review of their educational setting and transitions are discussed and/or initiated to review alternative options for school settings. Additional resources are accessed to help make a transition positive for the student and include additional FCPS staff members. Parents visit and observe these recommended settings so that they may also ensure that adequate supports will be in place to facilitate a smooth transition and successful educational setting for the student.

Ethnicity	2007-08	
	#	%
Asian or Pacific Islander	14	12.84
Black (Not of Hispanic Origin)	23	21.10
Hispanic	23	21.10
White (Not of Hispanic Origin)	42	38.53
Other	7	6.42

Free/Reduced - Priced Meals	2007-08	
	#	%
Yes	38	34.86
No	71	65.14

Enrollment	2007-08	
	#	%
General Education	0	0.00
English for Speakers of Other Languages	22	20.18
Special Education Services	109	100.00

English Proficiency	2007-08	
	#	%
English Proficient	55	50.46
Limited English Proficient	54	49.54

Gender	2007-08	
	#	%
Female	33	30.28
Male	76	69.72

Mobility Rate	2007-08	
	%	
Division	14.76	
School	NA	

*III. Describe the instructional program and support services offered by the school. Include a profile of the teaching staff and its qualifications, characteristics of the program that makes it a special purpose school, any differentiated instructional methodologies used, and transition plans for the students.*

Key Center School has a highly qualified staff. Most classroom teachers have received a master's degree or are in the process of earning one. Many have also reached the status of 'highly qualified' and/or have an additional endorsement in severe disabilities. Teachers who have not yet reached the status of highly qualified or completed their endorsement, are actively pursuing the status and are anticipating its completion by the end of this school year. Teachers are teamed by grade level to offer common planning time to meet, discuss lessons, and to brainstorm

curricular challenges. The planning time is offered as students participate in two of four options each day, these include: music therapy, adapted physical education, and Learning is New Knowledge (LINK). The LINK class is unique to our school, yet it serves as another opportunity to promote individual skills such as task completion, following directions, and expressive and receptive language development. LINK also fosters many group skills as well, including wait time and turn taking. Students have Art class weekly in order to access additional sensory and multi-modal experiences.

In addition to the many classroom based and related service staff, Key Center's clinical team composed of the Principal, Assistant Principal, Social Worker, The school nurse, The Fairfax County Public Health Nurse, two School Psychologists, Vocational Coordinator, and two Behavior Specialists. The team meets weekly to address school-wide, classroom based, and individual student issues and concerns. Each clinical topic is reviewed, needed actions are determined and a clinical team member is designated to follow-up and report back on progress. Additional resources are also located in the school on a very frequent basis, including an audiologist, itinerants for vision and hearing, speech language clinicians, occupational therapists, and physical therapists. These staff members support additional schools yet are located in our school as a base for their services and are often in our building over the course of the school day. Key Center School also has an English for Speakers of Other Languages (ESOL) teacher who supports students directly and is involved with our Parents as Educational Partners (PEP) program.

Key Center provides a wealth of training for staff members. In addition to professional development for classroom teachers and related service providers on topics specific to our student and staff needs, we offer paraprofessional training for Assistants and Attendants to promote and expand the skills of those staff members supporting teachers. School based and district based staff members offer these trainings on a bi-weekly basis over the course of the school year. Staff members assisting in the Transition Program for students with behavioral challenges receive Professional Crisis Management (PCM) training to support students who are not always able to maintain positive responses to school challenges.

Key Center School offers a functional life skill curriculum with opportunities for academics, communication building, and social skill building all weaved within our curricular focus. The school has received full accreditation and has met Annual Yearly Progress (AYP) each year as a result of VAAP submissions. Students participate in the VAAP based on the school district testing schedule, as required by law. This includes testing for all third through eighth graders and the students entering eleventh grade for the first time. Our School Improvement Plan (SIP) reveals our commitment to addressing Academic, Life Skills and Responsibility to the Community through various activities which focus on promoting student independence through functional activities.

Students participate in a variety of educational opportunities to enhance individual skills and to promote social skills. Each student will have IEP goals to include Math and Reading skills, in addition to specific life skills the student is addressing. This offers the students experiences to parallel portions of the VAAP that align to the Standards of Learning, yet skills are task analyzed or broken down into increments to best meet their learning needs. The Aligned Standards of Learning are described to equate to student performance at the sixty month (60) level and are therefore too difficult for our students to address, much less master due to their cognitive deficits.

Speech and language clinicians, itinerants, and therapists consult frequently with teachers to enhance the students' curricular program.

**IV. Describe the strategies and instruments used by the school to evaluate student progress toward established goals and objectives:**

The student's goals and objectives are established and agreed upon by parents, teachers and related service personnel at the annual IEP meeting. These IEP goals and objectives are reported to parents on a quarterly basis.

Teachers and related staff determine a score for each objective and goal based on a compilation of information from various sources. With the goals and objectives individualized, the method of data collection has to be individualized and one standard form would not meet everyone's needs. All teachers use some variation of data sheets. They may be data sheets provided by specific sources (ABA data sheet adaptation), probe data sheets provided by administrators, or excel documents created by the teachers and therapists based on individual needs. Some of the variations of data sheets are: frequency data, prompting data, reinforcement data, and task/trial data.

Reevaluations are completed every three years; this includes testing by the classroom teacher, the school psychologist, and school social worker.

In addition, all students are given the Brigance Inventory of Early Development on a pre and post school year assessment schedule.

<p><b>V. Does the school meet the pre-accreditation eligibility requirements outlined in 8 VAC 20-131-280.F. of the accrediting standards? (If not, waivers must be requested for each accreditation standard not being met.)</b></p>	X	Yes		No
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**VI. List each standard and provide a detailed explanation of why the standard is not appropriate for the school. (Note: Waivers of the assessment requirements of the No Child Left Behind Act of 2001 and the Regulations Establishing Standards for Accrediting Public Schools in Virginia are not available.)**

Standard: 8 VAC 20-131-280 Expectations for School Accountability

Key Center School is a program for students with Severe Disabilities. Students will be assessed in the Virginia Alternate Assessment Program (VAAP) as determined by the IEP process.

Eligibility is based on educational, classroom performance, progress on individual goals and objectives from their IEP's and psychological testing.

The VAAP identifies Aligned Standards of Learning (ASOL) which begins at the third grade level, with some identified skills as low as the kindergarten level. There is a significant gap between the functioning level of the students at Key Center, and the lowest levels of the VAAP, which make it extremely difficult for students to demonstrate proficiency in the ASOL's and therefore require a different manner to determine if they are making sufficient progress in their instructional programs.

**VII. List the standards or student academic achievement criteria on which you propose to base the school's accreditation and provide a detailed rationale for selecting each. The standards/criteria must be objective, measurable, and related directly to the mission and purpose of the school. Provide data to support your rationale.**

Students will be assessed with the VAAP.

## ALTERNATIVE ACCREDITATION PLAN

All students participate in the Virginia Alternate Assessment Program (VAAP) for the purpose of determining progress and meeting the requirements of the No Child Left Behind Act. To determine the state's accreditation rating, scores from the VAAP will be the first measure used, as well as consideration of alternative criteria based upon data from the VAAP and other measures of student progress.

If student scores on the Virginia Alternate Assessment Program (VAAP) meet the regular accreditation criteria for Standard 8 VAC 20-131-280, then no adjustment is necessary.

### Alternative Accreditation Calculation Proposal

If a core academic area fails to meet accreditation standards, then the following alternative system will be used.

Scores for each content area will be assigned a certain number of points, based on the "cut score" from VAAP for that content area. Scores for students at **all** grade levels tested will be combined for a composite score for **each** content area (because of the small pool of students at each grade level).

Content Area:

Cut Score:

Performance Level	Number of Students	Number of Points	Total Points
Pass Advanced		125	
Pass Proficient		100	
1 point below cut score		90	
More than 1 point below cut score		0	
TOTAL			

**For each content area of the VAAP, student scores must average at least 70 points to achieve VDOE accreditation for the identified content area. If a score of 70 is not achieved, the following accreditation adjustments will be applied:**

- Student scores will be excluded from the accreditation rating calculation based on the adjustments already determined by the VDOE.
- Scores for students who are not in attendance for 75% of the total number of instructional days during which evidence is being collected for the VAAP will be excluded from the accreditation rating calculation. This period of time is generally from the first day of school until May 1, which is approximately 150 days. Thus, students must be present for at least 112 days (75%) of instruction from the start of the school year to May 1 for their scores to be included.

The final step in implementing the alternative accreditation plan will be to determine a composite average by averaging the "final" scores of all areas assessed.

Performance Level	Reading Number of Students	Mathematics Number of Students	Science Number of Students	Social Studies Number of Students	Total Number of Students	Number of Points	Total Points
Pass Advanced						125	
Pass Proficient						100	
1 point below VAAP cut scores						90	
More than 1 point below VAAP cut scores						0	
TOTAL							

**Calculation: Total Points/Total Number of Students = Accreditation Rating**

- Student scores will be excluded from the accreditation rating calculation based on the adjustments already determined by the VDOE.
- Scores for students who are not in attendance for 75% of the total number of instructional days during which evidence is being collected for the VAAP will be excluded from the accreditation rating calculation. This period of time is generally from the first day of school until May 1, which is approximately 150 days. Students must be present for at least 112 days (75%) of instruction from the start of the school year to May 1
- Three points will be added to the composite score for successful achievement of each of the following Achievement Indicators:
  - 75% of all students will participate in the vocational training program over 3 opportunities per week to develop and reinforce skills. Data will be collected via teachers and submitted monthly. (October through April data).
  - 90% of all students who are present on days for scheduled travel will participate in monthly Community-Based Instruction with appropriate or successful interactions over monthly probes.
  - 75% of all students will utilize a personalized communication system over weekly trials. Data will be collected via teachers and submitted monthly. (October through April data).

**VIII. Describe who was involved in the development of the proposed plan.**

Tom Flick, Principal	Nadia Jamai, Behavior Specialist
Ann Smith, Assistant Principal	Megan Burkhardt, Classroom Teacher
Carolyn Rapoza, Physical Therapist	Stephanie Merriam, Classroom Teacher
Jeanie Glasser, Vocational Coordinator	Nicole Bracken, School Based Technology Specialist
Lekkiah Pompey, Speech Language Clinician	Myrna Beck, School Psychologist

**IX. Describe the method(s) to be used in evaluating the success of the plan.**

- student progress as measured against evaluative criteria in plan
- success as determined by VDOE



FAIRFAX COUNTY  
PUBLIC SCHOOLS

Department of Accountability  
8115 Gatehouse Road  
Falls Church, Virginia 22042

February 6, 2009

Dr. Mark E. Emblidge, President  
Virginia Board of Education  
413 Stuart Circle, Suite 130  
Richmond, Virginia 23220

Dear Dr. Emblidge:

On page four, final paragraph, of the Request for Approval of an Alternative Accreditation Plan from Fairfax County Public Schools for Key Center, the statement below requires further clarification.

"Key Center School has a highly qualified staff. Most classroom teachers have received a master's degree or are in the process of earning one. Many have also reached the status of 'highly qualified' and/or have an additional endorsement in severe disabilities. **Teachers who have not yet reached the status of highly qualified or completed their endorsement, are actively pursuing the status and are anticipating its completion by the end of this school year.** Teachers are teamed by grade level to offer common planning time to meet, discuss lessons, and to brainstorm curricular challenges. The planning time is offered as students participate in two of four options each day, these include: music therapy, adapted physical education, and Learning is New Knowledge (LINK). The LINK class is unique to our school, yet it serves as another opportunity to promote individual skills such as task completion, following directions, and expressive and receptive language development. LINK also fosters many group skills as well, including wait time and turn taking. Students have Art class weekly in order to access additional sensory and multi-modal experiences."

The statement in bold - "**Teachers who have not yet reached the status of highly qualified or completed their endorsement, are actively pursuing the status and are anticipating its completion by the end of this school year.**" - is referring to the fact that all teachers at Key Center are either fully certified or provisionally licensed, and therefore are highly qualified teachers.

If you have any questions regarding this letter, please contact Kendra Weber, specialist, Office of Student Testing, at 703-208-7871, or Blair Robertson, specialist, Office of Educational Planning, at 571-423-1313.

Sincerely,

A handwritten signature in black ink, appearing to read 'PKM', written over a horizontal line.

Patrick K. Murphy, Ed.D.  
Assistant Superintendent

PKM/kew

# Board of Education Agenda Item

Item: \_\_\_\_\_ C. \_\_\_\_\_

Date: February 19, 2009

**Topic:** First Review of a Request for Approval of an Alternative Accreditation Plan from Fairfax County Public Schools for the Kilmer Center

**Presenter:** Dr. Kathleen M. Smith, Director, Office of School Improvement, Division of Student Assessment and School Improvement  
Dr. Patrick Murphy, Assistant Superintendent for Accountability

Telephone Number: (804) 225-2865

E-Mail Address: Kathleen.Smith@doe.virginia.gov

## 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: \_\_\_\_\_

Action requested at this meeting  Action requested at future meeting: March 26, 2009  
(date)

## Previous Review/Action:

No previous board review/action  
 Previous review/action  
date \_\_\_\_\_  
action \_\_\_\_\_

## Background Information:

The *Regulations Establishing Standards for Accrediting Public Schools in Virginia* effective September 7, 2006, Section 8 VAC 20-131.280.C. of the standards states:

Subject to the provisions of 8 VAC 20-131-330, the governing school board of special purpose schools such as those provided for in §22.1-26 of the Code, Governor's schools, special education schools, alternative schools, or career and technical schools that serve as the student's school of principal enrollment may seek approval of an alternative accreditation plan from the Board of Education. Special purpose schools with alternative accreditation plans shall be evaluated on standards appropriate to the programs offered in the school and approved by the Board prior to August 1 of the school year for which approval is requested. Any student graduating from a special purpose school with a Standard, Advanced Studies, or Modified Standard Diploma must meet the requirements prescribed in 8 VAC 20-131-50.

Section 22.1-253.13:1.D.8 of the *Standards of Quality* requires local school boards to provide educational alternatives for students whose needs are not met in programs prescribed elsewhere in these standards. Such students shall be counted in average daily membership (ADM) in accordance with the regulations of the Board of Education. Regulations governing programs such as this are found in the accrediting standards, which permit alternative accreditation plans and allow the Board to grant waivers to certain provisions of the standards.

### **Summary of Major Elements:**

The Kilmer Center is a special purpose school serving students with severe disabilities. Students are placed at the Kilmer Center because of cognitive and physical limitations; very challenging behaviors; and, complex medical reasons that warrant such a restrictive placement. Thus, it is not a “neighborhood” school and draws students from approximately one-half of the school system’s boundary areas. The school has arranged for a monthly consultation from a psychiatrist to assist families in the behavioral/medical management of their student. In-home support to families has been coordinated by the school social worker, through Child Specific Teams, which has identified resources for respite, behavior management, and day-to-day care. Students are transported on special education buses from their homes to school and back. Every bus has an attendant to monitor the health and behavioral concerns during transport. Nurses who support students ride the bus to and from school with the student.

The Kilmer Center is a public day school and is considered the most restrictive educational placement along the continuum of options available within Fairfax County Public Schools (FCPS), as defined by the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA). Students are placed at the Kilmer Center through the individualized education program (IEP) process, based upon a consensus of the IEP team (including parents) that the school is the least restrictive educational placement for the student. Parents participate in the placement process and have the right to appeal the recommended placement if they disagree with the consensus of the IEP team. IEP’s are conducted at least annually. At least every three years, more extensive evaluations may be completed to have the most up-to-date information available when determining placement. This re-evaluation may include a psychological evaluation, social case history, and updated evaluations by the teacher and other specialists. Students are identified with the following special education designations: Severe Disabilities, Moderate Mental Retardation, Mild Mental Retardation, and/or Autism.

Students at the Kilmer Center follow a modified instructional program based upon the areas of: Personal Management, Recreation and Leisure, School and Community, Vocational, Motor Skills, Functional Academics, Communication, and Social Competence. Additionally, instruction in the core academic areas of reading, mathematics, science, and social studies is embedded throughout instruction and support the Aligned Standards of Learning (ASOL). Students are taught by highly qualified teachers licensed and endorsed as special education teachers (Severe Disabilities, Mental Retardation) by the Virginia Department of Education (VDOE) and as directed in the *No Child Left Behind Act of 2001*. Students are also provided support by classroom assistants. Because of their unique and complex medical and behavioral needs, students are supported by adapted physical education teachers; a music therapist; itinerant teachers for the visually impaired and hearing impaired; speech/language clinicians; physical and occupational therapists; a psychologist; a social worker; a vocational coordinator; and nurses (as a related service).

The instructional program utilizes modified instructional materials, such as the Edmark reading and math programs, math for non-readers, step-up math, E-books developed by teachers, online resources (News-to-You; EdHelper), FCPS teacher leadership grant (to develop educational units of instruction), augmentative communication devices, and use of picture symbols for communication. Students are placed in classes of 4 -7 students supported by a teacher and two support staff. A majority of instruction is 1:1 and every student is on schedule to receive a special diploma. Technology provides a means to communicate (augmentative communication devices), access/control the environment (switches), and instructional support for students. The instructional program is geared toward developing academic skills that will lead to proficiency in the Standards of Learning (SOL) and beyond.

Students are provided regular opportunities to develop skills outside of the school through community-based instruction for academic, leisure, and vocational skills. Each student is considered for placement in a less restrictive educational setting by the IEP at least annually. Approximately 10 percent of the student population successfully transitions to less restrictive educational placements annually. Due to the nature of the challenging behaviors of some students, it may be necessary to refer the student to a more restrictive educational placement, either in a private day school or private residential school, if successful intervention strategies cannot be implemented.

Student progress is measured by Quarterly Progress Reports on IEP goals and objectives. Data is collected through checklists, observations, and noting student participation, this data is recorded at regular intervals as determined by the individual student's IEP. The Brigance Inventory of Early Development is administered annually, at the time of the IEP review.

The school meets the pre-accreditation eligibility requirements outlined in 8 VAC-20-131-280-F.

The Kilmer Center is asking for a waiver for accreditation purposes for 8 VAC 20-131-280.B which bases accreditation on the percentage of students passing Virginia assessment program tests in core academic areas as follows:

- B. Each school shall be accredited based, primarily, on achievement of the criteria established in 8 VAC 20-131-30 as specified below:
1. The percentage of students passing the Virginia assessment program tests in the four core academic areas administered in the school, with the accreditation rating calculated on a trailing three-year average that includes the current year scores and the scores from the two most recent years in each applicable academic area, or on the current year's scores, whichever is higher.
  2. The number of students who successfully complete a remediation recovery program.
  3. Schools, with grade configurations that do not house a grade or offer courses for which SOL tests or additional tests approved by the Board of Education as outlined in 8 VAC 20-131-110 are administered, will be paired with another school in the division housing one or more of the grades in which SOL tests are administered. The pairing of such schools will be made upon the recommendation of the local superintendent. The schools should have a "feeder" relationship and the grades should be contiguous.

All students at the Kilmer Center participate in the Virginia Alternate Assessment Program (VAAP), as

determined through the IEP process. The VAAP, which identifies SOL, is first used at the third grade level, with identified skills as low as the kindergarten level. It has been determined that students at the Kilmer Center demonstrate skills from the three month level up to approximately the second and third grade level (up through age 21). This significant gap between the functioning level of many of the students at Kilmer Center and the lowest levels of the VAAP make it extremely difficult for students to demonstrate proficiency in the SOL and thus, they require additional measures to determine if they are making sufficient progress in their instructional programs.

The Kilmer Center proposes an alternative accreditation plan. All students will participate in the VAAP for the purpose of determining progress and meeting the requirements of the No Child Left Behind Act. To determine the state’s accreditation rating, scores from the VAAP will be the first measure used, as well as consideration of alternative criteria based upon data from the VAAP and other measures of student progress.

If pass rates on the VAAP meet the regular accreditation criteria for Standard 8 VAC 20-131-280, then no adjustment is necessary. If a core academic area fails to meet accreditation standards, then the following alternative system will be used:

For each content area of the VAAP, student scores must average at least 70 points to achieve VDOE accreditation for the identified content area. If a score of 70 is not achieved, the following accreditation adjustments will be applied:

- Student scores will be excluded from the accreditation rating calculation based on the adjustments allowed by current policy determined by VDOE.
- Scores for students who are not in attendance for 75 percent of the total number of instructional days during which evidence is being collected for the VAAP will be excluded from the accreditation rating calculation. This period of time is generally from the first day of school until May 1, which is approximately 150 days. Thus, students must be present for at least 112 days (75 percent) of instruction from the start of the school year to May 1 for their scores to be included.

Scores for each content area will be assigned a certain number of points, based on the “cut score” from VAAP for that content area. Scores for students at **all** grade levels tested will be combined for a composite score for **each** content area (because of the small pool of students at each grade level).

Content Area:  
Cut Score:

Performance Level	Number of Students	Number of Points	Total Points
Pass Advanced		125	
Pass Proficient		100	
1 point below cut score		90	
More than 1 point below cut score		0	
TOTAL			

A composite average will be determined by averaging the “final” scores of all areas assessed.

Performance Level	Reading Number of Students	Mathematics Number of Students	Science Number of Students	Social Studies Number of Students	Total Number of Students	Number of Points	Total Points
Pass Advanced						125	
Pass Proficient						100	
1 point below VAAP cut scores						90	
More than 1 point below VAAP cut scores						0	
TOTAL							

Calculation: Total Points/Total Number of Students = Accreditation Rating

The composite score from all areas assessed must be at least 70 points to achieve VDOE accreditation. If the composite score is not at least 70, additional accreditation adjustments will be applied:

- Three points will be added to the composite score for each student who transitions from the Kilmer Center to a special education placement in a less restrictive educational setting.
- Three points will be added to the composite score for successful achievement of each of the following Achievement Indicators from the Kilmer Center School Improvement Plan (FCPS):
  - 75 percent of all students who use technology to access the curriculum, communicate, or for other purposes, will average at least three opportunities per day to practice their skills. Data on each student will be submitted monthly (October through April data).
  - 90 percent of the students, who are present at school on the days that they are scheduled to travel, will travel once a month into the community as indicated on the CBI travel survey (October through April data).

**Superintendent's Recommendation:** The Superintendent of Public Instruction recommends that the Board of Education accept for first review the alternative accreditation plan from Fairfax County Public Schools for the Kilmer Center.

**Impact on Resources:** There is no impact on the resources of the Department of Education.

**Timetable for Further Review/Action:** None

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF EDUCATION  
RICHMOND, VIRGINIA**

**REQUEST FOR APPROVAL OF AN ALTERNATIVE ACCREDITATION PLAN**

*Regulations Establishing Standards for Accrediting Public Schools in Virginia, (8 VAC 20-131-10 et. seq.) set the minimum standards public schools must meet to be accredited by the Board of Education. Accreditation of public schools is required by the Standards of Quality ( 22.1-253.13:1 et. seq.). The annual accrediting cycle for public schools is July 1 through June 30. This cover sheet, with the supporting documentation, must be submitted to the Department of Education for review and recommendation to the Board at least 90 days prior to August 1 of the school year in which the plan is to be implemented.*

8 VAC 20-131-280 of the *Regulations Establishing Standards for Accrediting Public Schools in Virginia* states (in part): *Special purpose schools such as regional, special education, alternative, or career and technical schools that serve as the student's school of principal enrollment shall be evaluated on standards appropriate to the programs offered in the school and approved by the Board prior to August 1 of the school year for which approval is requested. Any student graduating from a special purpose school with a Standard, Advanced Studies, or Modified Standard Diploma must meet the requirements prescribed in 8 VAC 20-131-50.*

The Board of Education, in its *Guidelines Governing the Implementation of Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia*, states:

*Schools described in this section are those that serve as a student's school of principal enrollment and where students are reported in fall membership for the school. Fall membership determines whether or not these schools are subject to the provisions of the accrediting standards; therefore, schools reporting fall membership are subject to the provisions of the standards. These schools may or may not administer Standards of Learning (SOL) tests.*

*In accordance with the provisions of 8 VAC 20-131-330 of the standards, local school boards may seek waivers of provisions of the standards to address the unique needs of these special purpose schools. Such requests may include an alternative accreditation plan. Applications must be submitted to the Board for consideration at least ninety days prior to August 1 of the school year. Requests for consideration must be accompanied by information that documents the need for approval of the request.*

We, the undersigned, submit this request for review and approval by the Board of Education and understand that we are expected to appear before the Board to discuss the program and respond to questions raised.

\_\_\_\_\_  
11/28/09  
Date Approved  
by the Local School Board

\_\_\_\_\_  
*Clayton J. Mont*  
Signature  
Chairman of the School Board

\_\_\_\_\_  
1/28/09  
Submission Date

\_\_\_\_\_  
*[Signature]*  
Signature  
Division Superintendent

*ALTERNATIVE ACCREDITATION PLAN TEMPLATE*

School Name	<b>KILMER CENTER</b>	Division	<b>FAIRFAX</b>
School Address	<b>8102 Wolftrap Road Vienna VA 22182</b>		
Contact Person	<b>Michael Marsallo</b>	Phone	<b>571-226-8440</b>
Fax	<b>571-226-8497</b>	E-mail Address	<b><u>memarsallo@fcps.edu</u></b>
Proposed Duration of the Plan	<b>1 year</b>		
Grade Levels Served	<b>special education, ungraded, ages 5-21</b>		
No. Students Enrolled by Grade Level	<b>80 students: 3@K; 5@ 1; 4@ 2; 8@3; 1@4; 3@ 5; 2@ 6; 6@ 7; 6@ 8; 5@9; 9@ 10; 25@ 11 (ages 16-20); 3@ 12</b>		

*NOTE: The space provided will expand to accommodate the description if the form is prepared in Word.*

**I. Describe the mission and purpose of the school.**

**MISSION:** Kilmer Center strives to be a school that

- Provides an enriched, stimulating, and safe educational environment for all students, where they can be challenged toward greater levels of independence and integrated into the community
- Provides opportunities for students to experience the general curriculum
- Works with families to promote cooperative relationships that enhance their quality of life

**VISION:** Kilmer Center will be a school in which

- Students are taught by qualified, enthusiastic staff
- Collaborative teaching occurs
- Students are taught from a structured curriculum
- Technology is used to enhance instruction and communication
- A school-wide approach to discipline is incorporated

**COMMITMENTS:** To achieve our shared vision, we will

- Develop curricular opportunities that are based upon students' strengths and utilize current technology and other strategies that maximize student involvement
- Align curriculum with local, state and national expectations
- Use data to make curricular/behavioral decisions/develop common assessments
- Attend relevant staff development opportunities and use information to improve instruction
- Develop relevant communication systems that all students will use
- Staff students as a team, for educational and behavioral purposes
- Celebrate our successes together!

