

Just In Time Quick Check
[Standard of Learning \(SOL\) 5.8b](#)

Strand: Measurement and Geometry

Standard of Learning (SOL) 5.8b

The student will differentiate among perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.

Grade Level Skills:

- Describe practical situations where perimeter, area, and volume are appropriate measures to use, and justify orally or in writing.
- Identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.

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[Just in Time Quick Check Teacher Notes](#)

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [The Sandbox: Perimeter, Area, and Volume](#)
- VDOE Algebra Readiness Remediation Plans
 - [Banking Business](#)
 - [You Make the Decision](#)
- VDOE Word Wall Cards: Grade 5 [Word](#) / [PDF](#)
 - Area
 - Perimeter
 - Volume

Supporting and Prerequisite SOL: [5.8a](#), [4.7](#), [4.12](#), [3.8a](#), [3.8b](#)

SOL 5.8b - Just in Time Quick Check

1. The table below lists different situations. In each blank, write the most appropriate measure: perimeter, area, or volume.

Situation	Most Appropriate Measure (Perimeter, Area, or Volume)
Filling a swimming pool with water	
Putting a border around a bulletin board	
Covering a floor with carpet	
Covering a table with a tablecloth	
Filling a jar with honey	
Putting a fence around a yard	
Painting a wall	

2.

a) Describe a situation where you would need to know the perimeter. Explain your thinking using pictures, numbers, and words.

b) Describe a situation where you would need to know the area. Explain your thinking using pictures, numbers, and words.

c) Describe a situation where you would need to know the volume. Explain your thinking using pictures, numbers, and words.

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Common Errors/Misconceptions and their Possible Indications

1. The table below lists different situations. In each blank, write the most appropriate measure: perimeter, area, or volume.

Situation	Most Appropriate Measure (Perimeter, Area, or Volume)
Filling a swimming pool with water	
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Covering a table with a tablecloth	
Filling a jar with honey	
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Some students may have difficulty identifying the correct term for each situation due to either a lack of vocabulary exposure or misconceptions about the application of each term. If students are familiar with the terms they may still confuse the meaning of the terms perimeter, area, and volume. Teachers may wish to have students explore the concepts of perimeter, area, and volume using predetermined scenarios and utilizing the VDOE word wall cards.

- 2.
- Describe a situation where you would need to know the perimeter. Explain your thinking using pictures, numbers, and words.
 - Describe a situation where you would need to know the area. Explain your thinking using pictures, numbers, and words.
 - Describe a situation where you would need to know the volume. Explain your thinking using pictures, numbers, and words.

Some students may have difficulty describing situations where perimeter, area, and volume are applicable due to a lack of experience with these three measurements. Teachers may wish to have students explore and describe the concepts of perimeter, area, and volume using representations and physical objects/spaces.