**GOALS:** Through a shared Mission, common Vision, and collaborative Commitments, we will

- Improve student performance on IEP goals and objectives
- Improve student performance on local, state, and national assessments

**II. Describe the Characteristics of the Student Population Served by the School. Include demographic information that identifies the subgroups attending the school, the criteria used to determine the students' placement in this school, and the policies governing parental involvement in determining the placement.**

**STUDENTS**

- The 80 students at the Kilmer Center are ages 5-21 and have been found eligible for special education services. Students have severe disabilities, moderate mental retardation, and autism.
- All students have significant cognitive disabilities, are significantly below age/grade level in their academic performance, and receive instruction in self contained classrooms.
- 16 students receive Homebound instruction and are unable to attend school (even with nursing services) because of medically fragile conditions.
- 33 students are severely disabled, use wheelchairs, and function in the 3-12 month range, based upon testing used for eligibility for special education services.
- 21 students are severely disabled, ambulatory, and function in the 6-18 month range based upon testing used for eligibility for special education services.
- 3 students have been determined to have mental retardation based upon testing used for eligibility for special education services and are functioning no higher than at the 1<sup>st</sup>--2<sup>nd</sup> grade level based upon educational testing and classroom performance.
- 7 students have autism and are functioning no higher than the 1<sup>st</sup>--2<sup>nd</sup> grade level, based upon educational testing and classroom performance.
- 38 of the above students receive support from teachers of students with visual and hearing impairments and an audiologist.
- Student demographics reflect: \* 63% Male; 37% Female; \* Asian 22%; Black 13%; Hispanic 17%; White 47%; Other 1%; 40% of the students receive Free/Reduced Priced Meals.

**PLACEMENT**

- Kilmer Center is a Public Day School and is considered the most restrictive educational placement along the continuum of options available within Fairfax County Public Schools, as defined by the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA).
- Students are placed at the Kilmer Center through the IEP process, based upon a consensus of the IEP team (including parents) that the school is the least restrictive educational placement for the student. Prior to the IEP meeting, a student's goals and objectives are drafted by the educational team consisting of classroom staff and related service providers. Parental input is also sought and the goals and objectives are formally presented at the meeting.
- Parents must sign an agreement at the IEP meeting, to place their student at the Kilmer Center. Parents participate in the placement process and have the right to appeal the recommended placement if they disagree with the consensus of the IEP team. IEP's are conducted at least annually.
- At least every three years, more extensive evaluations may be completed to have the most up to date information available when determining placement. This re-evaluation may include a psychological evaluation, social case history, and updated evaluations by the teacher and other specialists,
- Students are identified with the following special education designations: Severely Disabilities, Moderate Mental Retardation, Mild Mental Retardation, and/or Autism.

**III. Describe the instructional program and support services offered by the school. Include a profile of the teaching staff and its qualifications, characteristics of the program that makes it a special purpose school, any differentiated instructional methodologies used, and transition plans for the students.**

- Students at the Kilmer Center follow a modified instructional program based upon the areas of: Personal Management, Recreation and Leisure, School and Community, Vocational, Motor Skills, Functional Academics, Communication, and Social Competence. Additionally, instruction in the core academic areas of reading, math, science, and social studies is embedded throughout instruction and support the Aligned Standards of Learning.
- Students are taught by highly qualified teachers licensed and endorsed as special education teachers (Severe Disabilities, Mental Retardation) by the Virginia Department of Education and as directed in the No Child Left Behind Act of 2005. Students are also provided support by classroom assistants.
- Because of their unique and complex medical and behavioral needs, students are supported by: \* adapted physical education teachers; \* a music therapist; \* itinerant teachers for the visually impaired and hearing impaired; \* speech/language clinicians; \* physical and occupational therapists; \* a psychologist; \* a social worker; \* a vocational coordinator; \* and nurses (as a related service, for 5 students).
- Students are placed at Kilmer Center because of: \* cognitive and physical limitations; \* very challenging behaviors; \* and complex medical reasons that warrant such a restrictive placement. Thus, it is not a “neighborhood” school and draws students from approximately ½ of the school system’s boundary areas.
- The school has arranged for a monthly consultation from a psychiatrist to assist families in the behavioral/medical management of their student.
- In-home support to families has been coordinated by the school social worker, through Child Specific Teams, which has identified resources for respite, behavior management, and day to day care.
- Students are transported on special education buses from their homes to school and back. Every bus has an attendant to monitor the health and behavioral concerns during transport. Nurses who support students (5) ride the bus to and from school with the student.
- The instructional program utilizes modified instructional materials, such as the Edmark reading and math programs, math for non-readers, step-up math, E-books developed by teachers, online resources (News-to-You; EdHelper), FCPS teacher leadership grant (to develop educational units of instruction), augmentative communication devices, and use of picture symbols for communication
- Students are placed in classes of 4 -7 students supported by a teacher and two support staff
- A majority of instruction is 1:1 and every student is on schedule to receive a Special Diploma
- Technology: used to provide a means to communicate (augmentative communication devices), access/control the environment (switches), and instructional support (e-books ...)
- The instructional program is geared toward developing academic skills that will lead to proficiency in the Aligned Standards of Learning (ASOLs) and beyond.

**TRANSITION PLANNING**

- Kilmer Center is a Public Day School
- Students are provided regular opportunities to develop skills outside of the school through community based instruction for academic, leisure, and vocational skills.
- Each student is considered for placement in a less restrictive educational setting by the IEP at least annually. Approximately 10% of the student population successfully transitions to less restrictive educational placements annually.
- Due to the nature of the challenging behaviors of some students, it may be necessary to refer the student to a more restrictive educational placement, either in a Private Day School or Private Residential School, if successful intervention strategies can not be implemented.

**IV. Describe the strategies and instruments used by the school to evaluate student progress toward established goals and objectives.**

**EVALUATING STUDENT PROGRESS**

- Quarterly Progress Reports on IEP goals and objectives
- Data is collected through checklists, observations, and noting student participation, this data is recorded at regular intervals as determined by the individual student’s IEP.
- Brigance Inventory of Early development – administered annually, at the time of the IEP
- Reevaluation testing at least every three years, including testing by the psychologist, social worker, teacher(s), and related service providers (Speech, Physical & Occupational therapy)
- Fairfax County Public Schools Teacher Leadership Grant – creating benchmarks for reading and math that identify the earliest skills necessary before a student is “ready” to demonstrate success with the Aligned Standards of Learning

<b>V. Does the school meet the pre-accreditation eligibility requirements outlined in 8 VAC 20-131-280.F. of the accrediting standards? (If not, waivers must be requested for each accreditation standard not being met.)</b>	<b>X</b>	<b>Yes</b>		<b>No</b>
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**VI. List each standard and provide a detailed explanation of why the standard is not appropriate for the school. (Note: Waivers of the assessment requirements of the No Child Left Behind Act of 2001 and the Regulations Establishing Standards for Accrediting Public Schools in Virginia are not available.)**

8VAC20-1313-280 Expectations for School Accountability, which bases accreditation on the percentage of students passing Virginia assessment program tests in core academic areas.

All students at the Kilmer Center participate in the Virginia Alternate Assessment Program (VAAP), as determined through the IEP process. Students meet the following criteria as required by the VDOE:

- \* have an IEP
- \* demonstrate severe cognitive disabilities
- \* need extensive, direct instruction in a curriculum based on Aligned Standards of Learning
- \* require intensive, frequent, and individualized instruction in a variety of settings to show achievement
- \* are working on goals other than those for a Modified Standard, Standard, or Advanced Studies Diploma.

The VAAP, which identifies Aligned Standards of Learning (ASOL’s), is first used at the third grade level, with identified skills as low as the kindergarten level. It has been determined that students at the Kilmer Center demonstrate skills from the 3 month level up to approximately the 2<sup>nd</sup> -- 3<sup>rd</sup> grade level (up through age 21). This significant gap between the functioning level of many of the students at Kilmer Center and the lowest levels of the VAAP make it extremely difficult for students to demonstrate proficiency in the ASOLs and thus, they require additional measures to determine if they are making sufficient progress in their instructional programs.

**VII. List the standards or student academic achievement criteria on which you propose to base the school's accreditation and provide a detailed rationale for selecting each. The standards/criteria must be objective, measurable, and related directly to the mission and purpose of the school. Provide data to support your rationale.**

- Virginia Alternate Assessment Program
- Alternate Accreditation System (below)

**ALTERNATIVE ACCREDITATION PLAN**

All students participate in the Virginia Alternate Assessment Program (VAAP) for the purpose of determining progress and meeting the requirements of the No Child Left Behind Act. To determine the state's accreditation rating, scores from the VAAP will be the first measure used, as well as consideration of alternative criteria based upon data from the VAAP and other measures of student progress.

If student scores on the Virginia Alternate Assessment Program (VAAP) meet the regular accreditation criteria for Standard 8 VAC 20-131-280, then no adjustment is necessary.

**Alternative Accreditation Calculation Proposal**

If a core academic area fails to meet accreditation standards, then the following alternative system will be used.

Scores for each content area will be assigned a certain number of points, based on the "cut score" from VAAP for that content area. Scores for students at **all** grade levels tested will be combined for a composite score for **each** content area (because of the small pool of students at each grade level).

Content Area:

Cut Score:

Performance Level	Number of Students	Number of Points	Total Points
Pass Advanced		125	
Pass Proficient		100	
1 point below cut score		90	
More than 1 point below cut score		0	
TOTAL			

**For each content area of the VAAP, student scores must average at least 70 points to achieve VDOE accreditation for the identified content area. If a score of 70 is not achieved, the following accreditation adjustments will be applied:**

- Student scores will be excluded from the accreditation rating calculation based on the adjustments already determined by the VDOE.
- Scores for students who are not in attendance for 75% of the total number of instructional days during which evidence is being collected for the VAAP will be excluded from the accreditation rating calculation. This period of time is generally from the first day of school until May 1, which is approximately 150 days. Thus, students must be present for at least 112 days (75%) of instruction from the start of the school year to May 1 for their scores to be included.

A composite average will be determined by averaging the “final” scores of all areas assessed.

Performance Level	Reading Number of Students	Mathematics Number of Students	Science Number of Students	Social Studies Number of Students	Total Number of Students	Number of Points	Total Points
Pass Advanced						125	
Pass Proficient						100	
1 point below VAAP cut scores						90	
More than 1 point below VAAP cut scores						0	
TOTAL							

**Calculation: Total Points/Total Number of Students = Accreditation Rating**

**The composite score from all areas assessed must be at least 70 points to achieve VDOE accreditation. If the composite score is not at least 70, the following accreditation adjustments will be applied:**

- Student scores will be excluded from the accreditation rating calculation based on the adjustments already determined by the VDOE.
- Scores for students who are not in attendance for 75% of the total number of instructional days during which evidence is being collected for the VAAP will be excluded from the accreditation rating calculation. This period of time is generally from the first day of school until May 1, which is approximately 150 days. Students must be present for at least 112 days (75%) of instruction from the start of the school year to May 1
- Three points will be added to the composite score for each student who transitions from Kilmer Center to a special education placement in a less restrictive educational setting.
- Three points will be added to the composite score for successful achievement of each of the following Achievement Indicators from the Kilmer Center School Improvement Plan (FCPS):
  - 75% of all students who use technology to access the curriculum, communicate, or for other purposes, will average at least 3 opportunities per day to practice their skills. Data on each student will be submitted monthly (October through April data).
  - 90% of the students, who are present at school on the days that they are scheduled to travel, will travel once a month into the community as indicated on the CBI travel survey (October through April data).

**Example (example does not reflect actual student numbers)**

Content Area: Reading

Cut Score: 4

Performance Level	Number of Students	Number of Points	Total Points
Pass Advanced	10	125	1250
Pass Proficient	3	100	300
1 point below cut score	0	90	0
More than 1 point below cut score	13	0	0
<b>TOTAL</b>	<b>26</b>		<b>1550</b>

Calculation:  $1550/26 = 59.61$

Content Area: Mathematics

Cut Score: 11

Performance Level	Number of Students	Number of Points	Total Points
Pass Advanced	10	125	1250
Pass Proficient	1	100	100
1 point below cut score	0	90	0
More than 1 point below cut score	11	0	0
<b>TOTAL</b>	<b>22</b>		<b>1350</b>

Calculation:  $1350/22 = 61.36$

Performance Level	Reading Number of Students	Mathematics Number of Students	Science Number of Students	Social Studies Number of Students	Total Number of Students	Number of Points	Total Points
Pass Advanced	10	10	1	0	21	125	2625
Pass Proficient	3	2	4	1	10	100	1000
1 point below VAAP cut scores	0	0	0	0	0	90	0
More than 1 point below VAAP cut scores	13	10	7	0	30	0	0
<b>TOTAL # of Students</b>	<b>26</b>	<b>22</b>	<b>12</b>	<b>1</b>	<b>31</b>	<b>XXX</b>	<b>3625</b>

Calculation:  $3625/61 = 59.42$       **Accreditation not achieved**

**Example of Accreditation Adjustments Applied to Example:**

**Composite Calculation:**  $3625/61 = 59.42$  points (need 70 for accreditation)

**Adjustment # 1:** Scores excluded by VDOE guidelines: 0 students  
No change in accreditation status – 59.42 points

**Adjustment # 2:** Students attending less than 75% 4 students  
Adjusted calculation:  $3625/57 = 63.59$  composite

**Adjustment # 3:** Student transitions to less restrictive 3 students  
educational placement (3 points per transition = 9)

**Adjusted calculation:**  $69.69 + 9 = 72.69 = \text{ACCREDITATION ACHIEVED}$

**Adjustment # 4:** meeting School improvement Plan criteria --- not necessary

**VIII. Describe who was involved in the development of the proposed plan.**

Michael Marsallo, Principal, Kilmer Center  
Carol Jordan, Assistant Principal, Kilmer Center  
Selected staff members, Kilmer Center School and PTA  
Kendra Weber, FCPS Department of Accountability  
Blair Robertson, FCPS Department of Accountability

**IX. Describe the method(s) to be used in evaluating the success of the plan.**

- student progress as measured against evaluative criteria in plan
- success as determined by VDOE

**Virginia Department of Education  
Evaluation Criteria  
Kilmer Center, Fairfax County Public Schools  
Alternative Accreditation Plans for Special Purpose Schools**

Criteria	Yes	No	Limited
<b>School characteristics and instructional program:</b>			
1. The mission, purpose, and target population of the school justify its categorization as a “special purpose” school and, therefore, eligible to request an alternative accreditation plan.	√		
2. The characteristics and special needs of the student population are clearly defined, and the criteria for student placement require parental consultation and agreement.	√		
3. The program of instruction provides all students with opportunities to study a comprehensive curriculum that is customized to support the mission of the school.  Meets Pre-Accreditation Requirements. The program is individualized for each student as documented in the IEP.	√		
4. The school provides transition planning to help students be successful when they return to a regular school setting.*	√		
5. Strategies used to evaluate student progress are aligned to the mission/purpose of the school and include academic achievement measures.	√		
6. Convincing evidence has been provided that students enrolled in the school have not been successful in other schools subject to all the accrediting standards.	√		
7. Students will be taught with highly qualified teachers who meet the Board of Education’s licensure requirements for instructional personnel.	√		

\*Transitions are to special education classrooms in regular school settings. While it is true that few students return to a regular school setting (into a general education class), Kilmer transitions approximately 5-10% students to less restrictive educational placements (special education) annually.

<b>Alternative Accreditation Accountability Criteria:</b>			
1. Rationale and documentation provide convincing evidence that the “special purpose” nature of the school precludes its being able to reach and maintain full accreditation status as defined in the <i>Regulations Establishing Standards for Accrediting Public Schools in Virginia</i> (SOA).	√		
2. Alternative accreditation criteria described in the plan include academic achievement measures that are objective, measurable, and directly related to the mission and purpose of the school.	√		
3. The plan includes use of statewide assessment student achievement results of English and mathematics.	√		
4. The plan meets the testing requirements of the SOA.	√		
5. The plan meets the testing requirements of NCLB and describes how the school plans to meet “adequate yearly progress” requirements of the federal law.	√		
6. The plan provides convincing evidence that all pre-accreditation eligibility criteria are met for standards in which waivers have not been requested.	√		
7. Waivers have been requested for accrediting standards that are not being met, and the rationale for the waivers are clear and appropriate for the mission/purpose of the school.  Although in most cases a comprehensive program is not included in the IEP, any needs the student would have to meet a comprehensive program will be provided.	√		

# Board of Education Agenda Item

Item: \_\_\_\_\_ D. \_\_\_\_\_

Date: February 19, 2009

Topic: Final Review of Proposed Revised *Mathematics Standards of Learning*

Presenter: Mrs. Deborah Kiger Bliss, Mathematics Coordinator

Telephone Number: (804) 786-6418

E-Mail Address: [Deborah.Bliss@doe.virginia.gov](mailto:Deborah.Bliss@doe.virginia.gov)

## 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: \_\_\_\_\_

Action requested at this meeting     Action requested at future meeting: \_\_\_\_\_

## Previous Review/Action:

No previous board review/action

Previous review/action  
Date February 21, 2008  
Action Board of Education approved the timeline to proceed with the review process.  
Date October 23, 2008  
Action Board of Education accepted the Proposed Revised *Mathematics Standards of Learning* for first review.

## Background Information:

The *Mathematics Standards of Learning* were developed in 1995 and revised in 2001. The *Standards of Quality* require the Board of Education to review the Standards of Learning on a regular schedule. The *Mathematics Standards of Learning* are scheduled for review in 2009. As a result, on February 21, 2008, the Board approved a plan to review these standards during the 2008-2009 academic year. In accordance with the plan, the Department of Education took the following steps to produce a draft of the proposed revised *Mathematics Standards of Learning* for the Board's first review:

- Received online comments from stakeholders, including teachers, parents, and administrators;
- Met with a teacher review committee that consisted of recommended individuals solicited from school divisions on August 5, 6, and 7, 2008, to review the public comment and consider recommendations and reports from Achieve, the College Board, ACT, as well as the

National Assessment of Educational Progress (NAEP) Frameworks, the Curriculum Focal Points from the National Council of Teachers of Mathematics (NCTM), Principles and Standards for School Mathematics from NCTM, the Singapore Curricula, and the Report of the President's National Mathematics Advisory Panel;

- Solicited a postsecondary review committee comprised of mathematics and mathematics education faculty and met with the review committee on August 20, 2008;
- Solicited business leaders review committee and sent a summary of the public comment with the current *Mathematics Standards of Learning*, requesting comments; and
- Developed a draft of the proposed revised *Mathematics Standards of Learning*.

On October 23, 2008, the Virginia Board of Education accepted the proposed revised standards for first review. The Board held two public hearings on Monday, December 1, 2008, and three public hearings on Wednesday, December 3, 2008, to solicit comments on the proposed revised *Mathematics Standards of Learning*. The public hearings were held at Pulaski County High School, Pulaski County; Hermitage High School, Henrico County; Robinson Secondary School, Fairfax County; Joliff Middle School, Chesapeake City; and Linkhorne Middle School, Lynchburg City. There were a total of 46 speakers. In addition to comments received at the public hearings, 224 comments were received either online or as letters and faxes.

The proposed revised *Mathematics Standards of Learning* in Attachment A contain changes made as a result of public comment. These changes are indicated by double underlines and strikethroughs. A more detailed review of public comments is contained in Attachment B.

### **Summary of Major Elements:**

The attached draft of the proposed revised *Mathematics Standards of Learning* consists of the following elements:

#### **Introduction**

The Standards of Learning for mathematics identify academic content for essential components of the mathematics curriculum at different grade levels for Virginia's public schools. Standards are identified for kindergarten through grade eight and for a core set of high school courses. Throughout a student's mathematics schooling from kindergarten through grade eight, specific content strands or topics are included. These content strands are Number and Number Sense; Computation and Estimation; Measurement; Geometry; Probability and Statistics; and Patterns, Functions, and Algebra. The Standards of Learning for each strand progress in complexity at each grade level and throughout the high school courses.

#### **Goals**

The *Mathematics Standards of Learning* address all students' needs today for stronger mathematical knowledge and skills to pursue higher education, to compete in a technologically-oriented work force, and to be informed citizens. Students must gain an understanding of fundamental ideas in arithmetic, measurement, geometry, probability, data analysis and statistics, and algebra and functions, and develop proficiency in mathematical skills. In addition, students must learn to use a variety of methods and tools to compute, including paper and pencil, mental arithmetic, estimation, and calculators. The content of the

mathematics standards is intended to support the following five goals for students: becoming mathematical problem solvers, communicating mathematically, reasoning mathematically, making mathematical connections, and using mathematical representations to model and interpret practical situations.

### **Strands/Reporting Categories**

The *Mathematics Standards of Learning* for each grade level kindergarten through Grade 8, Algebra I, Geometry, and Algebra II are grouped into categories that address related content and skills.

### **Standards**

The *Mathematics Standards of Learning* for Virginia public schools describe the Commonwealth's expectations for student learning and achievement in grades K-12.

### **Summary of the Proposed Revised *Mathematics Standards of Learning***

The major elements of the attached proposed revised *Mathematics Standards of Learning* include:

- Edits to enhance clarity, specificity, rigor, alignment of skills and content, and a reflection of the current academic research and practice;
- Emphasis on vertical alignment in grades K-7 to prepare students for Algebra I;
- Increased alignment of Algebra I and Algebra II; and
- Increase of focus at each grade level.

### **Superintendent's Recommendation:**

The Superintendent of Public Instruction recommends that the Board of Education adopt the proposed revised *Mathematics Standards of Learning*.

### **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 activity, other services may be impacted.

### **Timetable for Further Review/Action:**

Upon approval of the *Mathematics Standards of Learning*, the Department of Education will post the document on the Department's Standards of Learning Web site.

**Proposed Revised  
Mathematics  
Standards of  
Learning**

**for  
Virginia  
Public Schools**

**Final Review  
February 19, 2009**

## Foreword

The Standards of Learning in this publication represent a ~~major~~ significant development in public education in Virginia. These standards focus on the mathematical knowledge and skills all students need for the future, and they have been aligned with national expectations for postsecondary success. The Standards of Learning provide a framework for instructional programs designed to raise the academic achievement of all students in Virginia and are an important part of Virginia's efforts to provide challenging educational programs in the public schools.

The Standards of Learning set reasonable targets and expectations for what teachers need to teach and students need to learn. The standards are not intended to encompass the entire curriculum for a given grade level or course or to prescribe how the content should be taught; the standards are to be incorporated into a broader, locally designed curriculum. Teachers are encouraged to go beyond the standards and select instructional strategies and assessment methods appropriate for their students.

The Standards of Learning are recognized as a model for other states. They were developed through a series of public hearings and the efforts of parents, teachers, representatives from higher education officials, and ~~representatives of~~ business and industry leaders. The standards set clear, concise, and measurable academic expectations for young people. Parents are encouraged to work with their children to help them achieve these academic standards.

A major objective of Virginia's educational agenda is to give the citizens of the eCommonwealth a program of public education that is among the best in the nation and that meets the needs of all young people in the eCommonwealth. These Standards of Learning chart the course for achieving that objective.

# Mathematics Standards of Learning

## Introduction

The Standards of Learning for mathematics identify academic content for essential components of the mathematics curriculum at different grade levels for Virginia's public schools. Recommendations and reports from Achieve, the College Board, and ACT, as well as the National Assessment of Educational Progress (NAEP) Frameworks, the *Curriculum Focal Points* from the National Council of Teachers of Mathematics (NCTM), *Principles and Standards for School Mathematics* from NCTM, the Singapore Curricula, the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report* from the American Statistical Association, and the *Report of the President's National Mathematics Advisory Panel* were considered in identifying mathematics content necessary for success for all students in postsecondary pursuits.

Standards are identified for kindergarten through grade eight and for a core set of high school courses. Throughout a student's mathematics schooling from kindergarten through grade eight, specific content strands or topics are included. These content strands are Number and Number Sense; Computation and Estimation; Measurement; Geometry; Probability and Statistics; and Patterns, Functions, and Algebra. The Standards of Learning for each strand progress in complexity at each grade level and throughout the high school courses.

The *Mathematics Standards of Learning Curriculum Framework* is a companion document to the *Mathematics Standards of Learning* that amplifies the *Mathematics Standards of Learning* and defines the content knowledge, skills, and understandings that are measured by the Standards of Learning assessments. The Curriculum Framework provides additional guidance to school divisions and their teachers as they develop an instructional program appropriate for their students. It assists teachers as they plan their lessons by identifying essential understandings, defining essential content knowledge, and describing the intellectual skills students need to use. This supplemental framework delineates in greater specificity the minimum content that all teachers should teach and all students should learn.

The Standards of Learning are not intended to encompass the entire curriculum for a given grade level or course or to prescribe how the content should be taught. Teachers are encouraged to go beyond the standards and to select instructional strategies and assessment methods appropriate for their students.

## Goals

Students today require stronger mathematical knowledge and skills to pursue higher education, to compete in a technologically-oriented sophisticated work force, and to be informed citizens. Students must gain an understanding of fundamental ideas in arithmetic, measurement, geometry, probability, data analysis and statistics, and algebra and functions, and develop proficiency in mathematical skills. In addition, students must learn to use a variety of methods and tools to compute, including paper and pencil, mental arithmetic, estimation, and calculators. Graphing utilities, spreadsheets, calculators, computers, and other forms of electronic information technology are now standard tools for mathematical problem solving in science,

engineering, business and industry, government, and practical affairs. Hence, the use of technology must be an integral part of teaching, ~~and~~ learning, and assessment. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations. The teaching of computer/technology skills should be the shared responsibility of teachers of all disciplines.

The content of the mathematics standards is intended to support the following five goals for students: becoming mathematical problem solvers, communicating mathematically, reasoning mathematically, making mathematical connections, and using mathematical representations to model and interpret practical situations.

### **Mathematical Problem Solving**

Students will apply mathematical concepts and skills and the relationships among them to solve problem situations of varying complexities. Students also will recognize and create problems from real-life data and situations within and outside mathematics and then apply appropriate strategies to find an acceptable solution. To accomplish this goal, students will need to develop a repertoire of skills and strategies for solving a variety of problem types. A major goal of the mathematics program is to help students become competent mathematical problem solvers.

### **Mathematical Communication**

Students will use the language of mathematics, including specialized vocabulary and symbols, to express mathematical ideas precisely. Representing, discussing, reading, writing, and listening to mathematics will help students ~~to~~ clarify their thinking and deepen their understanding of the mathematics being studied.

### **Mathematical Reasoning**

Students will recognize reasoning and proof as fundamental aspects of mathematics. Students will learn and apply inductive and deductive reasoning skills to make, test, and evaluate mathematical statements and to justify steps in mathematical procedures. Students will use logical reasoning to analyze an argument and to determine whether conclusions are valid. In addition, students will learn to apply proportional and spatial reasoning and to reason from a variety of representations such as graphs, tables, and charts.

### **Mathematical Connections**

Students will relate concepts and procedures from different topics in mathematics to one another and see mathematics as an integrated field of study. Through the application of content and process skills, students will make connections between different areas of mathematics and between mathematics and other disciplines, especially science. Science and mathematics teachers and curriculum writers are encouraged to develop mathematics and science curricula that reinforce each other.

## **Mathematical Representations**

Students will represent and describe mathematical ideas, generalizations, and relationships with a variety of methods. Students will understand that representations of mathematical ideas are an essential part of learning, doing, and communicating mathematics. Students should move easily among different representations—graphical, numerical, algebraic, verbal, and physical—and recognize that representation is both a process and a product.

# Kindergarten

The kindergarten standards place emphasis on developing the concept of number by counting; combining, sorting, and comparing sets of objects; recognizing and describing simple repeating patterns; and recognizing shapes and sizes of figures and objects. Students will investigate nonstandard and standard measurement, collect data, and create graphs. The idea of fractions is introduced.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as calculators and computers. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## **Number and Number Sense** **(Focus: Whole Number Concepts)**

- K.1 The student, given two sets each containing ~~10-20~~ 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.
- K.2 The student, given a set containing ~~10-20~~ 15 or fewer concrete items, will
- a) tell how many are in the set by counting the number of items 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; ~~and~~.
- K.3 The student, given an ordered set of ~~three~~ ten objects and/or pictures, will indicate the ordinal position of each item, first through ~~third~~ tenth, and the ordered position of each item from left-to-right, right-to-left, top-to-bottom, and/or bottom-to-top.
- K.4 ~~The student will investigate and recognize patterns from counting by fives and tens to 30, using concrete objects and a calculator. [Moved to new SOL K.4 c]~~

- ~~K.5~~ K.4 The student will ~~count~~  
 a) ~~count~~ forward to ~~30~~ 100 and backward from ~~10~~ 30 10;  
 b) identify one more than and one less than a number; and  
 c) count by fives and tens to 30-100 using concrete objects and a calculator. [Move to Curriculum Framework]

- K.5 The student will identify the part of a set and/or region that represents a fraction for halves and fourths.

## **Computation and Estimation** **(Focus: Whole Number Operations)**

- K.6 The student will model adding and subtracting whole numbers, using up to 10 concrete items ~~using up to 10 concrete items using whole numbers up to ten.~~

## **Measurement** **(Focus: Instruments and Attributes)**

- 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.
- 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.9 The student will tell time to the hour, using an analog ~~or~~ and digital clock.
- 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, block.

## **Geometry** **(Focus: ~~Identify~~ Plane Shapes)**

- K.11 The student will  
 a) identify, and describe, and trace and draw two-dimensional (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).

- 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, square, and rectangle) regardless of their position and orientation in space.
- K.13 ~~The student will compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).~~ [Moved to new SOL K.11 b]

### **Probability and Statistics** **(Focus: Data Collection and Display)**

- ~~K.14~~ K.13 The student will gather data ~~relating to familiar experiences~~ by counting and tallying.
- K.15 ~~K.14~~ The student will display gathered data in objects and information, using object graphs, pictorial picture graphs, and tables, and will answer questions related to the data.
- ~~K.16~~ ~~K.15~~ ~~The student will investigate and describe the results of dropping a two-colored counter or using a multicolored spinner.~~

### **Patterns, Functions, and Algebra** **(Focus: Attributes and Patterning)**

- K.17 ~~K.16~~ K.15 The student will sort and classify objects according to ~~similar~~ attributes (size, shape, and color). [Move to Curriculum Framework]
- K.18 ~~K.17~~ K.16 The student will identify, describe, and extend a repeating ~~and growing~~ relationship patterns found in common objects, sounds, and movements. [Move to Curriculum Framework]

# Grade One

The first-grade standards place emphasis on counting, sorting, and comparing sets of up to 100 objects; recognizing and describing simple repeating and growing patterns; and ~~drawing, tracing, describing and~~ sorting ~~two-dimensional~~ plane geometric figures. Students' understanding of number is expanded through learning and applying the basic addition facts through the ~~fives~~ nines table and the corresponding subtraction facts; using nonstandard and standard units to measure; and organizing and interpreting data. ~~The idea of fractions is introduced.~~ [Moved to Kindergarten.] Fractional concepts are expanded.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as calculators and computers. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## **Number and Number Sense** **(Focus: Place Value and Fraction Concepts)**

- 1.1 The student will
- a) ~~count objects in a given set containing between 1 and~~ from 0 to 100 objects and write the corresponding numeral; 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 group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.~~ [Moved to new SOL 1.1 b]
- 1.3 ~~1.2~~ The student will count forward by ones, twos, fives, and tens to 100, ~~by twos to 20~~ and backward by ones from ~~20~~ 30.
- 1.4 ~~The student will recognize and write numerals 0 through 100.~~ [Moved to new SOL 1.1 a]

- 1.5 ~~The student will identify the ordinal positions first through tenth, using an ordered set of objects. [Moved to new SOL K.3]~~
- 1.6 1.3 ~~The student will identify and represent the concepts of one half and one fourth, using appropriate materials or a drawing. the part of a set and/or region that represents a fraction for halves, thirds, and fourths and write the fraction.~~

## **Computation and Estimation**

### **(Focus: Whole Number Operations)**

- 1.7 1.4 The student, given a familiar problem situation involving magnitude, will
- 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, and 500); and
  - explain the reasonableness of ~~his/her~~ the choice.
- 1.8 1.5 The student will recall basic ~~basic~~ addition facts ~~—i.e., with~~ with sums to ~~40~~ 18 or less and the corresponding subtraction facts.
- 1.9 1.6 The student will create and solve one-step story and picture problems ~~involving one-step solutions,~~ using basic ~~basic~~ addition facts with sums to 18 or less and the corresponding subtraction facts.

## **Measurement**

### **(Focus: Time and Nonstandard Measurement)**

- 1.10 1.7 The student will
- identify the number of pennies equivalent to a nickel, a dime, and a quarter; and
  - determine the value of a collection of pennies, nickels, and dimes whose total value is 100 cents or less.
- 1.11 1.8 The student will tell time to the half-hour, using an analog ~~or~~ and digital clock.
- 1.12 1.9 The student will use nonstandard units to measure length, ~~and~~ weight/mass and volume.
- 1.13 1.10 The student will compare using the concepts of more, less, and equivalent,
- the volumes of two given containers ~~by using concrete materials (e.g., jelly beans, sand, water, rice)~~ [Move to Curriculum Framework] ~~;~~ and
  - the weight/mass of two objects, using a balance scale.
- 1.14 ~~The student will compare the weights of two objects, using a balance scale. [Moved to new SOL 1.10 b]~~
- 1.11 The student will use calendar language appropriately (e.g., months, today, yesterday, next week, last week).

## Geometry

### (Focus: Characteristics of Plane Figures)

- 1.15 The student will describe the proximity of objects in space (*near, far, close by, below, above, up, down, beside, and next to*). [Move to Curriculum Framework]
- 1.16 ~~1.12~~ The student will ~~draw, describe, and sort plane geometric figures~~ identify and trace, describe, and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, ~~corners~~ vertices, and square corners right angles. [Move to Curriculum Framework]
- 1.17 ~~1.13~~ The student will ~~identify~~ construct, model, and describe objects in his/her the environment using shapes and spatial reasoning as geometric shapes that depict plane geometric figures (triangle, rectangle, square, and circle) (triangle, rectangle, square, and circle) and explain the reasonableness of the choice. [Move to Curriculum Framework]

## Probability and Statistics

### (Focus: Data Collection and Interpretation)

- 1.18 ~~1.14~~ The student will investigate, identify, and describe various forms of data collection in ~~his/her~~ the world (e.g., recording daily temperature, lunch count, attendance, and favorite ice cream), using tables, picture graphs, and object graphs.
- 1.19 ~~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*.

## Patterns, Functions, and Algebra

### (Focus: Patterning and Equivalence)

- 1.20 ~~1.16~~ The student will sort and classify concrete objects according to one or more attributes, including color, size, shape, and thickness.
- 1.21 ~~1.17~~ The student will recognize, describe, extend, and create a wide variety of patterns including rhythmic, color, shape, and numerical. Patterns will include both [Move to Curriculum Framework] growing and repeating patterns. Concrete materials and calculators will be used by students [Move to Curriculum Framework]
- 1.18 The student will ~~recognize~~ demonstrate an understanding of equality through the use of the equal sign as a representation of equivalency.

# Grade Two

The second-grade standards extend the study of number and spatial sense to include three-digit whole numbers and solid geometric (~~three-dimensional~~) figures. Students will continue to learn, use, and gain proficiency in the basic addition facts through the ~~nines tens~~ table and the corresponding subtraction facts. Students will begin to use ~~standard~~ U.S. Customary and metric units of measurement; predict, using simple probability; and create and interpret picture and bar graphs. Students will work with a variety of patterns and will develop knowledge of equality by identifying missing numbers in addition and subtraction facts.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as calculators and computers. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## Number and Number Sense

### (Focus: Place Value, Number Patterns, and Fraction Concepts)

- 2.1 The student will
- read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; ~~and~~
  - round two-digit numbers to the nearest ten; ~~and~~
  - compare two whole numbers between 0 and 999, using symbols ( $>$ ,  $<$ , or  $=$ ) and words (*greater than*, *less than*, or *equal to*).
- 2.2 ~~The student will compare two whole numbers between 0 and 999, using symbols ( $>$ ,  $<$ , or  $=$ ) and words (*greater than*, *less than*, or *equal to*).~~ [Moved to new SOL 2.1 c]
- 2.3 2.2 The student will
- identify the ordinal positions first through twentieth, using an ordered set of objects; ~~and-~~
  - write the ordinal numbers.

- 2.4 2.3 The student will
- ~~identify the part of a set and/or region that represents a fractions for one-half, one-third, one-fourth, one-eighth, and one-tenth halves, thirds, fourths, sixths, eighths, and tenths;~~
  - ~~write the corresponding fraction; and-~~
  - ~~compare the unit fractions for halves, thirds, fourths, sixths, eighths, and tenths.~~
- 2.5 2.4 The student will
- ~~count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10; using mental mathematics, paper and pencil, hundred chart, calculators, and/or concrete objects, as appropriate [Move to Curriculum Framework] ;~~
  - ~~count backward by tens from 100; and~~
  - ~~group objects by threes and fours; and~~
  - ~~c) recognize even and odd numbers, using objects. [Move to Curriculum Framework]~~

## **Computation and Estimation**

### **(Focus: Number Relationships and Operations)**

- 2.6 2.5 The student will recall ~~basic~~ addition facts, ~~i.e.,~~ with sums to ~~18~~ 20 or less and the corresponding subtraction facts.
- 2.7 2.6 The student, given two whole numbers whose sum is 99 or less, will
- ~~estimate the sum; and~~
  - ~~find the sum, using various methods of calculation. (mental computation, concrete materials, and paper and pencil). [Move to Curriculum Framework]~~
- 2.8 2.7 The student, given two whole numbers, each of which is 99 or less, will
- ~~estimate the difference; and~~
  - ~~find the difference, using various methods of calculation. (mental computation, concrete materials, and paper and pencil.) [Move to Curriculum Framework]~~
- 2.9 2.8 The student will create and solve ~~one- or two-~~step addition and subtraction problems using data from simple tables, picture graphs, and bar graphs, ~~and practical situations.~~ [Move to Curriculum Framework]
- 2.10 2.9 The student, ~~given a simple addition or subtraction fact,~~ will recognize and describe the related facts which represent and describe the inverse relationship between addition and subtraction (e.g.,  $3 + \underline{\quad} = 7$ ,  $\underline{\quad} + 3 = 7$ ;  $7 - 3 = \underline{\quad}$ , and  $7 - \underline{\quad} = 3$ ).

## Measurement

### (Focus: Money, Linear Measurement, Weight/mass, Volume)

- ~~2.11~~ 2.10 The student will
- count and compare a collection of pennies, nickels, dimes, and quarters whose total value is \$2.00 or less; and
  - ~~identify the correct usage of~~ correctly use the cent symbol (¢), dollar symbol (\$), and decimal point (.
- ~~2.12~~ 2.11 The student will estimate and ~~then use a ruler to make linear measurements to~~ measure
- length to the nearest centimeter and inch, ~~including measuring the distance around a polygon in order to determine perimeter.~~; [Moved to new SOL 3.10 a]
  - weight/mass of objects using a scale in pounds, ounces/kilograms, grams; and
  - liquid volume in (cups, pints, quarts, gallons, and liters), ~~using the concepts of more, less, and equivalent.~~ [Moved to new SOL 1.10]
- ~~2.13~~ The student, ~~given grid paper,~~ will estimate and then count the number of square units needed to cover a given surface in order to determine area. [Moved to new SOL 5.8 a]
- ~~2.14~~ The student will estimate and then count the number of cubes in a rectangular box in order to determine volume. [Moved to new SOL 5.8 a]
- ~~2.15~~ The student will estimate and then determine weight/mass of familiar objects in pounds and/or kilograms. [Moved to new SOL 2.11 b]
- ~~2.16~~ 2.12 The student will tell and write time to the ~~quarter hour~~ nearest five minutes, using analog and digital clocks.
- ~~2.17~~ The student will use actual measuring devices to compare metric and U.S. Customary units (cups, pints, quarts, gallons, and liters) for measuring liquid volume, using the concepts of *more, less, and equivalent*. [Moved to new SOL 2.11 c]
- ~~2.18~~ 2.13 The student will
- ~~use calendar language appropriately (e.g., months, today, yesterday, next week, last week);~~ [Moved to new SOL 1.11]
  - ~~a) determine past and future days of the week; and~~
  - ~~b) identify specific days and dates on a given calendar.~~
- ~~2.19~~ 2.14 The student will read the temperature on a Celsius and/or Fahrenheit thermometer to the nearest 10 degrees.

## Geometry

### (Focus: Symmetry and Plane and Solid Figures)

- 2.20 ~~The student will identify, describe, and sort three-dimensional (solid) concrete figures, [Moved to new SOL 3.14] including a cube, rectangular solid (prism), square pyramid, sphere, cylinder, and cone, according to the number and shape of the solid's faces, edges, and corners. [Move to Curriculum Framework in support of new SOL 3.14]~~
- 2.21 ~~2.15~~ The student will  
 a) draw a line of symmetry in a figure; and  
 b) identify and create figures symmetric along a line, with at least one line of symmetry using various concrete materials. [Move to Curriculum Framework]
- 2.22 ~~2.16~~ The student will identify, describe, compare, and contrast plane and solid geometric shapes (circle/sphere, square/cube, and rectangle/rectangular solid prism).

## Probability and Statistics

### (Focus: Applications of Data)

- 2.23 ~~2.17~~ The student will use data from experiments to read, construct, and interpret a simple picture graphs, pictographs, and bar graphs.
- 2.24 ~~2.18~~ The student will ~~record~~ use data from experiments, using spinners and colored tiles/cubes, and use the data to predict outcomes which of two events is more likely to occur [Move to Curriculum Framework] if the experiment is repeated.
- 2.19 ~~The student will analyze data displayed in a picture graphs, pictographs, and bar graphs.~~

## Patterns, Functions, and Algebra

### (Focus: Patterning and Numerical Sentences)

- 2.25 ~~2.20~~ The student will identify, create, and extend a wide variety of patterns, ~~using numbers, concrete objects and pictures.~~ [Move to Curriculum Framework]
- 2.26 ~~2.21~~ The student will solve problems by completing a numerical sentence involving the basic facts for addition and subtraction. ~~Examples include:  $3 + \underline{\quad} = 7$ , or  $9 - \underline{\quad} = 4$ ,  $\underline{\quad} = 2$ .~~ [Move to Curriculum Framework] Students will create story problems, using the numerical sentences.
- 2.22 The student will demonstrate an understanding of equality by recognizing that the symbol, =, in an equation indicates equivalent quantities and the symbol,  $\neq$ , indicates that quantities are not equivalent.

# Grade Three

The third-grade standards place emphasis on learning multiplication and division facts through the nines table. Students will be fluent in the basic addition facts through the ~~nines~~ tens table and the corresponding subtraction facts. Concrete materials and two-dimensional representations will be used to introduce addition and subtraction with fractions and decimals and the concept of probability as chance. Students will use standard units (U.S. Customary and metric) ~~for~~ to measure temperature, length, liquid volume, and weight and identify relevant properties of shapes, points, line segments, ~~rays,~~ and angles, vertices, and lines. Students will investigate and describe the identity and commutative properties for addition and multiplication.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as calculators and computers. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## Number and Number Sense (Focus: Place Value and Fractions)

- 3.1 The student will
- read and write six-digit numerals and identify the place value and value for each digit;
  - round a whole number, 9,999 or less, to the nearest ten, hundred, and thousand; and
  - compare two whole numbers between 0 and 9,999, using symbols ( $>$ ,  $<$ , or  $=$ ) and words (*greater than, less than, or equal to*).
- 3.2 ~~The student will round a whole number, 9,999 or less, to the nearest ten, hundred, and thousand.~~ [Moved to new SOL 3.1 b]
- 3.3 ~~The student will compare two whole numbers between 0 and 9,999, using symbols ( $>$ ,  $<$ , or  $=$ ) and words (*greater than, less than, or equal to*).~~ [Moved to new SOL 3.1 c]

- 3.4 ~~3.2~~ The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. Students will use these relationships to solve problems, ~~such as~~  $5 + 3 = 8$  and  $8 - 3 = \underline{\quad}$ . [Move to Curriculum Framework]
- 3.5 ~~3.3~~ The student will
- a) ~~divide regions and sets to represent a fraction;~~ and [Move to Curriculum Framework]
  - b) ~~name and write the fractions represented by a given model (area/region, length/measurement, and set). Fractions (including mixed numbers) will include halves, thirds, fourths, eighths, and tenths.~~ [Moved to new SOL 3.3 a]
  - a) name and write fractions (including mixed numbers) represented by a model
  - b) Fractions (including mixed numbers);
  - b) model fractions (including mixed numbers) and write the fractions' names; and
  - c) compare the numerical value of two fractions having like and unlike denominators, using words and symbols for  $<$ ,  $>$ , and  $=$ . using concrete or pictorial models involving areas/regions and lengths/measurements. [Move to Curriculum Framework]
- 3.6 ~~The student will compare the numerical value of two fractions having like and unlike denominators, using concrete or pictorial models involving areas/regions, lengths/measurements, and sets.~~ [Moved to new SOL 3.3 c]
- 3.7 ~~The student will read and write decimals expressed as tenths and hundredths, using concrete materials and models.~~ [Moved to new SOL 4.3 a]

## **Computation and Estimation**

### **(Focus: Computation and Fraction Operations)**

- 3.8 ~~3.4~~ The student will estimate solutions to and solve single and multistep problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping using various computational methods, including calculators, paper and pencil, mental computation, and estimation. [Move to Curriculum Framework]
- 3.9 ~~3.5~~ The student will
- a) ~~recall the multiplication and division facts through the nines twelves table, and the corresponding division facts.~~
  - b) ~~find the related quotients.~~
- 3.10 ~~3.6~~ The student will represent multiplication and division, using area ~~and~~ 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.

- ~~3.11~~ 3.7 The student will add and subtract ~~with~~ proper fractions having like denominators of ~~10~~ 12 or less, ~~using concrete materials and pictorial models representing areas/regions, lengths/measurements, and sets.~~ [Move to Curriculum Framework]
- 3.12 ~~The student will add and subtract with decimals expressed as tenths, using concrete materials, pictorial representations, and paper and pencil.~~ [Moved to new SOL 4.5 c]

## Measurement

### **(Focus: U.S. Customary and Metric Units, Area and Perimeter, Time)**

- ~~3.13~~ 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 coins or bills, and make change.
- 3.14 3.9 The student will estimate and ~~then use actual measuring devices with metric and U.S. Customary~~ U.S. Customary and metric units to measure:
- length - including part of an inch ( $1/2$ ), inches, feet, yards, centimeters, and meters;
  - liquid volume - cups, pints, quarts, gallons, and liters; and
  - weight/mass - ounces, pounds, grams, and kilograms; and
  - area and perimeter.
- 3.10 The student will
- measure the distance around a polygon in order to determine perimeter; and
  - count the number of square units needed to cover a given surface in order to determine area.
- ~~3.15~~3.11 The student will
- tell time to the nearest five-minute interval and to [Moved to new SOL 2.12] the nearest minute, using analog and digital clocks; and
  - determine elapsed time in one-hour increments over a 12-hour period.
- ~~3.16~~ 3.12 The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.
- ~~3.17~~ 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.

## Geometry

### **(Focus: ~~Properties and Congruence~~ Characteristics of Plane and Solid Figures)**

3.18 ~~3.14~~ The student will ~~analyze-identify~~, describe, compare, and contrast ~~analyze~~ characteristics of two-dimensional (plane) and three-dimensional (solid) geometric figures (circle, square, rectangle, triangle, cube, rectangular ~~solid~~ [prism], square pyramid, sphere, cone, and cylinder) ~~and identify by identifying relevant properties-~~ characteristics, including the number of ~~corners, square corners~~ angles, vertices, edges, and the number and shape of faces, using concrete models.

3.19 ~~3.15~~ The student will identify and draw representations of points, line segments, rays, angles, and lines ~~using a ruler or straightedge~~. [Move to Curriculum Framework]

3.20 ~~3.16~~ The student, ~~given appropriate drawings or models~~, [Move to Curriculum Framework] will identify and describe congruent and symmetrical, noncongruent, ~~two-dimensional~~ (plane) figures, ~~using tracing procedures~~. [Move to Curriculum Framework]

## Probability and Statistics

### **(Focus: Applications of Data and Chance)**

3.21 ~~3.17~~ The student, ~~given grid paper~~, will  
 a) collect and organize data ~~on a given topic of his/her choice~~, using observations, measurements, surveys, or experiments; ~~and~~  
b) construct a line plot, a picture graph, or a bar graph to represent the results. the data ~~Each graph will include an appropriate title and key~~. [Move to Curriculum Framework]; ~~and~~  
c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

3.22 ~~The student will read and interpret data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.~~ [Moved to new SOL 3.17 c]

3.23 ~~3.18~~ The student will investigate and describe the concept of probability as chance and list possible results of a given situation.

## Patterns, Functions, and Algebra

### **(Focus: Patterns and Property Concepts)**

3.24 ~~3.19~~ The student will recognize and describe a variety of patterns formed using ~~concrete objects~~, numbers, tables, and pictures, and extend the pattern, using the same or different forms.

- ~~3.25~~ 3.20 The student will
- a) investigate ~~and create patterns involving numbers,~~ [Move to Curriculum Framework] ~~operations (addition and multiplication), and relations that model the identity and the commutative properties for addition and multiplication; and~~
  - b) identify examples of the identity and commutative properties for addition and multiplication; and
  - b)c) demonstrate an understanding of equality ~~by recognizing that the equals sign (=) in an equation links equivalent quantities,~~ [Moved to new SOL 2.22] ~~such as  $4 + 3 = 2 + 6$ .~~ [Move to Curriculum Framework] through the use of the symbols, = and  $\neq$ .

# Grade Four

The fourth-grade standards place emphasis on multiplication and division with whole numbers and solving problems involving addition and subtraction of fractions and decimals by finding common multiples and factors. ~~Students will continue to learn and use the basic multiplication facts. Students will be fluent in the basic multiplication facts through the twelves ~~nines~~-table and the corresponding division facts as they become proficient in multiplying larger numbers. Students also will refine their estimation skills for computations and measurements and investigate relationships between and among simple two-dimensional (plane) figures and three-dimensional (solid) figures.~~ Students will identify and ~~draw~~ describe representations of points, lines, line segments, ~~and rays, and angles, including endpoints and vertices.~~ ~~Students will graph points in the first quadrant in the coordinate plane and extend and duplicate patterns.~~ Concrete materials and two-dimensional representations will be used to solve problems involving perimeter, patterns, probability, and equivalence of fractions and decimals. Students will recognize images of figures resulting from a geometric transformations, such as reflection (~~flip~~), translation (~~slide~~), and rotation (~~turn~~). Students will investigate and describe the associative property for addition and multiplication.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as calculators and computers. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## **Number and Number Sense** **(Focus: Place Value, Fractions, and Decimals)**

- 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.

- 4.2 The student will
- ~~identify, model, and compare and order rational numbers~~ fractions and mixed numbers; ~~using concrete objects and pictures~~ [Move to Curriculum Framework]
  - represent equivalent fractions; and
  - ~~relate fractions to decimals, using concrete objects.~~ [Moved to new SOL 4.3 d]
  - identify the fraction division statement that represents ~~division~~ a fraction.
- 4.3 ~~The student will compare the numerical value of fractions~~ [Moved to new SOL 4.2 a] ~~(with like and unlike denominators) having denominators of 12 or less, using concrete materials.~~ [Move to Curriculum Framework]
- 4.4 4.3 The student will
- read, write, represent, and identify decimals expressed as ~~tenths and hundredths~~ through thousandths;
  - round decimals to the nearest whole number, tenth, and hundredth; ~~and~~
  - compare ~~the value of two~~ and order decimals, ~~using symbols ( $<$ ,  $>$ , or  $=$ ), concrete materials, drawings, and calculators.~~ [Move to Curriculum Framework] ; and
  - given a model, write the decimal and fraction equivalents.

## **Computation and Estimation**

### **(Focus: Factors and Multiples, and Fraction and Decimal Operations)**

- 4.5 4.4 The student will ~~estimate whole number sums and differences and describe the method of estimation. Students will refine estimates, using terms such as *closer to*, *between*, and *a little more than*.~~ [Move to Curriculum Framework]
- estimate sums, differences, products, and quotients ~~for~~ of whole numbers;
  - add, subtract, and multiply whole numbers;
  - divide whole numbers, finding quotients with and without remainders; and
  - solve single and multistep addition, subtraction, and multiplication problems with whole numbers.
- 4.6 ~~The student will add and subtract whole numbers written in vertical and horizontal form, choosing appropriately between paper and pencil methods and calculators.~~ [Move to Curriculum Framework]
- 4.7 ~~The student will find the product of two whole numbers when one factor has two digits or fewer and the other factor has three digits or fewer,~~ [Moved to new SOL 4.4 a] ~~using estimation and paper and pencil. For larger products (a two-digit numeral times a three-digit numeral), estimation and calculators will be used.~~ [Move to Curriculum Framework]
- 4.8 ~~The student will estimate and find the quotient of two whole numbers~~ [Moved to new SOL 4.4 c], ~~given a one-digit divisor.~~ [Move to Curriculum Framework]

- 4.9 4.5 The student will
- a) ~~add and subtract with fractions having like and unlike denominators of 12 [Moved to new SOL 4.5 b] or less, using concrete materials, pictorial representations, and paper and pencil; simplify fractions; [Moved to new SOL 4.5 b] determine common multiples and factors, including least common multiple and greatest common factor [Moved from new SOL 5.3a.] of up to two fractions;~~
  - b) ~~add and subtract with decimals [Moved to new SOL 4.5 c] through thousandths, using concrete materials, pictorial representations, and paper and pencil; and [Move to Curriculum Framework] add and subtract with fractions having like and unlike denominators whose denominators are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fraction using common multiples and factors;~~
  - c) ~~solve problems involving addition and subtraction with fractions [Moved to new SOL 4.5 d] having like and unlike denominators of 12 or less [Move to Curriculum Framework] and with decimals [Moved to new SOL 4.5 d] expressed through thousandths, using various computational methods, including calculators, paper and pencil, mental computation, and estimation [Move to Curriculum Framework] add and subtract with decimals; and~~
  - d) solve single and multistep practical problems involving addition and subtraction with fractions and with decimals.

## Measurement

### **(Focus: Equivalence between U.S. Customary and Metric Units)**

- 4.10 4.6 The student will
- a) ~~estimate and measure weight/mass, using actual measuring devices, [Move to Curriculum Framework] and describe the results in U.S. Customary/metric units as appropriate, including ounces, pounds, tons, grams, and kilograms [Move to Curriculum Framework]; and~~
  - b) ~~identify equivalent measurements between units within the U.S. Customary system (ounces, and pounds, and tons, and between units within the metric system (grams and kilograms)); and~~
  - e) ~~estimate the conversion of ounces and grams and pounds and kilograms, using approximate comparisons (1 ounce is about 28 grams, or 1 gram is about the weight of a paper clip; 1 kilogram is a little more than 2 pounds).\*~~  
[Moved to new SOL 6.9]

*\* The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

~~4.11~~ 4.7 The student will

- a) estimate and measure length, ~~using actual measuring devices~~, and determine the result in both metric and U.S. Customary ~~units including part of an inch ( $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{1}{8}$ ), inches, feet, yards, miles, millimeters, centimeters, and meters~~ [Move to Curriculum Framework]; 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). ~~;~~ and
- c) ~~estimate the conversion of inches and centimeters, yards and meters, and miles and kilometers, using approximate comparisons (1 inch is about 2.5 centimeters, 1 meter is a little longer than 1 yard, 1 mile is slightly farther than 1.5 kilometers, or 1 kilometer is slightly farther than half a mile).~~\*  
[Moved to new SOL 6.9]

*\* The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

4.12 4.8 The student will

- a) estimate and measure liquid volume, ~~using actual measuring devices~~ [Move to Curriculum Framework] and using metric and describe the results in U.S. Customary; and
- b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons). ~~and between units within the metric system (milliliters and liters)~~; and
- c) ~~estimate the conversion of quarts and liters, using approximate comparisons (1 quart is a little less than 1 liter, 1 liter is a little more than 1 quart).~~\* [Moved to new SOL 6.9]

*\* The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U. S. Customary and metric units.*

~~4.13~~ The student will

- a) ~~identify and describe situations representing the use of perimeter and area;~~  
[Moved to new SOL ~~5.9~~ 5.8a] and
- b) ~~use measuring devices to find perimeter in both standard and nonstandard units of measure.~~[Moved to new SOL ~~5.9~~ 5.8a]

4.9 The student will determine elapsed time in hours and minutes within a 12-hour period.

## Geometry

### (Focus: Representations and Polygons)

- 4.14 4.10 The student will ~~investigate and describe the relationships between and among points, lines, line segments, and rays.~~
- ~~identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices; and~~
  - ~~identify representations of lines that illustrate intersection, parallelism, and perpendicularity. ~~and~~~~
  - ~~describe the path of shortest distance between two points on a plane surface.~~ [Move to Curriculum Framework to support new SOL 4.10a]
- 4.15 The student will
- ~~identify and draw representations of points, lines, line segments, rays, and angles, using a straightedge or ruler; and~~ [Moved to new SOL 4.10 a]
  - ~~describe the path of shortest distance between two points on a flat surface.~~ [Move to new SOL 4.10 e Curriculum Framework in support of new SOL 4.10 a]
- 4.16 The student will ~~identify and draw representations of lines that illustrate intersection, parallelism, and perpendicularity.~~ [Moved to new SOL 4.10 b]
- 4.17 4.11 The student will
- ~~analyze and compare the properties of two-dimensional (plane) geometric figures (circle, square, rectangle, triangle, parallelogram, and rhombus) and three-dimensional (solid) geometric figures (sphere, cube, and rectangular solid [prism]);~~ [Moved to new SOL 3.14]
  - ~~identify congruent and noncongruent shapes; and~~ [Moved to new SOL 3.16]
    - ~~investigate congruence of plane figures after geometric transformations such as reflection (~~flip~~), translation (~~slide~~), and rotation (~~turn~~), using mirrors, paper folding, and tracing; and~~
    - ~~recognize the images of figures resulting from a geometric transformations such as translation (~~slide~~), reflection (~~flip~~), ~~or~~ and rotation (~~turn~~).~~
- 4.18 The student will ~~identify the ordered pair for a point and locate the point for an ordered pair in the first quadrant of a coordinate plane.~~ [Moved to new SOL 6.11]
- 4.12 The student will
- ~~define polygon; and~~
  - ~~identify polygons with 10 or fewer sides.~~

## Probability and Statistics

### (Focus: Outcomes and Congruent and Noncongruent Regions)

- 4.19 4.13 The student will
- ~~a) predict the likelihood of an outcomes of a simple event; and using the terms *certain, likely, unlikely, impossible* [Move to new SOL 2.18]~~
  - ~~b) determine the probability probabilities of a given simple event, using concrete materials. geometric representations with congruent and noncongruent regions; and~~
  - ~~e) b) represent probability as a number between 0 and 1, inclusive.~~
- 4.20 4.14 The student will collect, organize, ~~and~~ display, and interpret data ~~in line and bar graphs with scale increments of one or greater than one~~ [Move to Curriculum Framework] ~~and use the display to interpret the results, draw conclusions, and make predictions~~ from a variety of graphs.

## Patterns, Functions, and Algebra

### (Focus: Geometric Patterns, Equality, Properties)

- 4.21 4.15 The student will recognize, create, and extend numerical and geometric patterns; ~~using concrete materials, number lines, symbols, tables, and words.~~ [Move to Curriculum Framework]
- 4.22 4.16 The student will
- ~~a) recognize and demonstrate the meaning of equality in an equation, using symbols representing numbers, operations, and relations [e.g.,  $3 + 5 = 5 + 3$  and  $15 + (35 + 16) = (15 + 35) + 16$ ] [Move to Curriculum Framework]; and~~
  - ~~b) investigate and describe the associative property for addition and multiplication.~~

# Grade Five

The fifth-grade standards place emphasis on ~~developing proficiency in using whole numbers~~ number sense with whole numbers, fractions, and decimals, including ~~This focus includes concepts of prime and composite numbers, finding common multiples and factors, identifying even and odd numbers with and without remainders and solving problems using order of operations for positive whole numbers.~~ Students will develop proficiency in the use of fractions, and decimals to solve problems. Students will collect, display, and analyze data in a variety of ways and solve probability problems, using a sample space or tree diagram. Students also will solve problems involving volume, area, and perimeter. Students will be introduced to variable expressions and open sentences, and will model one-step linear equations in one variable using addition and subtraction. Students will investigate and recognize the distributive property. All of these skills will assist in the development of the algebraic concepts needed for success in pre-algebra at the middle level grades.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as calculators and computers. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## Number and Number Sense

### **(Focus: Prime and Composite Numbers and Rounding Decimals)**

- 5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.
- ~~read, write, and identify the place values of decimals through thousandths;~~
  - ~~round decimal numbers to the nearest tenth or hundredth; and~~
  - ~~compare the values of two decimals through thousandths, using the symbols  $>$ ,  $<$ , or  $=$ .~~ [Moved to new SOL 4.3]

- 5.2 The student will
- ~~recognize and name commonly used fractions (halves, fourths, fifths, eighths, and tenths) [Move to Curriculum Framework] in their equivalent decimal form and vice versa; and~~
  - ~~compare and order a given set of fractions and decimals from least to greatest and greatest to least. Fractions will include like and unlike denominators limited to 12 or less, and mixed numbers. [Move to Curriculum Framework]~~

- 5.3 The student will
- ~~find common multiples and factors, including least common multiple and greatest common factor. [Moved to SOL 4.5a].~~
  - ~~a) identify and describe the characteristics of prime and composite numbers; and~~
  - ~~b) identify and describe the characteristics of even numbers as having no remainder when divided by two and odd numbers as having a remainder of one when divided by two.~~

## **Computation and Estimation**

### **(Focus: Multistep Applications and Order of Operations)**

- ~~5.3~~ 5.4 The student will
- ~~create and solve single and multistep practical problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers, using paper and pencil, estimation, mental computation, and calculators. [Move to Curriculum Framework]; and.~~
  - ~~find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths. [Move to new SOL 5.5 a]~~
- 5.4 The student will find the sum, difference, and product of two numbers expressed as decimals through thousandths, [Moved to new SOL ~~5.4~~ 5.5 a] using an appropriate method of calculation, including paper and pencil, estimation, mental computation, and calculators. [Move to Curriculum Framework]
- ~~5.5~~ The student, given a dividend of four digits or fewer and a divisor of two digits or fewer, will find the quotient and remainder.
- ~~5.6~~ 5.5 The student<sub>7</sub> will
- ~~find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and~~
  - ~~create and solve single and multistep practical problems involving decimals given a dividend expressed as a decimal through thousandths and a single-digit divisor, will find the quotient.~~
- ~~5.7~~ 5.6 The student will solve single and multistep practical problems involving addition and subtraction with fractions and mixed numbers, ~~with and without regrouping~~, and express answers in simplest form. ~~Problems will include like and unlike denominators limited to 12 or less. [Move to Curriculum Framework]~~

~~5.8~~ ~~5.7~~ The student will ~~evaluate whole number numerical expressions~~ ~~apply~~ using the ~~rules~~ ~~for the order of operations limited to positive whole numbers including parentheses,~~ addition, subtraction, multiplication, and division ~~to solve problems.~~

## Measurement

### **(Focus: Perimeter, Area, Volume, and Equivalent Measures)**

- 5.8 ~~5.9~~ ~~5.8~~ The student will
- ~~describe and determine the~~ find perimeter, of a polygon and the area, and volume of a square, rectangle, and right triangle, given the appropriate measures. in standard units of measure;
  - ~~differentiate between perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation;~~
  - identify equivalent measurements within the metric system;
  - estimate and then measure to solve problems using U.S. Customary and metric units; and
  - choose an appropriate unit of measure for a given situation involving measurement using U.S. Customary and metric units.
- 5.9 ~~5.10~~ ~~5.9~~ The student will identify and describe the diameter, radius, chord, and circumference of a circle.
- 5.10 ~~The student will differentiate between perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation. [Moved to new SOL ~~5.9~~ 5.8b]~~
- 5.11 ~~The student will choose an appropriate measuring device and unit of measure to solve problems involving measurement of [Moved to new SOL ~~5.9~~ 5.8e]~~
- ~~length part of an inch ( $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{1}{8}$ ), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers; [Moved to new SOL ~~5.9~~ 5.8d]~~
  - ~~weight/mass ounces, pounds, tons, grams, and kilograms; [Moved to new SOL ~~5.9~~ 5.8d]~~
  - ~~liquid volume cups, pints, quarts, gallons, milliliters, and liters; [Moved to new SOL ~~5.9~~ 5.8 d]~~
  - ~~area square units; and [Moved to new SOL ~~5.9~~ 5.8d]~~
  - ~~temperature Celsius and Fahrenheit units. [Moved to new SOL ~~5.9~~ 5.8d]~~
- ~~Problems also will include estimating the conversion of Celsius and Fahrenheit units relative to familiar situations (water freezes at  $0^{\circ}\text{C}$  and  $32^{\circ}\text{F}$ , water boils at  $100^{\circ}\text{C}$  and  $212^{\circ}\text{F}$ , normal body temperature is about  $37^{\circ}\text{C}$  and  $98.6^{\circ}\text{F}$ ). [Move to Curriculum Framework]~~
- 5.12 ~~5.11~~ ~~5.10~~ The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.
- 5.13 ~~5.12~~ ~~5.11~~ The student will measure and draw right, acute, and obtuse, and straight angles and triangles, using appropriate tools. [Move to Curriculum Framework]

## Geometry

### (Focus: Classification and Subdividing)

- 5.14 ~~5.13~~ 5.12 The student will classify
- ~~a) angles and triangles as right, acute, or obtuse, or straight; and~~
  - ~~b) triangles as right, acute, obtuse, equilateral, scalene, or isosceles.~~
- 5.15 ~~5.14~~ 5.13 The student, using two-dimensional (plane) figures, (square, rectangle, triangle, parallelogram, rhombus, kite, and trapezoid) will
- ~~a) recognize, identify, describe, and analyze their properties in order to develop definitions of these plane figures; and~~
  - ~~b) identify and explore congruent, noncongruent, [Moved to new SOL 3.16] and similar figures; [Moved to new SOL 7.6]~~
  - ~~c) b) investigate and describe the results of combining and subdividing shapes plane figures;~~
  - ~~d) identify and describe a line of symmetry; and [Moved to new SOL 2.15]~~
  - ~~e) recognize the images of figures resulting from geometric transformations such as translation (slide), reflection (flip), or rotation (turn). [Moved to new SOL 4.11 b]~~
- 5.16 The student will identify, compare, and analyze properties of three-dimensional (solid) geometric shapes (cylinder, cone, cube, square pyramid, and rectangular prism): [Moved to new SOL 3.14]

## Probability and Statistics

### (Focus: Outcomes and Measures of Center)

- 5.17 ~~5.15~~ 5.14 The student will
- ~~a) make predictions and solve problems involving determine the probability of a single event an outcome by using tree diagrams or by constructing a sample space representing all possible results; and~~
  - ~~b) predict the probability of outcomes of simple experiments, representing it with fractions or decimals from 0 to 1, and test the prediction; [Moved to new SOL 4.13 c] and~~
  - ~~c) b) create a problem probability statement involving probability and based on information from a given problem situation. Students will not be required to solve the created problem statement. [Move to Curriculum Framework]~~
- 5.18 ~~5.16~~ 5.15 The student will, given a problem situation, collect, organize, and ~~display a set of numerical~~ interpret data in a variety of forms; using ~~bar graphs,~~ stem-and-leaf plots, and line graphs, ~~to draw conclusions and make predictions.~~
- 5.19 ~~5.17~~ 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.~~

## **Patterns, Functions, and Algebra**

### **(Focus: Equations and Properties)**

~~5.20~~ ~~5.18~~ 5.17 The student will analyze the structure of numerical and geometric patterns (how they change or grow), describe the relationship found in a number patterns (how they change or grow) and express the relationship, using words, tables, graphs, or a mathematical sentence. Concrete materials and calculators will be used. [Move to Curriculum Framework]

5.21 ~~5.19~~ 5.18 The student will

- a) investigate and describe the concept of variable;
- b) use a variable expression to represent a given verbal quantitative expression involving one operation; and
- e) 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.

5.22 The student will create a problem situation based on a given open sentence using a single variable. [Moved to new SOL ~~5.19~~ 5.18 d]

~~5.20~~ 5.19 The student will investigate and recognize the distributive property of multiplication over addition.

# Grade Six

The sixth-grade standards place continued emphasis on the study of whole numbers, decimals, and rational numbers (fractions). Students will use ratios to compare data sets; make conversions within a given measurement system; classify three-dimensional figures; collect, analyze, display, and interpret data, using a variety of graphical and statistical methods; begin using integers and percents; find the probability of an event; and investigate numerical and geometric patterns. Students will be introduced to algebraic terms and solving algebraic equations in one variable.

The sixth-grade standards are a transition from the emphasis placed on whole number arithmetic in the elementary grades to foundations of algebra. The standards emphasize rational numbers. Students will use ratios to compare data sets; recognize decimals, fractions and percents as ratios; solve single and multistep problems using rational numbers; and gain a foundation in the understanding of integers. Students will solve linear equations and use algebraic terminology. Students will solve problems involving area, perimeter and surface area, work with  $\pi$  (pi), and focus on the relationships among the properties of quadrilaterals. In addition, students will focus on applications of probability and statistics.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as fraction calculators, computers, and spreadsheets, ~~laser discs, and videos~~. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations. Students will also identify real-life applications of the mathematical principles they are learning and apply these to science and other disciplines they are studying.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## Number and Number Sense

### (Focus: Relationships among Fractions, Decimals and Percents)

6.1 ~~The student will identify representations of a given percent and describe orally and in writing the equivalence relationships among fractions, decimals, and percents.~~  
[Moved to new SOL 6.2 b and c]

6.2 6.1 The student will describe and compare ~~two sets of~~ data, using ratios, and will use appropriate notations, such as  ~~$\frac{a}{b}$~~   $\frac{a}{b}$ ,  $a$  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.
- ~~6.3~~      ~~The student will~~  
 a) ~~find common multiples and factors, including least common multiple and greatest common factor; [Moved to new SOL 4.5 a]~~  
 b) ~~identify and describe prime and composite numbers; and identify and describe the characteristics of even and odd integers. [Moved to new SOL 5.3]~~
- ~~6.4~~      ~~The student will compare and order whole numbers, [Moved to new SOL 3.1 c] fractions, and decimals, [Moved to new SOL 5.2 and new SOL 6.2] using concrete materials, drawings or pictures, and mathematical symbols. [Move to Curriculum Framework]~~
- ~~6.5~~ 6.3      The student will  
 a) identify; and represent integers; ;  
 b) order; and compare integers; and  
 c) identify and describe absolute value of integers.
- 6.4      The student will demonstrate multiple representations of multiplication and division of fractions.
- 6.5      The student will investigate and describe concepts of positive exponents and perfect squares.

## **Computation and Estimation**

### **(Focus: Applications of Operations with Rational Numbers)**

- 6.6      The student will:  
 a) ~~solve problems that involve addition, subtraction, multiplication, multiply and/or division divide~~ fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less, and express their answers in simplest form [Rewritten and moved to new SOL 6.6 b]; and  
 b) ~~find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit~~ estimate solutions and then solve single and multistep practical problems that involve addition, subtraction, multiplication and division of fractions.
- 6.7      The student will ~~use estimation strategies to solve~~ single and multistep practical problems involving whole numbers, decimals, and fractions (rational numbers)- addition, subtraction, multiplication and division of decimals. [Fractions moved to new SOL 6.6 a; whole numbers moved to new SOL 5.4]

- 6.8 ~~The student will solve multistep consumer application problems involving fractions and decimals [Moved to new SOL 6.7] and present data and conclusions in paragraphs, tables, or graphs. Planning a budget will be included. [Move to Curriculum Framework]~~
- 6.8 The student will ~~apply order of operations in solving equations.~~ evaluate whole number numerical expressions using the order of operations.

## Measurement

### **(Focus: Problem Solving with Area, Perimeter, Volume and Surface Area)**

- 6.9 ~~The student will compare and convert units of measure for length, area, weight/mass, and volume within the U.S. Customary system and the metric system and estimate conversions between units in each system:~~
- ~~length — part of an inch ( $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{1}{8}$ ), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers;~~
  - ~~weight/mass — ounces, pounds, tons, grams, and kilograms;~~
  - ~~liquid volume — cups, pints, quarts, gallons, milliliters, and liters; and~~
  - ~~area — square units. \* [Move to Curriculum Framework]~~
- ~~\* The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units. make ballpark comparisons between the U.S. Customary System of measurement and the metric system.~~
- 6.10 ~~The student will estimate and then determine length, weight/mass, area, and liquid volume/capacity, using standard and nonstandard units of measure. [Moved to new SOL 5.8]~~
- 6.10 The student will
- define pi ( $\pi$ ) as the ratio of the circumference of a circle to its diameter;
  - solve practical problems involving circumference and area of a circle given the diameter or radius;
  - solve practical problems involving area and perimeter; and
  - describe and determine the volume and surface area of a rectangular prism.
- 6.11 ~~The student will determine if a problem situation involving polygons of four or fewer sides represents the application of perimeter or area and apply the appropriate formula. [Moved to new SOL 5.8 b]~~
- 6.12 ~~The student will~~
- ~~solve problems involving the circumference and/or area of a circle when given the diameter or radius; and [Moved to new SOL 6.10 b]~~
  - ~~derive approximations for pi ( $\pi$ ) from measurements for circumference and diameter, [Moved to new SOL 6.10 a]-using concrete materials or computer models. [Move to Curriculum Framework]~~

- 6.13 ~~The student will~~
- ~~estimate angle measures, using  $45^\circ$ ,  $90^\circ$ , and  $180^\circ$  as referents, and use the appropriate tools to measure the given angles; and~~
  - ~~measure and draw right, acute, and obtuse angles and triangles. [Moved to new SOL 5.11 and new SOL 5.12.]~~

## **Geometry**

### **(Focus: Properties and Relationships)**

- 6.11 The student will
- identify the coordinates of a point in a coordinate plane; and
  - graph ordered pairs in a coordinate plane.
- 6.14 ~~The student will identify, classify, and describe the characteristics of plane figures, describing their similarities, differences, and defining properties. [Moved to new SOL 6.13]~~
- 6.15 ~~6.12~~ The student will determine congruence of segments, angles, and polygons by direct comparison, given their attributes. Examples of noncongruent and congruent figures will be included. [Move to Curriculum Framework]
- 6.16 ~~The student will construct the perpendicular bisector of a line segment and an angle bisector.~~
- 6.17 ~~The student will sketch, construct models of, and classify solid figures (rectangular prism, cone, cylinder, and pyramid).~~
- 6.13 The student will describe and identify properties of quadrilaterals.

## **Probability and Statistics**

### **(Focus: Practical Applications of Statistics)**

- 6.18 ~~6.14~~ The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including
- line, bar, and [Moved to new SOL 5.15] construct circle graphs; ~~and histograms~~
  - stem and leaf plots; [Moved to new SOL 5.15] and draw conclusions and make predictions using circle graphs ~~and histograms~~; and
  - box and whisker plots. [Moved to A.10] compare and contrast graphs which present the same information from the same data set.
- Circle graphs will be limited to halves, fourths, and eighths. [Move to Curriculum Framework]
- 6.19 ~~6.15~~ The student will
- describe the mean, median, and mode as measures of central tendency [Moved to new SOL 5.16]; balance point; and
  - describe the range, and determine their meaning for a set of data. [Moved to new SOL 5.16] decide which measure of center is appropriate for a given situation purpose.

- ~~6.20~~ 6.16 The student will
- ~~make a sample space for selected experiments and represent it in the form of a list, chart, picture, or tree diagram; [Moved to new SOL 5.14] distinguish between compare and contrast dependent and independent events; and~~
  - ~~determine and interpret the probability of an event occurring from a given sample space and represent the probability as a ratio, decimal or percent, as appropriate for the given situation. probabilities for dependent and independent events.~~

## **Patterns, Functions, and Algebra**

### **(Focus: Variable Equations and Properties)**

- ~~6.21~~ 6.17 The student will ~~investigate, describe,~~ identify and extend numerical and geometric patterns, including triangular numbers, patterns formed by powers of 10, and arithmetic sequences. [Move to Curriculum Framework]

- ~~6.22~~ The student will ~~investigate and describe concepts of positive exponents, perfect squares, [Moved to new SOL 6.5] square roots, and, for numbers greater than 10, scientific notation. [Moved to new SOL 7.1] Calculators will be used to develop exponential patterns. [Move to Curriculum Framework]~~

- ~~6.23~~ 6.18 The student will
- ~~model and solve algebraic equations, using concrete materials; [Moved to new SOL 5.18]~~
  - ~~solve one-step linear equations in one variable, involving whole number coefficients and positive rational solutions; and~~
  - ~~use the following algebraic terms appropriately: *variable, coefficient, term, and equation.*~~

- 6.19 The student will investigate and recognize
- the identity properties for addition and multiplication;
  - the multiplicative property of zero; and
  - the inverse ~~properties~~ property for ~~addition and~~ multiplication.

- 6.20 The student will graph inequalities on a number line.

# Grade Seven

~~The seventh-grade standards place emphasis on solving problems involving consumer applications, using proportional reasoning, and gaining proficiency in computations with integers. The students will gain an understanding of the properties of real numbers, solve one-step linear equations and inequalities, and use data analysis techniques to make inferences, conjectures, and predictions. Two- and three-dimensional representations, graphing transformations in the coordinate plane, and probability will be extended.~~

The seventh-grade standards continue to emphasize the foundations of algebra. Students who successfully complete the seventh-grade standards should be prepared to study Algebra I in grade eight. Topics in grade seven include proportional reasoning, integer computation, solving two-step linear equations, and recognizing different representations for relationships. Students will apply the properties of real numbers in solving equations, solve inequalities, and use data analysis techniques to make inferences, conjectures, and predictions.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies such as ~~fraction~~ calculators, computers, and spreadsheets, ~~laser discs, and videos~~. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations. Students will also identify real-life applications of the mathematical principles they are learning and apply these to science and other disciplines they are studying.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## Number and Number Sense

### (Focus: ~~Scientific Notation and Square Roots~~ Proportional Reasoning)

- 7.1 The student will
- investigate and describe the concept of negative exponents for powers of ten; compare, order, and determine equivalent relationships between fractions, decimals, and percents;
  - ~~including use of~~ determine scientific notation for numbers greater than ~~10~~ zero;
  - compare and order fractions, decimals, percents and numbers written in scientific notation;
  - determine square roots; and
  - identify and describe absolute value for rational numbers.
- 7.2 ~~The student will simplify expressions that contain rational numbers (whole numbers, fractions, and decimals) and positive exponents, using order of operations, [Moved to new SOL 6.8] mental mathematics, and appropriate tools. [Move to Curriculum Framework]~~
- 7.3 ~~The student will identify and apply the following properties of operations with real numbers:~~
- ~~the commutative and associative properties for addition and multiplication; [Moved to new SOL 3.20 a and new SOL 4.16]~~
  - ~~the distributive property; [Moved to new SOL 5.19]~~
  - ~~the additive and multiplicative identity properties; [Moved to new SOL 6.19 a]~~
  - ~~the additive and multiplicative inverse properties; and [Moved to new SOL 6.19 c]~~
  - ~~the multiplicative property of zero. [Moved to new SOL 6.19 b]~~
- 7.2 The student will describe and represent arithmetic and geometric sequences using variable expressions.

## Computation and Estimation

### (Focus: ~~Application of Rational Number~~ Integer Operations and Proportional Reasoning)

- 7.4 The student will
- ~~solve practical problems using rational numbers (whole numbers, fractions, decimals) and percents; and [Moved to new SOL 7.4]~~
  - ~~solve consumer application problems involving tips, discounts, sales tax, and simple interest. [Move to Curriculum Framework]~~

- ~~7.5~~ ~~7.2~~ 7.3 The student will
- ~~formulate rules for model addition, subtraction, multiplication and division of integers; and~~
  - ~~solve practical problems involving basic operations (addition, subtraction, multiplication, and division) with integers. [Moved to new SOL 7.4]~~ add, subtract, multiply, and divide integers.
- 7.6 The student will use proportions to solve practical problems, which may include scale drawings, that contain rational numbers (whole numbers, fractions, and decimals) and percents. [Move to Curriculum Framework to support new SOL 7.4]
- ~~7.3~~ 7.4 The student will solve single and multistep practical problems using ~~rational numbers~~ proportional reasoning.

## Measurement

### **(Focus: ~~Volume and Surface Area~~ Proportional Reasoning)**

- 7.7 The student, given appropriate dimensions, will
- ~~estimate and find the area of polygons by subdividing them into rectangles and right triangles; and [Moved to new SOL 8.11]~~
  - ~~apply perimeter and area formulas in practical situations. [Moved to new SOL 6.10 c]~~
- 7.8 ~~7.4~~ 7.5 The student will
- ~~investigate and describe volume and surface area of cylinders; and~~
  - ~~solve practical problems involving the volume and surface area of rectangular prisms and rectangular prisms and [Moved to SOL 6.10 d] cylinders; and using concrete materials and practical situations to develop formulas. [Move to Curriculum Framework]~~
  - describe how changing one measured attribute of a rectangular prism affects its volume and surface area.
- 7.6 The student will determine if plane figures – quadrilaterals and triangles – are similar and write proportions to express the relationships between corresponding parts of similar figures.

## Geometry

### **(Focus: Relationships Between Figures)**

- ~~7.9~~ ~~7.5~~ 7.7 The student will compare and contrast the following quadrilaterals based on properties: parallelogram, rectangle, square, rhombus, and trapezoid. ~~Deductive reasoning and inference will be used to classify quadrilaterals. [Move to Curriculum Framework]~~
- 7.10 The student will identify and draw the following polygons: pentagon, hexagon, heptagon, octagon, nonagon, and decagon. [Moved to new SOL 4.12]

- 7.11 ~~7.6~~ ~~The student will determine if geometric plane figures (quadrilaterals and triangles) are similar and write proportions to express the relationships between corresponding parts of similar figures. [Moved to new SOL 7.6]~~
- 7.12 ~~The student will identify and graph ordered pairs in the four quadrants of a coordinate plane. [Moved to new SOL 6.11]~~
- 7.13 ~~7.7~~ 7.8 The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing ~~the coordinates of the vertices of the transformed polygon and sketching the resulting figure in the coordinate plane.~~

## **Probability and Statistics**

### **(Focus: Applications of Statistics and Probability)**

- 7.14 ~~7.8~~ 7.9 The student will investigate and describe the difference between the probability of an event found through simulation versus experimental and theoretical probability of that same an event.
- 7.15 ~~7.9~~ 7.10 The student will ~~identify and describe the number of possible arrangements of several objects, using a tree diagram or~~ [Moved to new SOL 5.14] determine the probability of compound events using the Fundamental (Basic) Counting Principle.
- 7.16 ~~The student will create and solve problems involving the measures of central tendency (mean, median, mode) and the range of a set of data.~~
- 7.17 ~~7.10~~ 7.11 The student, given data in a practical situation, will ~~collect, analyze, display, and interpret data, using a variety of graphical methods, including~~
- a) ~~frequency distributions; construct and analyze box-and-whisker plots~~ histograms; and
  - b) ~~line plots; compare and contrast data presented in box-and-whisker plots~~ histograms and with other types of graphs presenting information from the same data set.
  - e) histograms; [Moved to new SOL 7.11 a, b]
  - d) stem and leaf plots; [Moved to new SOL 5.15]
  - e) box-and-whisker plots; and [Moved to new SOL A.10]
  - f) scattergrams [Move to Curriculum Framework to support new SOL A.11]
- 7.18 ~~The student will make inferences, conjectures, and predictions based on analysis of a set of data. [Moved to new SOL 7.11]~~

## Patterns, Functions, and Algebra

### (Focus: Linear Equations)

~~7.19~~ ~~7.11~~ 7.12 The student will represent, analyze, and generalize a variety of patterns, including arithmetic sequences and geometric sequences, relationships with tables, graphs, rules, and words, ~~in order to investigate and describe functional relationships.~~

~~7.20~~ ~~7.12~~ 7.13 The student will

- write verbal expressions as algebraic expressions and sentences as equations and vice versa; and
- evaluate algebraic expressions for given replacement values of the variables.

~~7.21~~ The student will use the following algebraic terms appropriately: ~~equation, inequality, and expression.~~

~~7.22~~ ~~7.13~~ 7.14 The student will

- solve one- ~~step~~ and two-step linear equations ~~and inequalities~~ [Moved to new SOL 7.15] in one variable ~~with strategies involving inverse operations and integers, using concrete materials, pictorial representations, and paper and pencil~~ [Move to Curriculum Framework]; and
- solve practical problems requiring the solution of ~~a one- or~~ and two-step linear equations.

~~7.14~~ 7.15 The student will

- solve one-step inequalities in one variable; and
- graph solutions to inequalities on the number line.

~~7.15~~ 7.16 The student will ~~identify and~~ apply the following properties of operations with real numbers:

- the commutative and associative properties for addition and multiplication;
- the distributive property;
- the additive and multiplicative identity properties;
- the additive and multiplicative inverse properties; and
- the multiplicative property of zero.

# Grade Eight

The eighth-grade standards are intended to serve two purposes. First, the standards contain both content that reviews or extends concepts and skills learned in previous grades, and Second, they contain new content that prepares students for more abstract concepts in algebra and geometry. The eighth-grade standards provide students additional instruction and time to acquire the concepts and skills necessary for success in Algebra I. Students will gain proficiency in computation with rational numbers (~~positive and negative fractions, positive and negative decimals, whole numbers, and integers~~) and use proportions to solve a variety of problems. New concepts include solving ~~two-step~~ multistep equations and inequalities, graphing linear equations, visualizing three-dimensional shapes represented in two-dimensional drawings, and applying transformations to geometric shapes in the coordinate plane, ~~and using matrices to organize and interpret data.~~ Students will verify and apply the Pythagorean Theorem and represent relations and functions using tables, graphs, and rules. The eighth-grade standards provide a more solid foundation in Algebra I for those students not ready for Algebra I in grade 8.

While learning mathematics, students will be actively engaged, using concrete materials and appropriate technologies ~~such as fraction calculators, computers, spreadsheets, laser discs, and videos.~~ However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations. Students will also identify real-life applications of the mathematical principles they are learning that can be applied to science and other disciplines they are studying.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## Number and Number Sense (Focus: Relationships within the Real Number System)

- 8.1 The student will
- simplify numerical expressions involving positive ~~and negative~~ exponents, using rational numbers, order of operations, and properties of operations with real numbers; and
  - ~~recognize, represent, compare, and order numbers expressed in scientific notation; and~~ [Moved to new SOL 7.1 c]
  - ~~b) compare and order decimals, fractions, percents, and numbers written in scientific notation.~~
- 8.2 The student will describe orally and in writing the relationship between the subsets of the real number system.

## Computation and Estimation (Focus: Practical Applications of Operations with Real Numbers)

- 8.3 The student will
- solve practical problems involving rational numbers, percents, ratios, and proportions; and ~~Problems will be of varying complexities and will involve real-life data, such as finding a discount and discount prices and balancing a checkbook.~~ [Move to Curriculum Framework]
  - determine the percent increase or decrease for a given situation.
- ~~8.4~~ ~~The student will determine the percent increase or decrease for a given situation.~~  
[Moved to new SOL 8.3]
- ~~8.4~~ ~~8.5~~ 8.4 The student will apply the order of operations to evaluate algebraic expressions for given replacement values of the variables. ~~Problems will be limited to positive exponents.~~ [Move to Curriculum Framework]
- ~~8.5~~ ~~8.6~~ 8.5 The student, ~~given a whole number from 0 to 100,~~ will
- ~~identify~~ determine whether a given whole number ~~it as~~ is a perfect square; and
  - ~~or~~ find the two consecutive whole numbers between which ~~the~~ a square root lies.

## Measurement (Focus: Problem Solving)

- ~~8.6~~ ~~8.7~~ 8.6 The student will
- verify by measuring and describe the relationships among vertical angles, adjacent angles, supplementary angles, and complementary angles; and
  - will measure and draw angles of less than 360°.

- ~~8.7~~ ~~8.8~~ 8.7 The student will
- ~~investigate and solve practical problems involving volume and surface area of rectangular solids (prisms), cylinders, cones, and pyramids; and~~ investigate and solve practical problems involving volume and surface area of rectangular solids (prisms), cylinders, cones, and pyramids; and
  - ~~describe how changing one measured attribute of the figure affects the volume and surface area.~~ describe how changing one measured attribute of the figure affects the volume and surface area.

## **Geometry**

### **(Focus: Problem Solving with 2- and 3-Dimensional Figures)**

- ~~8.8~~ ~~8.9~~ 8.8 The student will
- ~~apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) [Move to Curriculum Framework] to geometric plane figures; and represented on graph paper. The student will~~ apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) [Move to Curriculum Framework] to geometric plane figures; and represented on graph paper. The student will
  - ~~identify applications of transformations, such as tiling, fabric design, art, and sealing. [Move to Curriculum Framework]~~ identify applications of transformations, such as tiling, fabric design, art, and sealing. [Move to Curriculum Framework]

- ~~8.9~~ ~~8.10~~ 8.9 The student will construct a three-dimensional model, given the top, side, and/or bottom views. side and front views.

- ~~8.10~~ ~~8.11~~ 8.10 The student will
- ~~verify the Pythagorean Theorem, using diagrams, concrete materials, and measurement; and [Move to Curriculum Framework]~~ verify the Pythagorean Theorem, using diagrams, concrete materials, and measurement; and [Move to Curriculum Framework]
  - ~~apply the Pythagorean Theorem to find the missing length of a side of a right triangle when given the lengths of the other two sides. [Move to Curriculum Framework]~~ apply the Pythagorean Theorem to find the missing length of a side of a right triangle when given the lengths of the other two sides. [Move to Curriculum Framework]

- ~~8.12~~ 8.11 The student will solve practical area and perimeter problems involving composite, plane figures.

## **Probability and Statistics**

### **(Focus: Statistical Analysis of Graphs and Problem Situations)**

- ~~8.11~~ ~~8.13~~ 8.12 The student will ~~analyze problem situations, including games of chance, board games, or grading scales, [Move to Curriculum Framework] and make predictions, using knowledge of probability.~~ determine the probability of independent and dependent events with and without replacement.

- ~~8.12~~ ~~8.14~~ 8.13 The student will
- ~~make comparisons, predictions, and inferences, using information displayed in frequency distributions; box and whisker plots; scattergrams; line, bar, circle, and picture graphs; and histograms. graphs; [Move to Curriculum Framework]; and~~ make comparisons, predictions, and inferences, using information displayed in frequency distributions; box and whisker plots; scattergrams; line, bar, circle, and picture graphs; and histograms. graphs; [Move to Curriculum Framework]; and
  - ~~construct and analyze scatterplots.~~ construct and analyze scatterplots.

- ~~8.13~~ The student will use a matrix to organize and describe data.

## Patterns, Functions, and Algebra (Focus: Linear Relationships)

- 8.14 ~~8.15~~ 8.14 The student will
- ~~describe and represent a given relationship~~ relations and functions, ~~using in tables, graphs, word and rules form; and~~
  - ~~relate and compare tables, graphs, and rules as different forms of representation for relationships.~~ make connections between any two forms (tables, graphs, word, and rules) of a given relationship.
- 8.15 ~~8.16~~ 8.15 The student will
- ~~solve two- multistep linear equations and inequalities in one with in one variables; on one or and two sides of the equation using concrete materials, pictorial representations, and paper and pencil.~~ [Move to Curriculum Framework]
  - solve two-step linear inequalities and graph the results on a number line; and
  - identify properties of operations used to solve an equation.
- 8.16 ~~8.17~~ 8.16 The student will graph a linear equation in two variables, ~~in the coordinate plane, using a table of ordered pairs.~~
- 8.17 The student will create and solve problems, using proportions, formulas, and functions. [Moved to new SOL 8.3]
- ~~8.18~~ 8.17 The student will ~~use the following algebraic terms appropriately: domain, range, independent variable, and dependent variable.~~ identify the domain, range, independent variable or dependent variable in a given situation.

# Algebra I

The standards below outline the content for a one-year course in Algebra I. All students are expected to achieve the Algebra I standards. When planning for instruction, consideration will be given to the sequential development of concepts and skills by using concrete materials to assist students in making the transition from the arithmetic to the symbolic. Students should be helped to make connections and build relationships between algebra and arithmetic, geometry, and probability and statistics. Connections also should be made to other subject areas through practical applications. This approach to teaching algebra should help students attach meaning to the abstract concepts of algebra.

These standards require students to use algebra as a tool for representing and solving a variety of practical problems. Tables and graphs will be used to interpret algebraic expressions, equations, and inequalities and to analyze functions behavior. ~~Matrices will be used to organize and manipulate data.~~

Graphing calculators, computers, and other appropriate technology tools will be used to assist in teaching and learning. Graphing utilities enhance the understanding of functions; they provide a powerful tool for solving and verifying solutions to equations and inequalities.

Throughout the course, students should be encouraged to ~~talk~~ engage in discourse about mathematics with teachers and other students, use the language and symbols of mathematics in representations and communication, discuss problems and problem solving, and develop ~~their~~ confidence in themselves as mathematics students.

## Expressions and Operations

- A.1 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables.
- A.2 ~~The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables. [Moved to new SOL A.1] Students will choose an appropriate computational technique, such as mental mathematics, calculator, or paper and pencil. [Move to Curriculum Framework]~~
- A.2 The student will perform operations on polynomials, including
- applying the laws of exponents to perform operations on expressions;
  - adding, subtracting, multiplying, and dividing polynomials; and
  - factoring completely first- and second-degree binomials and trinomials in one or two variables. The graphing calculator will be used as a tool for factoring and for confirming algebraic factorizations.
- A.10 ~~The student will apply the laws of exponents to perform operations on expressions [Moved to new SOL A.2 a] with integral exponents, using scientific notation when appropriate. [Move to Curriculum Framework]~~

- A.11 ~~The student will add, subtract, and multiply polynomials and divide polynomials [Moved to new SOL A.2 b] with monomial divisors using concrete objects, pictorial and area representations, and algebraic manipulations. [Move to Curriculum Framework]~~
- A.12 ~~The student will factor completely first- and second-degree binomials and trinomials in one or two variables. [Moved to new SOL A.2 c] The graphing calculator will be used as a tool for factoring and for confirming algebraic factorizations. [Move to Curriculum Framework] [Moved to new SOL A.2 c]~~
- A.13 A.3 The student will express the square root and cube root of whole numbers and the square root of a monomial algebraic expression in simplest radical form, ~~and approximate square roots to the nearest tenth.~~

## Equations and Inequalities

- A.4 The student will solve multistep linear and quadratic equations in ~~and inequalities in one-two~~ variables, including
- solving literal equations (formulas) for a given variable, and ;
  - justifying steps used in simplifying expressions and solving equations and inequalities using field properties, axioms of equality and inequality, and properties of order that are valid for the set of real numbers and its subsets;
  - solving quadratic equations in one variable both algebraically and graphically;
  - solving multistep linear equations algebraically and graphically;
  - solving systems of two linear equations in two variables both algebraically and graphically; and
  - apply 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 ~~equations and~~ inequalities in ~~one two~~ variables, including
- solving multistep linear inequalities algebraically and graphically; and
  - solving real-world problems involving inequalities; and
  - solving systems of inequalities.
- A.1 ~~The student will solve multistep linear equations [Moved to new SOL A.4 d] and inequalities in one variable, [Moved to new SOL A.5] solve literal equations (formulas) for a given variable, [Moved to new SOL A.4 a] and apply these skills to solve practical problems. [Moved to new SOL A.4 f] Graphing calculators will be used to confirm algebraic solutions. [Move to Curriculum Framework] [Moved to new SOL A.4]~~

- A.3 ~~The student will justify steps used in simplifying expressions and solving equations and inequalities. [Moved to new SOL A.4 b] Justifications will include the use of concrete objects; pictorial representations; and the properties of real numbers, equality, and inequality. [Move to Curriculum Framework]~~
- A.9 ~~The student will solve systems of two linear equations in two variables both algebraically and graphically and apply these techniques to solve practical problems. [Moved to new SOL A.4 e] Graphing calculators will be used both as a primary tool for solution and to confirm an algebraic solution. [Move to Curriculum Framework] [Moved to new SOL A.4]~~
- A.14 ~~The student will solve quadratic equations in one variable both algebraically and graphically. [Moved to new SOL A.4 c] Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions. [Move to Curriculum Framework] [Moved to new SOL A.4]~~
- A.6 ~~The student will select, justify, and apply an appropriate technique to graph linear functions equations and linear inequalities in two variables. Techniques will include slope intercept,  $x$  and  $y$  intercepts, graphing by transformation, and the use of the graphing calculator. [Move to Curriculum Framework], 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;~~
  - ~~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; and~~
  - ~~c) graphing linear functions and inequalities in two variables.~~
- A.6 ~~The student will [Moved to new SOL A.6], select justify, and apply an appropriate technique to [Move to Curriculum Framework] graph linear functions and linear inequalities in two variables. [Moved to new SOL A.6 c] Techniques will include slope intercept,  $x$  and  $y$  intercepts, graphing by transformation, and the use of the graphing calculator. [Move to Curriculum Framework]~~
- A.7 ~~The student will determine 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. [Moved to new SOL A.6 a] The graphing calculator will be used to investigate the effect of changes in the slope on the graph of the line. [Move to Curriculum Framework]~~
- A.8 ~~The student will write an 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. [Moved to new SOL A.6 b]~~

## Functions

- 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) intervals in which the function is increasing/decreasing;~~
  - ~~f) e) finding the values of a function for elements in its domain; and~~
  - ~~g) f) making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.~~
- A.5 ~~The student will create and use tabular, symbolic, graphical, verbal, and physical representations [Moved to new SOL A.7 g f] to analyze a given set of data for the existence of a pattern, determine the domain and range of relations, [Moved to new SOL A.7 b.] and identify the relations that are functions. [Moved to new SOL A.7 a.]~~
- A.15 ~~The student will, given a rule, find the values of a function for elements in its domain [Moved to new SOL A.7 f.] and locate the zeros of the function [Moved to new SOL A.7 c.] both algebraically and with a graphing calculator. The value of  $f(x)$  will be related to the ordinate on the graph. [Move to Curriculum Framework]~~
- A.18 A.8 The student will, given a situation in a real-world context, analyze a relation to determine whether a direct or inverse variation exists, and represent a direct variation  
~~algebraically and graphically, if possible, and an inverse variation algebraically.~~

## Statistics

- A.4 ~~The student will use matrices to organize and manipulate data, including matrix addition, subtraction, and scalar multiplication. Data will arise from business, industrial, and consumer situations.~~
- A.17 A.9 The student will, given a set of data, compare and contrast multiple one-variable data sets, using statistical techniques that include measures of central tendency and range, 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.
- A.16 A.11 The student will, given a set of data points, write an equation for a line collect and analyze data, determine the equation of the curve of best fit use the equation in order to make predictions, and solve real-world problems using mathematical models. Mathematical models will include linear and quadratic functions.

# Geometry

This course is designed for students who have successfully completed the standards for Algebra I. All students are expected to achieve the Geometry standards. The course includes, among other things, properties of geometric figures, trigonometric relationships, and reasoning to justify conclusions. Methods of justification will include paragraph proofs, two-column proofs, indirect proofs, coordinate proofs, algebraic methods, and verbal arguments. A gradual development of formal proof is encouraged. Inductive and intuitive approaches to proof as well as deductive axiomatic methods should be used.

This set of standards includes emphasis on two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of applications and some general problem-solving techniques, including algebraic skills, should be used to implement these standards. Calculators, computers, graphing utilities (graphing calculators or computer graphing simulators), dynamic geometry software, and other appropriate technology tools will be used to assist in teaching and learning. Any technology that will enhance student learning should be used.

## Reasoning, Lines, and Transformations

- G.1 The student will construct and judge the validity of a logical argument consisting of a set of premises and a conclusion. This will include
- identifying the converse, inverse, and contrapositive of a conditional statement;
  - translating a short verbal argument into symbolic form;
  - using Venn diagrams to represent set relationships; and
  - using deductive reasoning, ~~including the law of syllogism.~~ [Move to Curriculum Framework]
- G-4 G.2 The student will use the relationships between angles formed by two lines cut by a transversal to
- determine if two lines are parallel; and
  - verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and
  - solve real-world problems involving angles formed when parallel lines are cut by a transversal.
- G-3 ~~The student will solve practical problems involving complementary, supplementary, and congruent angles that include vertical angles, [Moved to new SOL 8.7 a] angles formed when parallel lines are cut by a transversal, [Moved to new SOL G.2] and angles in polygons. [Moved to new SOL G.10]~~

- ~~G-2~~ 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
- investigating and using formulas for finding distance, midpoint, and slope;
  - applying slope to verify and determine if lines are parallel or perpendicular;
  - ~~b)~~ c) investigating symmetry and determining whether a figure is symmetric with respect to a line or a point; and
  - ~~e)~~ d) determining whether a figure has been translated, reflected, ~~or~~ rotated, or dilated using coordinate methods.
- ~~G-11~~ G.4 The student will construct and justify the constructions of
- a line segment congruent to a given line segment;
  - the perpendicular bisector of a line segment;
  - a perpendicular to a given line from a point not on the line;
  - a perpendicular to a given line ~~at~~ through a given point on the line;
  - the bisector of a given angle; ~~and~~;
  - an angle congruent to a given angle; and
  - a line parallel to a given line through a point not on the given line.

## Triangles

- ~~G-6~~ G.5 The student ~~will~~, given information concerning the lengths of sides and/or measures of angles in triangles, will ~~apply the triangle inequality properties to determine whether a triangle exists and to order sides and angles.~~
- order the sides by length, given the angle measures;
  - order the angles by degree measure, given the side lengths;
  - determine whether a triangle exists; and
  - determine the range in which the length of the third side must lie.
- These concepts will be considered in the context of ~~practical~~ real-world situations.
- ~~G-5~~ G.6 The student will
- ~~investigate and identify congruence and similarity relationships between triangles; and~~
  - ~~b)~~ prove two triangles are congruent ~~or similar~~, [Moved to new SOL G.7] given information in the form of a figure or statement, using algebraic and coordinate methods as well as deductive proofs.
- G.7 The student will prove two triangles are similar given information in the form of a figure or statement, using algebraic and coordinate methods as well as deductive proofs.
- ~~G-7~~ G.8 The student will solve ~~practical~~ real-world problems involving right triangles by using the Pythagorean Theorem and its converse, properties of special right triangles, and right triangle trigonometry. ~~Solutions will be expressed in radical form or as decimal approximations. [Move to Curriculum Framework]~~

## Polygons and Circles

- G.8 G.9 The student will
- ~~investigate and identify properties of quadrilaterals involving opposite sides and angles, consecutive sides and angles, and diagonals;~~
  - ~~prove verify these ~~properties~~ characteristics of quadrilaterals, using algebraic and coordinate methods as well as ~~deductive reasoning~~; [Move to Curriculum Framework] and~~
  - use properties of quadrilaterals to solve ~~practical~~ real-world problems.
- G.10 The student will solve real-world problems involving angles of polygons.
- G.9 ~~The student will use measures of interior and exterior angles of polygons to solve problems. [Moved to new SOL G.10] Tessellations and tiling problems will be used to make connections to art, construction, and nature. [Move to Curriculum Framework]~~
- G.11 The student will use angles, arcs, chords, tangents, and secants to
- ~~investigate, prove verify, and apply~~ properties of circles;
  - solve real-world problems involving properties of circles; and
  - find arc length and areas of sectors in circles.
- G.12 The student will, given the coordinates of the center of a circle and a point on the circle, write the equation of the circle.
- G.10 ~~The student will investigate and solve practical problems using properties of angles, arcs, chords, tangents, and secants. Problems will include finding arc length and the area of a sector, and may be drawn from applications of architecture, art, and construction. [Move to Curriculum Framework]~~

## Three-Dimensional Figures

- G.12 ~~The student will make a model of a three-dimensional figure from a two-dimensional drawing and make a two-dimensional representation of a three-dimensional object. Models and representations will include scale drawings, perspective drawings, blueprints, or computer simulations.~~
- G.13 ~~G.12~~ G.13 The student will use formulas for surface area and volume of three-dimensional objects to solve ~~practical~~ real-world problems. ~~Calculators will be used to find decimal approximations for results.~~ [Move to Curriculum Framework]

- ~~G.14~~ ~~G.13~~ G.14 The student will use similar geometric objects in two- or three-dimensions to
- a) ~~use proportional reasoning to solve practical problems, given similar geometric objects; and 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; ~~and~~
  - c) determine how changes in area and/or volume of an object affect one or more dimensions of the object; and
  - ~~e)~~ d) solve real-world problems about similar geometric objects.

# Algebra, Functions, and Data Analysis

**[Adopted by the Virginia Board of Education on June 28, 2007]**

The following standards outline the content for a one-year course in Algebra, Functions, and Data Analysis. All students who are pursuing a technical field are expected to achieve the Algebra, Functions, and Data Analysis or Algebra II standards. This course is designed for students who have successfully completed the standards for Algebra I. Within the context of mathematical modeling and data analysis, students will study functions and their behaviors, systems of inequalities, probability, experimental design and implementation, and analysis of data. Data will be generated by practical applications arising from science, business, and finance. Students will solve problems that require the formulation of linear, quadratic, exponential, or logarithmic equations or a system of equations.

Through the investigation of mathematical models and interpretation/analysis of data from real-life situations, students will strengthen conceptual understandings in mathematics and further develop connections between algebra and statistics. Students should use the language and symbols of mathematics in representations and communication throughout the course.

These standards include a transformational approach to graphing functions and writing equations when given the graph of the equation. Transformational graphing builds a strong connection between algebraic and graphic representations of functions.

The infusion of technology (graphing calculator and/or computer software) in this course will assist in modeling and investigating functions and data analysis.

## Algebra and Functions

- 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).

- 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 formulae, graphs, tables, and words. Students will select and use appropriate representations for analysis, interpretation, and prediction.
- AFDA.5 The student will determine optimal values in problem situations by identifying constraints and using linear programming techniques.

## Data Analysis

- AFDA.6 The student will calculate probabilities. Key concepts include:
- conditional probability;
  - dependent and independent events;
  - addition and multiplication rules;
  - counting techniques (permutations and combinations); and
  - Law of Large Numbers.
- AFDA.7 The student will analyze the normal distribution. Key concepts include:
- characteristics of normally distributed data;
  - percentiles;
  - normalizing data using z-scores; and
  - area under the standard normal curve and probability.
- AFDA.8 The student will design and conduct an experiment/survey. Key concepts include:
- sample size;
  - sampling technique;
  - controlling sources of bias and experimental error;
  - data collection; and
  - data analysis and reporting.

# Algebra II

The standards below outline the content for a one-year course in Algebra II. Students enrolled in Algebra II are assumed to have mastered those concepts outlined in the Algebra I standards. All students preparing for postsecondary and advanced technical studies are expected to achieve the Algebra II standards. A thorough treatment of advanced algebraic concepts is provided through the study of functions, “families of functions,” equations, inequalities, systems of equations and inequalities, polynomials, rational and radical expressions equations, complex numbers, ~~matrices~~, and sequences and series. Emphasis will be placed on practical applications and modeling throughout the course of study. Oral and written communication concerning the language of algebra, logic of procedures, and interpretation of results also should permeate the course.

These standards include a transformational approach to graphing functions. Transformational graphing uses translation, reflection, dilation, and rotation to generate a “family of graphs” from a given graph and builds a strong connection between algebraic and graphic representations of functions. Students will vary the coefficients and constants of an equation, observe the changes in the graph of the equation, and make generalizations that can be applied to many graphs.

Graphing utilities (graphing calculators or computer graphing simulators), computers, spreadsheets, and other appropriate technology tools will be used to assist in teaching and learning. Graphing utilities enhance the understanding of realistic applications through mathematical modeling and aid in the investigation and study of functions. They also provide an effective tool for solving/verifying equations and inequalities. Any other available technology that will enhance student learning should be used.

## Expressions and Operations

AII.1 ~~The student will identify field properties, axioms of equality and inequality, and properties of order that are valid for the set of real numbers and its subsets, [Moved to new SOL A.4 b] complex numbers, [Moved to new SOL AII.3] and matrices.~~

AII.2 AII.1 ~~The student will, given rational, radical, or polynomial expressions,~~  
 a) add, subtract, multiply, divide, and simplify rational algebraic expressions;  
 b) add, subtract, multiply, divide, and simplify radical expressions containing ~~positive~~ rational numbers and variables, and expressions containing rational exponents;  
 c) write radical expressions as expressions containing rational exponents and vice versa; and  
 d) factor ~~completely~~ polynomials completely.

AII.2 ~~The student will add, subtract, multiply, divide, and simplify rational expressions, [Moved to new SOL AII.1 a] including complex fractions. [Move to Curriculum Framework]~~

- AII.3 ~~The student will~~  
 a) ~~add, subtract, multiply, divide, and simplify radical expressions containing positive rational numbers and variables and expressions containing rational exponents; [Moved to new SOL AII.1 b] and~~  
 b) ~~write radical expressions as expressions containing rational exponents and vice versa. [Moved to new SOL AII.1 c]~~
- AII.5 ~~The student will identify and factor completely polynomials [Moved to new SOL AII.1 d] representing the difference of squares, perfect square trinomials, the sum and difference of cubes, and general trinomials. [Move to Curriculum Framework]~~
- AII.16 AII.2 The student will investigate and apply the properties of arithmetic and geometric sequences and series to solve ~~practical~~ real-world problems, including writing the first  $n$  terms, finding the  $n^{\text{th}}$  term, and evaluating summation formulas. Notation will include  $\Sigma$  and  $a_n$ .
- AII.17 AII.3 The student will perform operations on complex numbers ~~and~~, express the results in simplest form. Simplifying results will involve using patterns of the powers of  $i$ . and identify field properties that are valid for the complex numbers.

## **Equations and Inequalities**

- 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.4 ~~The student will solve absolute value equations and inequalities [Moved to new SOL AII.4 a] graphically and algebraically. [Moved to new SOL AII.4] Graphing calculators will be used as a primary method of solution and to verify algebraic solutions. [Move to Curriculum Framework]~~
- AII.6 ~~The student will select, justify, and apply a technique to solve a quadratic equation over the set of complex numbers. [Moved to new SOL AII.4 b] Graphing calculators will be used for solving and for confirming the algebraic solutions. [Move to Curriculum Framework] [Moved to new SOL A.4]~~
- AII.7 ~~The student will solve equations containing rational expressions [Moved to new SOL AII.4 c] and equations containing radical expressions algebraically and graphically. [Moved to new SOL AII.4 d] Graphing calculators will be used for solving and for confirming the algebraic solutions. [Move to Curriculum Framework] [Moved to new SOL AII.4]~~

~~AII.14~~ AII.5 The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically. ~~The graphing calculator will be used as a tool to visualize graphs and predict the number of solutions. [Move to Curriculum Framework]~~ The graphing calculator will be used as a tool to visualize graphs and predict the number of solutions.

AII.13 ~~The student will solve practical problems, using systems of linear inequalities and linear programming, and describe the results both orally and in writing. A graphing calculator will be used to facilitate solutions to linear programming problems.~~

## **Functions**

~~AII.8 The student will recognize multiple representations of functions (absolute value, step, and exponential, functions) and convert between a graph, a table, and symbolic form. A transformational approach to graphing will be employed through the use of graphing calculators. [Moved to new SOL AII.6]~~

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. The graphing calculator will be used as a tool to investigate the shape and behavior 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/decreasing;
- e) asymptotes;
- f) end behavior;
- g) inverse of a function; and
- h) composition of multiple functions.

The graphing calculator will be used as a tool to assist in investigation of functions.

~~AII.9 The student will find the domain, [Moved to new SOL AII.7 a] -range, [Moved to new SOL AII.7 a] zeros, [Moved to new SOL AII.7 b]-and inverse of a function [Moved to new SOL AII.7 g]; the value of a function for a given element in its domain; [Moved to new SOL A.6 f-e] and the composition of multiple functions. [Moved to new SOL AII.7 h] Functions will include exponential, logarithmic, [Move to Curriculum Framework] and those that have domains and ranges that are limited and/or discontinuous. [Moved to new SOL AII.7 a] The graphing calculator will be used as a tool to assist in investigation of functions. [Move to Curriculum Framework] [Moved to new SOL AII.7]~~

- ~~AII.15~~ ~~The student will recognize the general shape of polynomial, exponential, and logarithmic functions. [Moved to new SOL AII.6] The graphing calculator will be used as a tool to investigate the shape and behavior of these functions. [Move to Curriculum Framework] [Moved to new SOL AII.6]~~
- AII.8 The student will investigate and describe through the use of graphs the relationships between the solution of an equation, zero of a function,  $x$ -intercept of a graph, and factors of a polynomial expression.
- ~~AII.18~~ ~~The student will identify conic sections (circle, ellipse, parabola, and hyperbola) from his/her equations and graphs. Given the equations in  $(h, k)$  form, the student will sketch graphs of conic sections, using transformations.~~
- ~~AII.9~~ ~~The student will, given the coordinates of the center of a circle and a point on the circle, write the equation of the circle. [Move to new SOL G.12]~~

## **Statistics**

- ~~AII.19~~ ~~AII.10~~ 9 The student will collect and analyze data, determine the equation of the curve of best fit, ~~to~~ make predictions, and solve practical real-world problems using mathematical models. ~~Graphing calculators will be used to investigate scatterplots and to determine the equation for a curve of best fit. [Move to Curriculum Framework] Mathematical Mmodels will include linear, quadratic, polynomial, exponential, and logarithmic functions.~~
- AII.20 ~~AII.11~~ 10 The student will identify, create, and solve practical real-world problems involving inverse variation, joint variation, and a combination of direct and inverse variations.
- ~~AII.12~~ 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.
- ~~AII.13~~ 12 The student will compute and distinguish between permutations and combinations and use technology for applications.

## **Analytical Geometry**

- AII.10 The student will investigate and describe through the use of graphs the relationships between the solution of an equation, zero of a function,  $x$ -intercept of a graph, and factors of a polynomial expression. [Move to Curriculum Framework in support of new SOL AII.7]

**Systems of Equations and Inequalities**

- AII.11 ~~The student will use matrix multiplication to solve practical problems. Graphing calculators or computer programs with matrix capabilities will be used to find the product.~~
- AII.12 ~~The student will represent problem situations with a system of linear equations and solve the system, using the inverse matrix method. Graphing calculators or computer programs with matrix capability will be used to perform computations.~~
- AII.14 ~~The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically. The graphing calculator will be used as a tool to visualize graphs and predict the number of solutions. [Moved to new SOL AII.5]~~

# Trigonometry

The standards below outline the content for a one-semester course in trigonometry. Students enrolled in trigonometry are assumed to have mastered those concepts outlined in the Algebra II standards. A thorough treatment of trigonometry is provided through the study of trigonometric definitions, applications, graphing, and solving trigonometric equations and inequalities. Emphasis should also be placed on using connections between right triangle ratios, trigonometric functions, and circular functions. In addition, applications and modeling should be included throughout the course of study. Emphasis should also be placed on oral and written communication concerning the language of mathematics, logic of procedure, and interpretation of results.

Graphing calculators, computers, and other appropriate technology tools will be used to assist in teaching and learning. Graphing utilities enhance the understanding of realistic applications through modeling and aid in the investigation of trigonometric functions and their inverses. They also provide a powerful tool for solving/verifying trigonometric equations and inequalities.

- T.1 The student will use the definitions of the six trigonometric functions to find the sine, cosine, tangent, cotangent, secant, and cosecant of an angle in standard position, given a point, other than the origin, on the terminal side of the angle. ~~Circular function definitions will be connected with trigonometric function definitions.~~ Trigonometric functions defined on the unit circle will be related to trigonometric functions defined in right triangles.
- T.2 The student will, given the value of one trigonometric function, find the values of the other trigonometric functions. ~~Properties of the unit circle and, using the definitions and properties of circular the trigonometric functions, will be applied.~~
- T.3 The student will find without the aid of a ~~calculating utility~~ 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.
- T.4 The student will find with the aid of a calculator the value of any trigonometric function and inverse trigonometric function.
- T.5 The student will verify basic trigonometric identities and make substitutions, using the basic identities.

- T.6 The student, given one of the six trigonometric functions in standard form [~~e.g.,  $y = A \sin(Bx + C) + D$ , where  $A$ ,  $B$ ,  $C$ , and  $D$  are real numbers~~], will
- state the domain and the range of the function;
  - determine the amplitude, period, phase shift, ~~and vertical shift, and asymptotes~~;
  - sketch the graph of the function by using transformations for at least a ~~one~~ two-period interval; ~~and~~
  - The graphing calculator will be used to investigate the effect of changing  $A$ ,  $B$ ,  $C$ , and  $D$  the parameters in a trigonometric function on the graph of a trigonometric the function.
- 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.
- T.8 The student will solve trigonometric equations that include both infinite solutions and restricted domain solutions and solve basic trigonometric inequalities. ~~Graphing utilities will be used to solve equations, check for reasonableness of results, and verify algebraic solutions.~~ [Move to Curriculum Framework]
- T.9 The student will identify, create, and solve practical real-world problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.

# Algebra II and Trigonometry

The standards for this combined course in Algebra II and Trigonometry include all of the standards listed for Algebra II and Trigonometry. This course is designed for advanced students who are capable of a more rigorous course at an accelerated pace. The standards listed for this course provide the foundation for students to pursue a sequence of advanced mathematical studies from Mathematical Analysis to Advanced Placement Calculus.

## Expressions and Operations

~~AII/T.1 The student will identify field properties, axioms of equality and inequality, and properties of order that are valid for the set of real numbers and its subsets, [Moved to new SOL A.4 b] complex numbers, [Moved to new SOL AII/T.3] and matrices.~~

~~AII/T.2~~ AII/T.1 The student will given rational, radical, or polynomial expressions,

- ~~add, subtract, multiply, divide, and simplify rational algebraic expressions;~~
- ~~add, subtract, multiply, divide, and simplify radical expressions containing ~~positive~~ rational numbers and variables, and expressions containing rational exponents;~~
- ~~write radical expressions as expressions containing rational exponents and vice versa; and~~
- ~~factor completely polynomials completely.~~

~~AII/T.2 The student will add, subtract, multiply, divide, and simplify rational expressions, [Moved to new SOL AII/T.1 a] including complex fractions. [Move to Curriculum Framework]~~

~~AII/T.3 The student will~~

- ~~add, subtract, multiply, divide, and simplify radical expressions containing positive rational numbers and variables and expressions containing rational exponents; [Moved to new SOL AII/T.1 b] and~~
- ~~write radical expressions as expressions containing rational exponents and vice versa. [Moved to new SOL AII/T.1 c]~~

~~AII/T.5 The student will identify and factor completely polynomials [Moved to new SOL AII/T.1 d] representing the difference of squares, perfect square trinomials, the sum and difference of cubes, and general trinomials. [Move to Curriculum Framework]~~

~~AII/T.16~~ AII/T.2 The student will investigate and apply the properties of arithmetic and geometric sequences and series to solve ~~practical~~ real-world problems, including writing the first  $n$  terms, finding the  $n^{\text{th}}$  term, and evaluating summation formulas. Notation will include  $\Sigma$  and  $a_n$ .

~~AII/T.17 AII/T.3~~ The student will perform operations on complex numbers and express the results in simplest form. ~~Simplifying results will involve using patterns of the powers of  $i$ , and identify field properties that are valid for the complex numbers.~~

## Equations and Inequalities

~~AII/T.4~~ The student will solve, algebraically and graphically,

- ~~absolute value equations and inequalities;~~
- ~~quadratic equations over the set of complex numbers;~~
- ~~equations containing rational algebraic expressions; and~~
- ~~equations containing radical expressions.~~

Graphing calculators will be used for solving and for confirming the algebraic solutions.

~~AII/T.4~~ The student will solve absolute value equations and inequalities. [Moved to new SOL AII/T.4 a] graphically and algebraically. [Moved to new SOL AII/T.4] Graphing calculators will be used as a primary method of solution and to verify algebraic solutions. [Move to Curriculum Framework]

~~AII/T.6~~ The student will select, justify, and apply a technique to solve a quadratic equation over the set of complex numbers. [Moved to new SOL AII/T.4 b] Graphing calculators will be used for solving and for confirming the algebraic solutions. [Move to Curriculum Framework] [Moved to new SOL AII/T.4]

~~AII/T.7~~ The student will solve equations containing rational expressions [Moved to new SOL AII/T.4 c] and equations containing radical expressions algebraically and graphically. [Moved to new SOL AII/T.4 d] Graphing calculators will be used for solving and for confirming the algebraic solutions. [Move to Curriculum Framework]

~~AII/T.14 AII/T.5~~ The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically. ~~The graphing calculator will be used as a tool to visualize graphs and predict the number of solutions.~~ [Move to Curriculum Framework] The graphing calculator will be used as a tool to visualize graphs and predict the number of solutions.

~~AII/T.13~~ The student will solve practical problems, using systems of linear inequalities and linear programming, and describe the results both orally and in writing. ~~A graphing calculator will be used to facilitate solutions to linear programming problems.~~

## Functions

~~AII/T.8~~ The student will recognize multiple representations of functions (absolute value, step, and exponential, functions) and convert between a graph, a table, and symbolic form. ~~A transformational approach to graphing will be employed through the use of graphing calculators.~~ [Moved to new SOL AII/T.6]

- AII/T.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. The graphing calculator will be used as a tool to investigate the shape and behavior of these functions.
- AII/T.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/decreasing;
  - e) asymptotes;
  - f) end behavior;
  - g) inverse of a function; and
  - h) composition of multiple functions.
- The graphing calculator will be used as a tool to assist in the investigation of functions.
- ~~AII/T.9~~ ~~The student will find the domain, [Moved to new SOL AII/T.7 a] range, [Moved to new SOL AII/T.7 a] zeros, [Moved to new SOL AII/T.7 b] and inverse of a function [Moved to new SOL AII/T.7 g]; the value of a function for a given element in its domain; and the composition of multiple functions. [Moved to new SOL AII/T.7 h] Functions will include exponential, logarithmic, [Move to Curriculum Framework] and those that have domains and ranges that are limited and/or discontinuous. [Moved to new SOL AII/T.7 a] The graphing calculator will be used as a tool to assist in investigation of functions. [Move to Curriculum Framework] [Moved to new SOL AII/T.7]~~
- ~~AII/T.15~~ ~~The student will recognize the general shape of polynomial, exponential, and logarithmic functions. [Moved to new SOL AII/T.6] The graphing calculator will be used as a tool to investigate the shape and behavior of these functions. [Move to Curriculum Framework] [Moved to new SOL AII/T.6]~~
- AII/T.8 The student will investigate and describe through the use of graphs the relationships between the solution of an equation, zero of a function, x-intercept of a graph, and factors of a polynomial expression.
- ~~AII/T.18~~ ~~The student will identify conic sections (circle, ellipse, parabola, and hyperbola) from his/her equations and graphs. Given the equations in  $(h, k)$  form, the student will sketch graphs of conic sections, using transformations.~~
- ~~AII/T.9~~ ~~The student will, given the coordinates of the center of a circle and a point on the circle, write the equation of the circle. [Move to new SOL G.12]~~

## **Statistics**

~~AII/T.19~~ ~~AII/T.10~~ 9 The student will collect and analyze data, determine the equation of the curve of best fit, to make predictions, and solve practical real-world problems using mathematical models. ~~Graphing calculators will be used to investigate scatterplots and to determine the equation for a curve of best fit.~~ [Move to Curriculum Framework] Mathematical Models will include linear, quadratic, polynomial, exponential, and logarithmic functions.

~~AII/T.20~~ ~~AII/T.11~~ 10 The student will identify, create, and solve practical real-world problems involving inverse variation, joint variation, and a combination of direct and inverse variations.

~~AII/T.12~~ 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.

~~AII/T.13~~ 12 The student will compute and distinguish between permutations and combinations and use technology for applications.

## **Analytical Geometry**

~~AII/T.10~~ The student will investigate and describe through the use of graphs the relationships between the solution of an equation, zero of a function, x-intercept of a graph, and factors of a polynomial expression. [Move to Curriculum Framework to support new SOL AII/T.7]

## **Systems of Equations and Inequalities**

~~AII/T.11~~ The student will use matrix multiplication to solve practical problems. ~~Graphing calculators or computer programs with matrix capabilities will be used to find the product.~~

~~AII/T.12~~ The student will represent problem situations with a system of linear equations and solve the system, using the inverse matrix method. ~~Graphing calculators or computer programs with matrix capability will be used to perform computations.~~

~~AII/T.13~~ The student will solve practical problems, using systems of linear inequalities and linear programming, and describe the results both orally and in writing. ~~A graphing calculator will be used to facilitate solutions to linear programming problems.~~

~~AII/T.14~~ The student will solve nonlinear systems of equations, including linear-quadratic and quadratic-quadratic, algebraically and graphically. ~~The graphing calculator will be used as a tool to visualize graphs and predict the number of solutions.~~ [Moved to new SOL AII/T.5]

## Trigonometry

- AII/T.~~14~~ 13 The student will use the definitions of the six trigonometric functions to find the sine, cosine, tangent, cotangent, secant, and cosecant of an angle in standard position, given a point, other than the origin, on the terminal side of the angle. ~~Circular function definitions will be connected with trigonometric function definitions.~~ Trigonometric functions defined on the unit circle will be related to trigonometric functions defined in right triangles.
- AII/T.~~15~~ 14 The student will, given the value of one trigonometric function, find the values of the other trigonometric functions. ~~Properties of the unit circle and using the definitions and properties of circular~~ the trigonometric functions, will be applied.
- AII/T.~~16~~ 15 The student will find without the aid of a ~~calculating utility~~ 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.
- AII/T.~~17~~ 16 The student will find with the aid of a calculator the value of any trigonometric function and inverse trigonometric function.
- AII/T.~~18~~ 17 The student will verify basic trigonometric identities and make substitutions, using the basic identities.
- AII/T.~~19~~ 18 The student, given one of the six trigonometric functions in standard form [~~e.g.,  $y = A \sin(Bx + C) + D$ , where  $A$ ,  $B$ ,  $C$ , and  $D$  are real numbers~~], will
- state the domain and the range of the function;
  - determine the amplitude, period, phase shift, ~~and vertical shift,~~ and asymptotes;
  - sketch the graph of the function by using transformations for at least a ~~one~~ two-period interval; and
  - ~~The graphing calculator will be used to investigate the effect of changing  $A$ ,  $B$ ,  $C$ , and  $D$~~  the parameters in a trigonometric function on the graph of a trigonometric the function.
- AII/T.~~20~~ 19 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.
- AII/T.~~21~~ 20 The student will solve trigonometric equations that include both infinite solutions and restricted domain solutions and solve basic trigonometric inequalities. ~~Graphing utilities will be used to solve equations, check for reasonableness of results, and verify algebraic solutions.~~ [Move to Curriculum Framework]
- AII/T.~~22~~ 21 The student will identify, create, and solve practical problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.

# Computer Mathematics

This course is intended to provide students with experiences in using computer programming techniques and skills to solve problems that can be set up as mathematical models. Students enrolled in Computer Mathematics are assumed to have studied the concepts and skills in Algebra I and beginning geometry. Students who successfully complete the standards for this course may earn credit toward meeting the mathematics graduation requirement. It is recognized that many students will gain computer skills in other mathematics courses or in a separate curriculum outside of mathematics and prior to high school. In such cases, the standards indicated by an asterisk (\*) should be included in the student's course of study and treated as a review.

Even though computer ideas should be introduced in the context of mathematical concepts, problem solving per se should be developed in the most general sense, making the techniques applicable by students in many other environments. Strategies include defining the problem; developing, refining, and implementing a plan; and testing and revising the solution. Programming, ranging from simple programs involving only a few lines to complex programs involving subprograms, should permeate the entire course and may include programming a graphing calculator or scripting a problem solution in a database or spreadsheet. Programming concepts, problem-solving strategies, and mathematical applications should be integrated throughout the course.

These standards identify fundamental principles and concepts in the field of computer science that will be used within the context of mathematical problem solving in a variety of applications. As students develop and refine skills in logic, organization, and precise expression, they will apply those skills to enhance learning in all disciplines.

- COM.1 The student will apply programming techniques and skills to solve practical real-world problems in mathematics arising from consumer, business, and other applications in mathematics. Problems will include opportunities for students to analyze data in charts, graphs, and tables and to use their knowledge of equations, formulas, and functions to solve these problems.
- \*COM.2 The student will design, write, test, debug, and document a program. Programming documentation will include preconditions and postconditions of program segments, input/output specifications, the step-by-step plan, the test data, a sample run, and the program listing with appropriately placed comments.
- \*COM.3 The student will write program specifications that define the constraints of a given problem. These specifications will include descriptions of preconditions, postconditions, the desired output, analysis of the available input, and an indication as to whether or not the problem is solvable under the given conditions.

- \*COM.4 The student will design a step-by-step plan (algorithm) to solve a given problem. The plan will be in the form of a program flowchart, pseudo code, hierarchy chart, and/or data-flow diagram.
- \*COM.5 The student will divide a given problem into manageable sections (modules) by task and implement the solution. The modules will include an appropriate user-defined function, subroutines, and procedures. Enrichment topics might include user-defined libraries (units) and object-oriented programming.
- \*COM.6 The student will design and implement the input phase of a program, which will include designing screen layout and getting information into the program by way of user interaction, data statements, and/or file input. The input phase also will include methods of filtering out invalid data (error trapping).
- \*COM.7 The student will design and implement the output phase of a computer program, which will include designing output layout, accessing a variety of output devices, using output statements, and labeling results.
- COM.8 The student will design and implement computer graphics, which will include topics appropriate for the available programming environment as well as student background. Students will use graphics as an end in itself, as an enhancement to other output, and as a vehicle for reinforcing programming techniques.
- COM.9 The student will define simple variable data types that include integer, real (fixed and scientific notation), character, string, and Boolean.
- COM.10 The student will use appropriate variable data types, including integer, real (fixed and scientific notation), character, string, and Boolean. This will also include variables representing structured data types.
- COM.11 The student will describe the way the computer stores, accesses, and processes variables, including the following topics: the use of variables versus constants, variables addresses, pointers, parameter passing, scope of variables, and local versus global variables.
- \*COM.12 The student will translate a mathematical expression into a computer statement, which involves writing assignment statements and using the order of operations.
- COM.13 The student will select and implement built-in (library) functions in processing data.
- COM.14 The student will implement conditional statements that include "if/then" statements, "if/then/else" statements, case statements, and Boolean logic.
- COM.15 The student will implement loops, including iterative loops. Other topics will include single entry point, single exit point, preconditions, and postconditions.

- COM.16 The student will select and implement appropriate data structures, including arrays (one-dimensional and/or multidimensional), files, and records. Implementation will include creating the data structure, putting information into the structure, and retrieving information from the structure.
- \*COM.17 The student will implement pre-existing algorithms, including sort routines, search routines, and simple animation routines.
- COM.18 The student will test a program, using an appropriate set of data. The set of test data should be appropriate and complete for the type of program being tested.
- COM.19 The student will debug a program, using appropriate techniques (e.g., appropriately placed controlled breaks, the printing of intermediate results, and other debugging tools available in the programming environment), and identify the difference between syntax errors and logic errors.
- COM.20 The student will design, write, test, debug, and document a complete structured program that requires the synthesis of many of the concepts contained in previous standards.

# Probability and Statistics

The following standards outline the content of a one-year course in Probability and Statistics. If a one-semester course is desired, the standards with an asterisk (\*) would apply. Students enrolled in this course are assumed to have mastered the concepts identified in the Standards of Learning for Algebra II. The purpose of the course is to present basic concepts and techniques for collecting and analyzing data, drawing conclusions, and making predictions.

A graphing calculator is essential for every student taking the Probability and Statistics course and is required for the Advanced Placement Statistics Examination. The calculator may not fully substitute for a computer, however. In the absence of a computer for student use, teachers may provide students with examples of computer output generated by a statistical software package.

- \*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.
- \*PS.2 The student will analyze numerical characteristics of univariate data sets to describe patterns and departure from patterns, using mean, median, mode, variance, standard deviation, interquartile range, range, and outliers. ~~Appropriate technology will be used to calculate statistics.~~ [Move to Curriculum Framework]
- \*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. ~~Appropriate technology will be used to generate graphical displays.~~[Move to Curriculum Framework]
- \*PS.4 The student will analyze scatterplots to identify and describe the relationship between two variables, using shape; strength of relationship; clusters; positive, negative, or no association; outliers; and influential points. ~~Appropriate technology will be used to generate scatterplots and identify outliers and influential points.~~ [Move to Curriculum Framework]
- 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. ~~Appropriate technology will be used to compute correlation coefficients and residual plots.~~
- PS.6 The student will make logarithmic and power transformations to achieve linearity. ~~Appropriate technology will be used.~~ [Move to Curriculum Framework]
- 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.

- \*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 and 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.
- ~~\*PS.11~~ ~~The student will compute and distinguish between permutations and combinations and use technology for applications.~~ [Moved to new SOL AII.12 and new SOL AII/T.12] 12
- \*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.
- \*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.
- PS.15 The student will identify random variables as independent or dependent and find the mean and standard deviations for sums and differences of independent random variables.
- ~~\*PS.17~~ 16 The student will identify properties of a normal distribution and apply the normal distribution to determine probabilities, using a table or graphing calculator.
- ~~\*PS.16~~ 17 The student, given data from a large sample, will find and interpret point estimates and confidence intervals for parameters. The parameters will include proportion and mean, difference between two proportions, and difference between two means (independent and paired).
- ~~PS.17~~ 18 The student will apply and interpret the logic of a hypothesis-testing procedure. Tests will include large sample test for proportion, mean, difference between two proportions, and difference between two means (independent and paired) and Chi-squared test for goodness of fit, homogeneity of proportions, and independence.

- PS.~~18~~ 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.
- PS.~~19~~ 20 The student will identify properties of a t-distribution and apply t-distributions to single-sample and two-sample (independent and matched pairs) t-procedures, using tables or graphing calculators.

# Discrete Mathematics

The following standards outline the content of a one-year course in Discrete Mathematics. If a one-semester course is desired, the standards with an asterisk (\*) would apply. Students enrolled in Discrete Mathematics are assumed to have mastered the concepts outlined in the Standards of Learning for Algebra II.

Discrete mathematics may be described as the study of mathematical properties of sets and systems that have a countable (discrete) number of elements. With the advent of modern technology, discrete (discontinuous) models have become as important as continuous models. In this course, the main focus is problem solving in a discrete setting. Techniques that are not considered in the current traditional courses of algebra, geometry, and calculus will be utilized. As students solve problems, they will analyze and determine whether or not a solution exists (existence problems), investigate how many solutions exist (counting problems), and focus on finding the best solution (optimization problems). Connections will be made to other disciplines. The importance of discrete mathematics has been influenced by computers. ~~Modern~~ Technology (graphing calculators and/or computers) will be an integral component of this course.

- \*DM.1 The student will model problems, using vertex-edge graphs. The concepts of valence, connectedness, paths, planarity, and directed graphs will be investigated. Adjacency matrices and matrix operations will be used to solve problems (e.g., food chains, number of paths).
- \*DM.2 The student will solve problems through investigation and application of circuits, cycles, Euler Paths, Euler Circuits, Hamilton Paths, and Hamilton Circuits. Optimal solutions will be sought using existing algorithms and student-created algorithms.
- \*DM.3 The student will apply graphs to conflict-resolution problems, such as map coloring, scheduling, matching, and optimization. Graph coloring and chromatic number will be used.
- \*DM.4 The student will apply algorithms, such as Kruskal's, Prim's, or Dijkstra's, relating to trees, networks, and paths. Appropriate technology will be used to determine the number of possible solutions and generate solutions when a feasible number exists.
- \*DM.5 The student will use algorithms to schedule tasks in order to determine a minimum project time. The algorithms will include critical path analysis, the list-processing algorithm, and student-created algorithms.
- \*DM.6 The student will solve linear programming problems. Appropriate technology will be used to facilitate the use of matrices, graphing techniques, and the Simplex method of determining solutions.

- \*DM.7 The student will analyze and describe the issue of fair division (e.g., cake cutting, estate division). Algorithms for continuous and discrete cases will be applied.
- DM.8 The student will investigate and describe weighted voting and the results of various election methods. These may include approval and preference voting as well as plurality, majority, run-off, sequential run-off, Borda count, and Condorcet winners.
- DM.9 The student will identify apportionment inconsistencies that apply to issues such as salary caps in sports and allocation of representatives to Congress. Historical and current methods will be compared.
- DM.10 The student will use the recursive process and difference equations with the aid of appropriate technology to generate
- compound interest;
  - sequences and series;
  - fractals;
  - population growth models; and
  - the Fibonacci sequence.
- DM.11 The student will describe and apply sorting algorithms and coding algorithms used in storing, processing, and communicating information. These will include
- bubble sort, merge sort, and network sort; and
  - ISBN, UPC, Zip, and banking codes.
- DM.12 The student will select, justify, and apply an appropriate technique to solve a logic problem. Techniques will include Venn diagrams, truth tables, and matrices.
- DM.13 The student will apply the formulas of combinatorics in the areas of
- the Fundamental (Basic) Counting Principle;
  - knapsack and bin-packing problems;
  - permutations and combinations; and
  - the pigeonhole principle.

# Mathematical Analysis

The standards below outline the content for a one-year course in Mathematical Analysis. Students enrolled in Mathematical Analysis are assumed to have mastered Algebra II concepts and have some exposure to trigonometry. Mathematical Analysis develops students' understanding of algebraic and transcendental functions, parametric and polar equations, sequences and series, and vectors. The content of this course serves as appropriate preparation for a calculus course.

Graphing calculators, computers, and other appropriate technology tools will be used to assist in teaching and learning. Graphing utilities enhance the understanding of realistic applications through modeling and aid in the investigation of functions and their inverses. They also provide a powerful tool for solving and verifying equations and inequalities.

- MA.1 The student will investigate and identify the characteristics of polynomial and rational functions and use these to sketch the graphs of the functions. This will include determining zeros, upper and lower bounds,  $y$ -intercepts, symmetry, asymptotes, intervals for which the function is increasing or decreasing, and maximum or minimum points. Graphing utilities will be used to investigate and verify these characteristics.
- MA.2 The student will ~~find~~ apply compositions of functions and inverses of functions to real-world situations. Analytical methods and graphing utilities will be used to investigate and verify the domain and range of resulting functions.
- MA.3 The student will investigate and describe the continuity of functions using graphs and algebraic methods. ~~The functions will include piecewise and step functions.~~ [Move to Curriculum Framework]
- 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.
- MA.5 The student will find the sum (sigma notation included) of finite and infinite convergent series that will lead to an intuitive approach to a limit.
- MA.6 The student will use mathematical induction to prove formulas/statements.
- MA.7 The student will find the limit of an algebraic function, if it exists, as the variable approaches either a finite number or infinity. A graphing utility will be used to verify intuitive reasoning, algebraic methods, and numerical substitution.
- MA.8 The student will investigate and identify the characteristics of conic section equations in  $(h, k)$  and standard forms. The techniques of translations in the coordinate plane will be used to graph conic sections.

- 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 ~~practical 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. ~~Graphing utilities will be used to investigate and verify the graphs and solutions.~~ [Move to Curriculum Framework]
- 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.
- MA.11 The student will perform operations with vectors in the coordinate plane and solve ~~practical 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.
- MA.12 The student will use parametric equations to model and solve application problems. ~~Graphing utilities will be used to develop an understanding of the graph of parametric equations.~~ [Move to Curriculum Framework]
- MA.13 The student will identify, create, and solve ~~practical real-world~~ problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.
- MA.14 The student will use matrices to organize data and will add, subtract, multiply matrices, multiply matrices by a scalar and use matrices to solve systems of equations.

# Advanced Placement Calculus

[The College Board publishes the curricula for all Advanced Placement courses and updates these curricula biennially. Four comments from the public suggested that the course code for Advanced Placement Calculus be maintained but the Standards of Learning be deleted since teachers use the materials published by The College Board to guide instruction. The deletion of these Standards of Learning would be consistent with AP Statistics and AP Computer Science in the list of mathematics courses approved by the Board of Education to be used for high school graduation in Virginia.]

~~APC.1 — The student will define and apply the properties of elementary functions, including algebraic, trigonometric, exponential, and composite functions and their inverses, and graph these functions, using a graphing calculator. Properties of functions will include domains, ranges, combinations, odd, even, periodicity, symmetry, asymptotes, zeros, upper and lower bounds, and intervals where the function is increasing or decreasing.~~

~~APC.2 — The student will define and apply the properties of limits of functions. Limits will be evaluated graphically and algebraically. This will include~~

- ~~a) — limits of a constant;~~
- ~~b) — limits of a sum, product, and quotient;~~
- ~~c) — one-sided limits; and~~
- ~~d) — limits at infinity, infinite limits, and non-existent limits.\*~~

~~\*AP Calculus BC will include l'Hopital's Rule, which will be used to find the limit of functions whose limits yield the indeterminate forms:  $0/0$  and  $\infty/\infty$ .~~

~~APC.3 — The student will use limits to define continuity and determine where a function is continuous or discontinuous. This will include~~

- ~~a) — continuity in terms of limits;~~
- ~~b) — continuity at a point and over a closed interval;~~
- ~~c) — application of the Intermediate Value Theorem and the Extreme Value Theorem; and~~
- ~~d) — geometric understanding and interpretation of continuity and discontinuity.~~

~~APC.4 — The student will investigate asymptotic and unbounded behavior in functions. This will include~~

- ~~a) — describing and understanding asymptotes in terms of graphical behavior and limits involving infinity; and~~
- ~~b) — comparing relative magnitudes of functions and their rates of change.~~

- ~~APC.5~~ — The student will investigate derivatives presented in graphic, numerical, and analytic contexts and the relationship between continuity and differentiability. The derivative will be defined as the limit of the difference quotient and interpreted as an instantaneous rate of change.
- ~~APC.6~~ — The student will investigate the derivative at a point on a curve. This will include
- ~~a)~~ — finding the slope of a curve at a point, including points at which the tangent is vertical and points at which there are no tangents;
  - ~~b)~~ — using local linear approximation to find the slope of a tangent line to a curve at the point;
  - ~~c)~~ — defining instantaneous rate of change as the limit of average rate of change; and
  - ~~d)~~ — approximating rate of change from graphs and tables of values.
- ~~APC.7~~ — The student will analyze the derivative of a function as a function in itself. This will include
- ~~a)~~ — comparing corresponding characteristics of the graphs of  $f$ ,  $f'$ , and  $f''$ ;
  - ~~b)~~ — defining the relationship between the increasing and decreasing behavior of  $f$  and the sign of  $f'$ ;
  - ~~c)~~ — translating verbal descriptions into equations involving derivatives and vice versa;
  - ~~d)~~ — analyzing the geometric consequences of the Mean Value Theorem;
  - ~~e)~~ — defining the relationship between the concavity of  $f$  and the sign of  $f''$ ; and
  - ~~f)~~ — identifying points of inflection as places where concavity changes and finding points of inflection.
- ~~APC.8~~ — The student will apply the derivative to solve problems. This will include
- ~~a)~~ — analysis of curves and the ideas of concavity and monotonicity;
  - ~~b)~~ — optimization involving global and local extrema;
  - ~~c)~~ — modeling of rates of change and related rates;
  - ~~d)~~ — use of implicit differentiation to find the derivative of an inverse function;
  - ~~e)~~ — interpretation of the derivative as a rate of change in applied contexts, including velocity, speed, and acceleration; and
  - ~~f)~~ — differentiation of nonlogarithmic functions, using the technique of logarithmic differentiation.\*
- ~~\* AP Calculus BC will also apply the derivative to solve problems. This will include~~
- ~~a)~~ — analysis of planar curves given in parametric form, polar form, and vector form, including velocity and acceleration vectors;
  - ~~b)~~ — numerical solution of differential equations, using Euler's method;
  - ~~c)~~ — l'Hopital's Rule to test the convergence of improper integrals and series; and
  - ~~d)~~ — geometric interpretation of differential equations via slope fields and the relationship between slope fields and the solution curves for the differential equations.

- APC.9 ~~The student will apply formulas to find derivatives. This will include~~
- ~~derivatives of algebraic, trigonometric, exponential, logarithmic, and inverse trigonometric functions;~~
  - ~~derivations of sums, products, quotients, inverses, and composites (chain rule) of elementary functions;~~
  - ~~derivatives of implicitly defined functions; and~~
  - ~~higher order derivatives of algebraic, trigonometric, exponential, and logarithmic, functions.\*~~
- ~~\* AP Calculus BC will also include finding derivatives of parametric, polar, and vector functions.~~
- APC.10 ~~The student will use Riemann sums and the Trapezoidal Rule to approximate definite integrals of functions represented algebraically, graphically, and by a table of values and will interpret the definite integral as the accumulated rate of change of a quantity over an interval interpreted as the change of the quantity over the interval~~
- $$\int_a^b f'(x) dx = f(b) - f(a).$$
- ~~Riemann sums will use left, right, and midpoint evaluation points over equal subdivisions.~~
- APC.11 ~~The student will find antiderivatives directly from derivatives of basic functions and by substitution of variables (including change of limits for definite integrals).\*~~
- ~~\* AP Calculus BC will also include finding antiderivatives by parts and simple partial fractions (nonrepeating linear factors only), and finding improper integrals as limits of definite integrals.~~
- ~~\* AP Calculus BC will also solve logistic differential equations and use them in modeling.~~
- APC.12 ~~The student will identify the properties of the definite integral. This will include additivity and linearity, the definite integral as an area, and the definite integral as a limit of a sum as well as the fundamental theorem:~~
- $$\frac{d}{dx} \int_a^x f(t) d(t) = f(x).$$
- APC.13 ~~The student will use the Fundamental Theorem of Calculus to evaluate definite integrals, represent a particular antiderivative, and the analytical and graphical analysis of functions so defined.~~
- APC.14 ~~The student will find specific antiderivatives, using initial conditions (including applications to motion along a line). Separable differential equations will be solved and used in modeling (in particular, the equation  $y' = ky$  and exponential growth).~~

- ~~APC.15~~ — The student will use integration techniques and appropriate integrals to model physical, biological, and economic situations. The emphasis will be on using the integral of a rate of change to give accumulated change or on using the method of setting up an approximating Riemann sum and representing its limit as a definite integral. Specific applications will include
- ~~a) the area of a region;~~
  - ~~b) the volume of a solid with known cross-section;~~
  - ~~c) the average value of a function; and~~
  - ~~d) the distance traveled by a particle along a line. \*~~
- ~~\* AP Calculus BC will include finding the area of a region (including a region bounded by polar curves) and finding the length of a curve (including a curve given in parametric form).~~
- ~~APC.16~~ — The student will define a series and test for convergence of a series in terms of the limit of the sequence of partial sums. This will include
- ~~a) geometric series with applications;~~
  - ~~b) harmonic series;~~
  - ~~c) alternating series with error bound;~~
  - ~~d) terms of series as areas of rectangles and their relationship to improper integrals, including the integral test and its use in testing the convergence of p-series; and~~
  - ~~e) ratio test for convergence and divergence. \*~~
- ~~\* For those students who are enrolled in AP Calculus BC.~~
- ~~APC.17~~ — The student will define, restate, and apply Taylor series. This will include
- ~~a) Taylor polynomial approximations with graphical demonstration of convergence;~~
  - ~~b) Maclaurin series and the general Taylor series centered at  $x = a$ ;~~
  - ~~c) Maclaurin series for the functions  $e^x$ ,  $\sin x$ ,  $\cos x$ , and  $1/(1-x)$ ;~~
  - ~~d) formal manipulation of Taylor series and shortcuts to computing Taylor series, including substitution, differentiation, antidifferentiation, and the formation of new series from known series;~~
  - ~~e) functions defined by power series;~~
  - ~~f) radius and interval of convergence of power series; and~~
  - ~~g) Lagrange error bound of a Taylor polynomial. \*~~
- ~~\* For those students who are enrolled in AP Calculus BC.~~

**Summary of Comments on the  
Proposed Revised *Mathematics Standards of Learning*  
October 24, 2008 through December 3, 2008**

A total of 224 comments was received for the proposed revised *Mathematics Standards of Learning* during the public comment period and the public hearings. The public comment period was October 24, 2008 through November 22, 2008. Two public hearings were held on December 1, 2008, in Pulaski County and Henrico County. Three public hearings were held on December 3, 2008, in Chesapeake City, Lynchburg City, and Fairfax County. Public comments were received electronically, in written letters and faxes, and during the public hearings.

**Summary of Attendance at the Public Hearings**

<b>Public Hearing Site and Date of Hearing</b>	<b>Number of Attendees</b>	<b>Number of Persons Commenting</b>
Hermitage High School Henrico County December 1, 2008	11	8
Pulaski High School Pulaski County December 1, 2008	10	6
Joliff Middle School Chesapeake City December 3, 2008	21	14
Linkhorne Middle School Lynchburg City December 3, 2008	12	3
Robinson Secondary School Fairfax County December 3, 2008	15	4

**Summary of Comments**

Kindergarten through Grade 5	127 comments
Grades 6, 7, and 8	58 comments
High School	39 comments

Kindergarten-Grade 5:

- The K-5 revisions do not seem to reflect the intent of NCTM's Curriculum Focal Points. There still seems to be an abundance of content at each grade level rather than a few big ideas.
- The proposed revised *Mathematics Standards of Learning* have a greatly improved vertical articulation between elementary and middle grades and gaps have been removed.
- The Curriculum Framework needs to be noted in the opening paragraphs of the standards document so teachers understand that this document is an extension of the standards document and its use is critical to understanding the details of the standards.

## Grades 6-8:

- Overall the middle school comments were positive about the vertical articulation with the elementary grades.
- There were conflicting opinions about whether or not the amount of content in grades 6-8 was reduced.
- There were some comments that the statement in the introduction to grade 7 stating “students should be ready for Algebra I after successful completion of the grade 7 standards” should be rewritten to state, “may be ready for Algebra I in grade 8.”
- There was concern that students who take Algebra I in grade 8 would miss some crucial content such as scatterplots and multistep linear equations which appear in the grade 8 standards.
- There were some suggestions to increase the focus in grade 7 on proportional reasoning.
- The move to include more challenging topics in the middle grades, such as compound events and negative exponents, was questioned as being too abstract for students in this age group and developmentally inappropriate.
- There were conflicting opinions about the addition of inequalities to the grade six standards.

## High School:

- The revisions enhance the rigor of the standards and represent the knowledge and skills required for successful entry into credit-bearing college courses and quality jobs.
- Added expectations about the normal distribution and the associated statistics in Algebra I and Algebra II will better prepare students for college and the workplace. However, variation should be addressed in Algebra II instead of Algebra I.
- The organization and focus of the proposed standards for high school courses add clarity. Additionally, the standards meet the criteria of coherence, specificity, accessibility, and measurability.
- The cognitive demand of the standards is increased.
- The actual and perceived connection between the Standards of Learning and the Curriculum Framework must be strengthened in order to clarify and support the idea of the Curriculum Framework as an expansion of the standards themselves.
- Consider tabling the implementation of the *Mathematics Standards of Learning* until the current economic situation is alleviated.
- Return at least some references to the graphing calculators to the standards instead of moving the references to the Curriculum Framework.

Both Achieve and The College Board sent letters evaluating the alignment between the proposed revised *Mathematics Standards of Learning* and their respective standards and/or benchmarks. Both letters follow.



November 21, 2008

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Dr. Patricia Wright  
Superintendent of Public Instruction  
Virginia Department of Education  
PO Box 2120  
Richmond, VA 23218

Dear Dr. Wright:

Achieve has completed the final Quality Review of the alignment of Virginia's proposed revised *Mathematics Standards of Learning* (accepted by the Board of Education on October 23, 2008 for first review) during this period of time provided for public comment. While the standards have not yet been finalized, the primary purpose of this review is to ensure that the state's proposed revised academic standards for exiting high school align with the expectations for success in college and career. The American Diploma Project (ADP) Benchmarks to which these proposed revised Virginia standards were compared represent the knowledge and skills required for successful entry into credit-bearing college courses and quality jobs. A secondary purpose of this review is to ensure that these proposed revised standards meet the criteria of high quality standards that include rigor, coherence, focus, specificity, clarity/accessibility, and measurability.

**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.**

#### Summary of Findings

- *Virginia's proposed revised Mathematics SOL are generally well aligned to the ADP Benchmarks in mathematics. The revisions enhance the rigor of the standards and their alignment with the ADP Benchmarks in mathematics, particularly in the area of data, statistics and probability. Virginia proposes adding expectations about the normal distribution and its associated statistics in both Algebra I and Algebra II that will better prepare students for college and the workplace. In addition, the state has added explicit language to the introduction about the importance of technology, but has removed explicit references to technology from the standards themselves. The*

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state should ensure that technology is comprehensively treated in the revisions to the *Mathematics SOL* Curriculum Framework that include the Essential Knowledge and Skills and Essential Understandings as proposed.

- *Virginia’s proposed revised Mathematics SOL for Algebra, Functions, and Data Analysis provide the scaffold for a strong and innovative option to Algebra II.* The proposed revised Algebra, Functions, and Data Analysis has the potential to provide students with rigorous mathematics at or approaching the level of Algebra II in a more applied and contextualized format — one well suited to students not intending to pursue mathematics intensive STEM majors and careers. The state is encouraged to develop the *Mathematics SOL* Curriculum Framework that includes the Essential Knowledge and Skills and Essential Understandings to support and further develop the standards articulated for this course.
- *Virginia has enhanced the organization and increased the focus of its proposed revised high school standards while reducing the actual number of standards.* Virginia is to be commended for a number of steps taken to add clarity and focus to its high school expectations including the development of an organizational framework for each course that consists of headings under which standards are categorized. Topics have been streamlined as well. These proposed revisions should ensure that the standards are more useful to teachers and curriculum developers and more understandable to educators and non-educators alike.
- *While alignment between the proposed revised Mathematics SOL and the ADP Benchmarks is generally strong, there is a difference between the level of preparation students will receive if they follow a course of study that culminates with Algebra, Functions and Data Analysis rather than Algebra II, which the state has clarified for students and teachers.* Students who successfully complete a sequence culminating in Algebra II should be very well prepared for college level mathematics, including those courses required for STEM majors and careers. On the other hand, students who successfully complete a course sequence that culminates with Algebra, Functions and Data Analysis will be prepared to take non-remedial credit bearing courses such as College Algebra, but will not have the level of preparation required to successfully pursue mathematics intensive programs of study in college. The proposed revisions now make this distinction clear to students and teachers.

Overall, this review found that as expectations for graduating students, the proposed revised *Mathematics SOL* are intellectually challenging. However, as noted in prior Achieve reviews, it is still true that the high school graduation requirements are problematic in not requiring mathematics beyond Geometry. Given Virginia’s graduation requirements for a Standard Diploma—at least three standard credits and one verified credit in mathematics to include at least two courses from among Algebra I, Geometry, Algebra II, or other mathematics courses above the level of algebra and geometry—it is possible that a student may not advance beyond the successful completion of Geometry. By not completing either Algebra II or Algebra, Functions, and Data Analysis, these students will not have had the opportunity to learn a substantial portion

of content that the ADP Benchmarks define as critical preparation for success in postsecondary education or 21<sup>st</sup> century careers.

In conclusion, with these proposed revisions to the *Mathematics SOL*, Virginia has taken an important step to better prepare young people for success in postsecondary education and in their careers. My Achieve colleagues and I look forward to continuing to support your efforts to ensure that Virginia's students are prepared for the real world demands they will face upon graduation.

Regards,

A handwritten signature in cursive script that reads "Laura M. Slover".

Laura Slover  
Vice President for Content & Policy Research,  
Achieve

LMS:ms

Enclosure

cc: Dr. Thomas Morris  
Secretary of Education, Commonwealth of Virginia

Dr. Mark Emblidge  
President, Virginia Board of Education

## Achieve Quality Review II

### **Feedback on Virginia’s Proposed Revised *Mathematics Standards of Learning* (accepted by the Board of Education on October 23, 2008 for first review)**

#### Documents Reviewed

In this review, Achieve focuses on Virginia’s proposed revised *Mathematics Standards of Learning* (dated October 23, 2008) and how these standards align with the Achieve ADP Benchmarks for Mathematics. In preparing these proposed revised standards, the Virginia Department of Education took into consideration comments from a variety of groups, both within and outside of the Commonwealth. Achieve and Virginia’s American Diploma Project (ADP) Alignment Team provided important feedback at formative junctures in this work, as part of the Commonwealth’s participation in three ADP Alignment Institute meetings held since March 2007. Specifically, in March 2007 Achieve provided its initial analyses of Virginia’s Algebra I, Geometry, and Algebra II standards—supplemented by selected standards from the middle grades, as needed, to align with the ADP Benchmarks. Virginia’s ADP Alignment Team took Achieve’s initial analysis into consideration when making proposed revisions to the standards, which were then re-submitted for a comprehensive “Quality Review I” analysis completed in the spring of 2008. For this Quality I Review, Standards of Learning for Algebra, Functions and Data Analysis were also available so Achieve was able to incorporate them into its analysis.

For this final review, a “Quality Review II,” Achieve is focusing its analysis on the proposed revised *Mathematics Standards of Learning* (dated October 23, 2008, as accepted by the Board of Education for first review) for Algebra I, Geometry, Algebra II, and Algebra, Functions, and Data Analysis. Achieve also included proposed revised standards for earlier grades, as needed, since the ADP Benchmarks to which the Commonwealth’s proposed revised standards were being aligned are cumulative in nature and contain content that may be addressed in middle school grades.

#### Achieve Review Panel Comments

- **Virginia’s proposed revised *Mathematics Standards of Learning (SOL)* are generally well aligned with the ADP Benchmarks in mathematics.**

Virginia has taken its work to align its state standards with the ADP Benchmarks quite seriously. The feedback provided as part of earlier Achieve reviews has been taken into consideration and the Commonwealth’s responses are reflected in the proposed revised standards. Since proposed revisions to the Commonwealth’s Curriculum Framework documents were not provided for Achieve’s review, it is assumed that none of the content from these supporting documents which further develop the Standards of Learning through the delineation of Essential Knowledge and Skills and Essential Understandings has been deleted. It is apparent from the review of the proposed revised *Mathematics SOL*, however, that substance from the current *Mathematics SOL* has been proposed to be

moved to the Curriculum Framework documents. Achieve reviewers viewed this as an organizational revision, not a substantive deletion from the proposed revised *Mathematics SOL*, and hence credited Virginia with including such content in its expectations.

The state has responded to Achieve’s earlier feedback by making edits and additions to its standards to more closely align with the ADP Benchmarks. For example, Virginia’s Algebra I, Geometry, and Algebra II standards had earlier been identified as having weak alignment with the ADP Benchmarks with respect to including an understanding of the normal distribution. The ADP Benchmarks clearly state that students should know the characteristics of the normal distribution. Virginia has responded by proposing to add expectations about the normal distribution and its associated statistics in both Algebra I and Algebra II. Coupled with the inclusion of the normal curve in Virginia’s recently adopted Standards of Learning for Algebra, Functions and Data Analysis, the proposed revised standards will ensure that all students in Virginia have the opportunity to learn about a facet of data analysis and statistics that will better prepare them for college and the workplace. In those select instances where the state has chosen not to take Achieve’s suggestions (for example, an even more extensive treatment of data, statistics and probability in Algebra I or Algebra II), the gaps are not significant enough to impact the overall strong alignment of the proposed revised *Mathematics SOL* with the ADP Benchmarks.

While technology is still apparent in the proposed revised *Mathematics SOL*, it is not as clearly visible within the proposed standards as it is in the existing standards. The Goals that accompany the proposed revised standards make clear that Virginia strives to prepare students who can “compete in a technologically sophisticated work force.” It is explicitly stated that “graphing utilities, spreadsheets, calculators, computers, and other forms of electronic information technology are now standard tools for mathematical problem solving in science, engineering, business and industry, government, and practical affairs” and that “the use of technology must be an integral part of teaching, learning, and assessment.” In addition, the introductory paragraphs that precede each set of course standards emphasize that graphing calculators, computers, and other appropriate technology tools are to be used to assist in teaching and learning. It is somewhat curious, given this strong advocacy for technology in the introductory material accompanying the proposed revised standards, that explicit references to technology have been deleted from the standards themselves. In many instances, references to technology have been moved to the Curriculum Framework documents. Hopefully, teachers will attend to the references to technology in the introductory text and in the Curriculum Framework.

- **Virginia’s proposed revised *Mathematics SOL* for Algebra, Functions, and Data Analysis provide the scaffold for a strong and innovative option—one well suited to students not intending to pursue mathematics intensive STEM majors and careers. The Commonwealth is encouraged to develop a Curriculum Framework to support and further develop the standards articulated for this course.**

States across the country are struggling to define mathematics courses that provide students with rigorous mathematics at or approaching the level of Algebra II in a more applied and contextualized format. Virginia's Algebra, Functions, and Data Analysis standards provide a strong framework for such a course but would benefit from the same level of supporting detail that is provided for the other high school courses (Algebra I, Geometry, and Algebra II). To provide districts and schools with the level of detail they need to implement such a course, it is important that the Commonwealth develop Essential Understandings and Essential Knowledge and Skills for this course, enlisting both postsecondary faculty and high school teachers to help ensure that the course adequately prepares students for postsecondary success in non-remedial credit-bearing mathematics courses. In addition, the Commonwealth could add credibility to this course by also developing an end-of-course exam so that students could earn a verified mathematics credit for successful completion of this course.

- **Virginia has enhanced the organization and increased the focus of its proposed revised high school standards while reducing the actual number of standards. This should ensure that the standards are more useful to teachers and curriculum developers and more understandable to educators and non-educators alike.**

In developing the proposed revised *Mathematics SOL*, Virginia is to be commended for a number of steps taken to add clarity and focus to its high school expectations. As discussed earlier, clarifying language has been added to the introductions of each course to clarify which students are expected to achieve each set of course standards. In addition to this, a number of other steps have been taken to enhance the standards' focus. First, an organizational framework has been developed for each course that consists of headings under which standards are categorized. For example, the headings for Algebra I consist of: Expressions and Operations, Equations and Inequalities, Functions, and Statistics. Standards for each course have been re-sequenced and re-worded so as to fit well into these categories. This is a nice addition that is missing from the existing Standards of Learning. Second, to increase the brevity and focus of the proposed revised *Mathematics SOL*, it is proposed that significant portions of the existing *SOL* be moved into the supporting Curriculum Framework document. This increases the clarity of the standards, without eliminating the level of detail that will be critical to successful implementation by teachers. And third, some topics (such as matrices in Algebra I and Algebra II) have been eliminated from the proposed revised *Mathematics SOL* in an attempt to focus on content important for all students. Another example of this paring back of topics is the replacement of conic sections, in general, in Algebra II with a more focused standard dealing with circles and their equations.

The end result of these steps to enhance the focus and clarity of the standards is a reduction in the number of proposed revised standards. In Algebra I, the decrease is from eighteen to ten standards, and the proposed decrease for Algebra II is from twenty to thirteen standards. In Geometry, the proposed reduction is from fourteen standards to thirteen standards.

- **While alignment between the proposed revised *Mathematics SOL* and the ADP Benchmarks is generally strong, there are distinctions, which the state has clarified for students and teachers, between the level of preparation students will receive if they follow a course of study that culminates with Algebra, Functions and Data Analysis, as opposed to Algebra II.**

Virginia's proposed revised *Mathematics SOL* clearly state in the introductions to the Algebra I and Geometry standards that all students are expected to achieve these standards. Following completion of Geometry, it is clear that students in Virginia have two options. All students who intend to pursue a technical field are expected to achieve the Algebra, Functions and Data Analysis or Algebra II standards. All students preparing for postsecondary and advanced technical studies are expected to achieve the Algebra II standards.

Both the Algebra, Functions, and Data Analysis standards and the Algebra II standards define rigorous courses—but they prepare students for different options. Students who successfully complete a sequence culminating in Algebra II should be very well prepared for college level mathematics, including those courses required for STEM majors and careers. On the other hand, students who successfully complete a course sequence that culminates with Algebra, Functions and Data Analysis will be prepared to take non-remedial credit bearing courses such as College Algebra, but will not have the level of preparation required to successfully pursue mathematics intensive programs of study in college.

Students taking a course sequence that culminates with Algebra II will receive a more rigorous algebra preparation than those students who take a course sequence culminating in Algebra, Functions, and Data Analysis. For example, Virginia's proposed revised Algebra II standards are clear that students are to be able to add, subtract, multiply, divide and simplify rational algebraic expressions. This is not addressed explicitly in the standards for Algebra, Functions, and Data Analysis. On the other hand, the Algebra, Functions, and Data Analysis standards include a deeper and more comprehensive treatment of a number of statistical concepts such as experimental design, probability, and the normal curve than the Algebra II standards. (The proposed revised Algebra II standards have been enhanced to better address some statistical concepts, such as the normal distribution, that students might not otherwise encounter until Pre-calculus.)

Finally, this review has found that as expectations for graduating students, the proposed revised *Mathematics SOL* are intellectually challenging. However, as noted in prior Achieve reviews, it is still true that the high school graduation requirements are problematic in not requiring mathematics that extends beyond Geometry. Achieve has focused on the proposed revised *Mathematics SOL* for Algebra I, Geometry, Algebra II, and Algebra, Functions, and Data Analysis in this alignment study, and the resulting alignment with the ADP Benchmarks is generally strong. Unfortunately, given Virginia's graduation requirements for a Standard Diploma—at least three standard credits and one verified credit in mathematics to include at least two courses from among Algebra I, Geometry, Algebra II, or other mathematics courses above the level of algebra

and geometry—it is possible that a student may not advance beyond the successful completion of Geometry. By not completing either Algebra II or Algebra, Functions, and Data Analysis, these students will not have had the opportunity to learn a substantial portion of content that the ADP Benchmarks define as critical preparation for success in postsecondary education or 21<sup>st</sup> century careers. Virginia should consider raising its graduation requirement to require students to take a rigorous core curriculum that includes mathematics at the level of Algebra II and/or Algebra, Functions, and Data Analysis.

In conclusion, the proposed revised *Mathematics Standards of Learning* are intellectually demanding and align well with the ADP Benchmarks, when the benchmarks for Algebra I, Geometry, Algebra II, and Algebra, Functions, and Data Analysis are taken into consideration. Students achieving proficiency in these standards will be well prepared for both workplace and college success.

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Dr. Patricia I. Wright  
Superintendent of Public Instruction  
Commonwealth of Virginia  
Department of Education  
P.O. Box 2120  
Richmond, Virginia 23218-2120

November 21, 2008

Dear Dr. Wright:

The College Board, a not-for-profit organization committed to connecting all students to college success, provides this review of the revised *Mathematics Standards of Learning* to the Virginia Department of Education in support of the Department's goals to strengthen the alignment of the *Virginia Standards of Learning* to postsecondary and career readiness.

The College Board finds significant improvement in the revised *Mathematics Standards of Learning* in terms of both content emphasis and rigor, and the Virginia Department of Education has addressed the majority of the recommendations presented in the College Board's 2007 alignment study of the *Virginia Standards of Learning*. There is significant evidence of improvement in the following areas:

- **Content Emphasis**: The revised standards fully address topics or concepts essential to postsecondary and career readiness that were not addressed as sufficiently in the previous standards, such as:
  - absolute value
  - similarity of figures
  - multiple representations of numbers, functions, and data
  - deduction and induction as methods of reasoning
  - the fundamental principle of counting
  - bivariate data and their applications
  - dependent and independent events
  - sampling and inferential methods in statistics
- **Organization and Progression**: The most significant improvement in this area was in the middle school *Standards of Learning*, where there is evidence of an accelerated



progression, especially in Algebra. The learning progression of standards in the middle school years is critical to building the necessary pathway to college readiness in high school mathematics.

- **Rigor:** The cognitive demand inherent in the revised *Mathematics Standards of Learning* is clearly higher than in the previous version. There is more emphasis placed on mathematical reasoning and communicating, which is reflected in the more frequent use of cognitive actions such as *justify, prove, investigate, analyze, and explain*. The increased emphasis on proving and justifying results, especially in the Algebra and Geometry *Standards of Learning*, will prepare students well for the mathematical reasoning skills required in college and careers.

Although the improvements in the revised *Mathematics Standards of Learning* are clear and evident, there are some areas in which the standards can be further refined in terms of clarity and specificity. These refinements will ensure that the grain size of the standards remains consistent across all strands and that the standards do not allow for different interpretations to be made in terms of their intent.

Overall, it is the College Board's perspective that the proposed *Mathematics Standards of Learning* are aligned well to the *College Board Standards for College Success* and students who complete a course of study aligned to revised *Mathematics Standards of Learning* will be college and career ready.

In providing this information, the College Board views itself as a committed partner with Virginia in setting clear and high expectations for all students in order to prepare them for college and the workforce and welcomes future opportunities to collaborate with the Virginia Department of Education.

Sincerely,

Natasha Vasavada

Senior Director, Standards and Curriculum Alignment Services  
Research and Development  
The College Board  
[nvasavada@collegeboard.org](mailto:nvasavada@collegeboard.org)  
(212) 520-8589

# Board of Education Agenda Item

Item: E.

Date: February 19, 2009

**Topic:** First Review of Process for State Adoption of Textbooks and Instructional Materials for K-12 History and Social Science

**Presenter:** Dr. Beverly Thurston, History, Social Science, and International Education Coordinator

**Telephone Number:** 804-225-2893

**E-Mail Address:** [Beverly.Thurston@doe.virginia.gov](mailto:Beverly.Thurston@doe.virginia.gov)

## 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: \_\_\_\_\_

Action requested at this meeting  Action requested at future meeting:

## 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*. The Board of Education's Regulations Governing Textbook Adoption specifies the types of materials that may be adopted.

### Virginia Constitution; Art. 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

§ 22.1-238. *Approval of textbooks.*

*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.*

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.*

“Basal textbook” or “basal instructional materials” are terms often used to describe the types of materials described in 8 VAC 20-220-30. These materials may be print and/or electronic.

**Summary of Major Elements**

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 provided school divisions with a list of the instructional materials submitted and a profile of each submission that included 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, and on September 26, 2007, the Board adopted its 2007-2012 Comprehensive Plan noting major policy decisions that included textbook adoption.

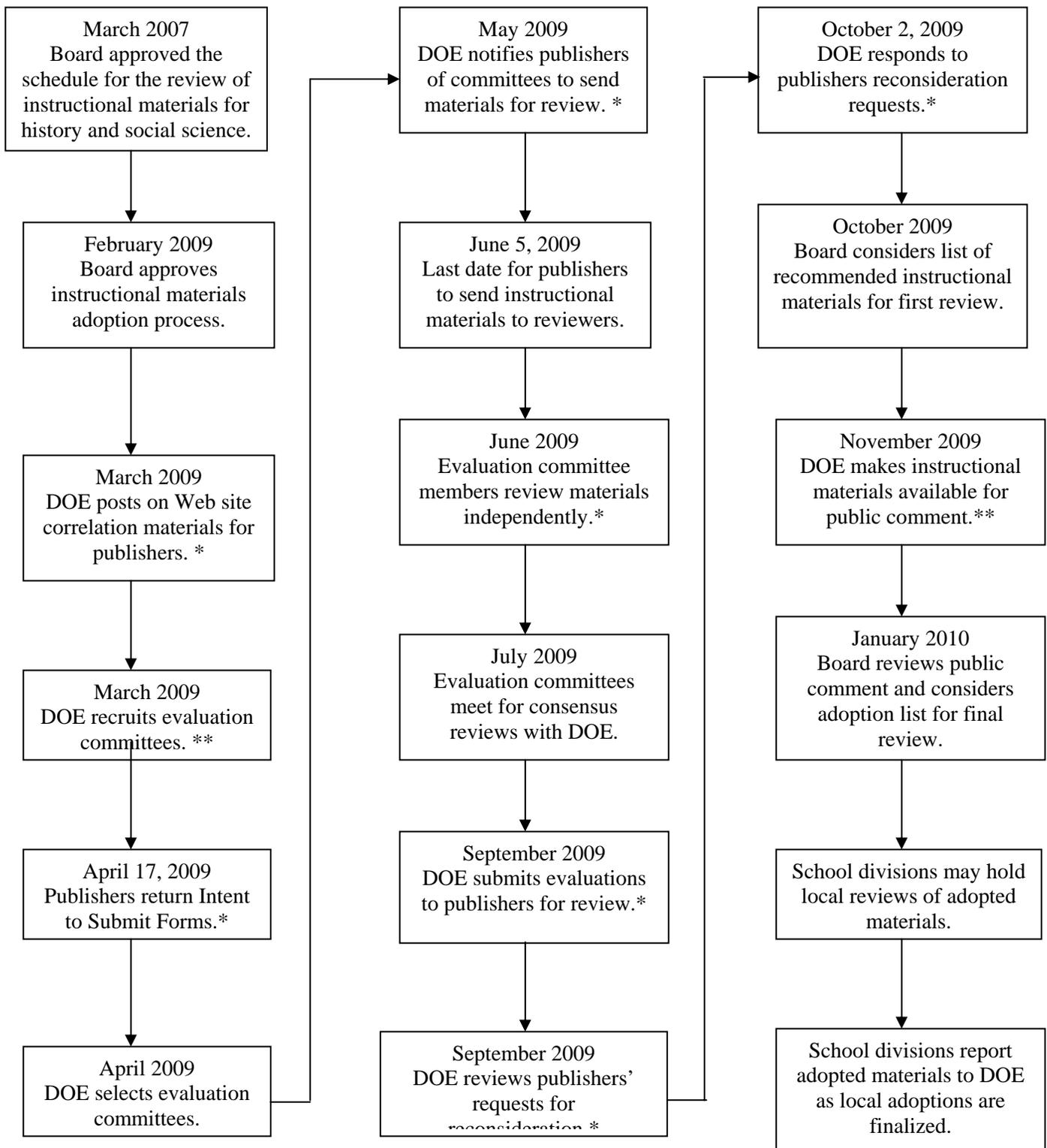
The importance of teachers using curricula and materials that are aligned to the *Standards of Learning* is a major factor contributing to student achievement on the standards. To ensure school divisions have access to textbooks and instructional materials that support the *Standards of Learning*, textbooks and instructional materials for K-12 history and social science are scheduled for adoption in 2009-2010. The Department will use an established review process and criteria to administer the state adoption process for the Board of Education. The Department will submit to the Board for approval a list of recommended materials. The attachment contains a proposed timeline for the process.

**Superintendent's Recommendation:** The Superintendent of Public Instruction recommends that the Board of Education waive first review and grant approval for the Department of Education to proceed with the adoption of K-12 history and social science textbooks and instructional materials.

**Impact on Resources:** The agency’s existing resources can absorb this responsibility at this time. School divisions would have the option of adopting K-12 history and social science textbooks and instructional materials for students.

**Timetable for Further Review/Action:** Upon approval, the Department of Education will provide information to all interested parties according to the timeline described in Attachment A.

**2009 Adoption Process  
History and Social Science Textbook and Instructional Materials Adoption**



\* DOE communication via Internet or e-mail

\*\*Superintendent's Memorandum

# Board of Education Agenda Item

Item: \_\_\_\_\_ F. \_\_\_\_\_

Date: \_\_\_\_\_ February 19, 2009 \_\_\_\_\_

**Topic:** First Review of a Recommendation of the Advisory Board on Teacher Education and Licensure to Grant Approval to Requests to Add New Endorsement Programs at Norfolk State University and Virginia State University

**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)

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 *Regulations Governing the Review and Approval of Education Programs in Virginia* (8VAC20-542-10 et seq.), effective September 21, 2007, require colleges and universities that offer programs for the preparation of professional school personnel to obtain education program (endorsement) approval from the Board of Education. Current education programs have been granted “*Conditional Approval*.” By December 31, 2009, programs must receive one of the following three ratings by the Board of Education: *Approved*; *Approved with Stipulations*; or *Approval Denied*.

Requests to offer new education endorsement programs are submitted to the Department of Education. Personnel in the Division of Teacher Education and Licensure and program specialists within the Department of Education review the programs to ensure competencies have been addressed. The Advisory Board on Teacher Education and Licensure (ABTEL) reviews and makes recommendations to the Board of Education on approval of Virginia education programs for school personnel. Final authority for program approval rests with the Board of Education. Requests for new program endorsements approved by the Board of Education will receive a rating of “*Conditional Approval*.”

The *Regulations Governing the Review and Approval of Education Programs in Virginia*, in part, stipulate the following:

**8VAC20-542-20. Administering the regulations.**

- D. Institutions of higher education seeking approval of an education program shall be accredited by a regional accrediting agency....
- H. Education programs shall be approved under these regulations biennially based on compliance with the criteria described in 8VAC20-542-40....

**8VAC20-542-40. Standards for biennial approval of education programs.**

Approved education programs in Virginia shall have national accreditation or be accredited by a process approved by the Board of Education and demonstrate achievement biennially of the following accountability measures:

1. Candidate progress and performance on prescribed Board of Education licensure assessments. Candidate passing rates, reported by percentages, shall not fall below 70 percent biennially for individuals completing and exiting the program. Achievement of an 80 percent biennial passing rate shall be required by July 1, 2010. Candidates completing a program shall have successfully completed all coursework, required assessments, including those prescribed by the Board of Education, and supervised student teaching or internship. Candidates exiting a program shall have successfully completed all coursework, regardless of whether the individuals attempted, passed, or failed required assessments, including those prescribed by the Board of Education, and/or who may not have completed supervised student teaching or required internship.
2. Candidate progress and performance on an assessment of basic skills as prescribed by the Board of Education for individuals seeking entry into an approved education preparation program....
3. Structured and integrated field experiences to include student teaching requirements....
4. Evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, economic, linguistic, and ethnic diversity throughout the program experiences....
5. Evidence of contributions to preK-12 student achievement by candidates completing the program....
6. Evidence of employer job satisfaction with candidates completing the program....
7. Partnerships and collaborations based on preK-12 school needs....

**Summary of Major Elements:**

On January 26, 2009, the Advisory Board on Teacher Education and Licensure recommended that the Board of Education grant “*conditional approval*” for the following new endorsement programs at Norfolk State University and Virginia State University:

<b>Institution</b>	<b>Endorsement Program Requested</b>	<b>Level of Program</b>
Norfolk State University	Mathematics Specialist for Elementary and Middle Education	Graduate
Virginia State University	Mathematics Specialist for Elementary and Middle Education	Graduate

**Superintendent's Recommendation:**

The Superintendent of Public Instruction recommends that the Board of Education waive first review and approve the Advisory Board on Teacher Education and Licensure’s recommendation to grant “*Conditional Approval*” for new endorsement programs at Norfolk State University and Virginia State University.

**Impact on Resources:** There is a minimum impact on resources.

**Timetable for Further Review/Action:** Colleges and universities must meet requirements for continued approval in accordance with the *Regulations Governing the Review and Approval of Education Programs in Virginia*, effective September 21, 2007.

# Board of Education Agenda Item

Item: \_\_\_\_\_ G. \_\_\_\_\_

Date: February 19, 2009

**Topic:** Report from the Board of Education's 2008-2009 Student Advisory Committee

**Presenters:** Mrs. Isis M. Castro and Mrs. Eleanor B. Saslaw, Members of the Board of Education and Sponsors of the Student Advisory Committee

**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: \_\_\_\_\_

Action requested at this meeting

Action requested at future meeting:

**Previous Review/Action:**

No previous board review/action

Previous review/action  
date:  
action:

**Background Information:** Members of the 2008-2009 Student Advisory Committee were selected from more than 125 nominations received in November 2008 from public middle and high schools across the state. Each public middle school and high school was eligible to nominate one student for consideration. Statewide student organizations were also invited to submit nominees. The nominees completed an application packet that included letters of recommendation and essays.

Representatives of the Board of Education reviewed all applications and selected the new members according to Board of Education policy. The membership of the Student Advisory Committee is set forth in Article X of the Board of Education's bylaws. Of the 12 members of the Student Advisory Committee, one high school student is selected from each of the Department of Education's eight Superintendents' Study Group regions, and four middle school students are selected at-large (see attached membership list).

**Summary of Major Elements:** During the first meeting in December 2008, the members of the Student Advisory Committee discussed a broad range of issues and concerns for students in the public schools across the state. From this discussion, the committee members selected three topics for in-depth study and divided into small work groups focused on the three topics.

At the committee's second meeting on February 18, 2009, the members will continue their discussions and formulate preliminary findings.

At the February 19<sup>th</sup> meeting, the Board of Education will hear a report and a summary of the topics selected for in-depth study. Mrs. Castro and Mrs. Saslaw, the committee's sponsors, will present the report. The student members will be present at the April 2009 meeting to give the committee's final report and recommendations.

**Superintendent's Recommendation:** N/A

**Impact on Resources:** Department of Education funds are used to support the work of the Student Advisory Committee by reimbursing for travel and other expenses related to the committee's meetings.

**Timetable for Further Review/Action:** Members of the Student Advisory Committee will present the final report and recommendations at the April 29-30 meeting. Following receipt of the final report and recommendations, the Board of Education will set a timetable for follow-up actions and discussions.

## Members of the 2008-2009 Student Advisory Committee

Johnathan (Drake) Bishop  
Nottoway High School  
Crewe, VA  
Region 8  
Grade 11

Meghan Bryan  
Eagle Ridge Middle School  
Ashburn, VA  
Region 4  
Grade 8

Tara Coleman  
Council High School  
Council, VA  
Region 7  
Grade 11

Calvin Hunt  
Millbrook High School  
Winchester, VA  
Region 4  
Grade 12

Kevin Kabaria  
Richlands Middle School  
Richlands, VA  
Region 7  
Grade 8

David Krawczyk  
William Fleming High School  
Roanoke, VA  
Region 6  
Grade 12

Abigail (Abby) Moul  
Bruton High School  
Williamsburg, VA  
Region 2  
Grade 12

Londeka (Nqobile) Mthethwa  
Prospect Heights Middle School  
Orange, VA  
Region 4  
Grade 8

Kelly Robeson  
North Stafford High School  
Stafford, VA  
Region 3  
Grade 12

Jose Soto  
Bayside Middle School  
Virginia Beach, VA  
Region 2  
Grade 8

Kiyoko Timmons  
Richmond Community High School  
Richmond, VA  
Region 1  
Grade 12

Madison Wilson  
Harrisonburg High School  
Harrisonburg, VA  
Region 5  
Grade 9