

Just In Time Quick Check
Standard of Learning (SOL) 2.13

Strand: Measurement and Geometry

Standard of Learning (SOL) 2.13

The student will identify, describe, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms).

Grade Level Skills:

- Determine similarities and differences between related plane and solid figures (circles/spheres, squares/cubes, rectangles/rectangular prisms), using models and cutouts.
- Trace faces of solid figures (cubes and rectangular prisms) to create the set of plane figures related to the solid figure.
- Identify and describe plane figures (circles, squares, and rectangles), according to their characteristics (number of sides, vertices, and angles). Squares and rectangles have four right angles.
- Identify and describe solid figures (spheres, cubes, and rectangular prisms), according to the shape of their faces, number of edges, and number of vertices, using models.
- Compare and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms) according to their characteristics (number and shape of their faces, edges, vertices, and angles).

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [2.13 - The Shape Show](#) (Word) / [PDF Version](#)
- VDOE Word Wall Cards: Grade 2 ([Word](#)) | ([PDF](#))
 - Plane Figures
 - Square: Right Angle
 - Triangle: Side and Vertex
 - Rectangle: Right Angle
 - Sphere
 - Cube
 - Rectangular Prism

Supporting and Prerequisite SOL: [1.11a](#), [1.11b](#), [K.10a](#), [K.10b](#)

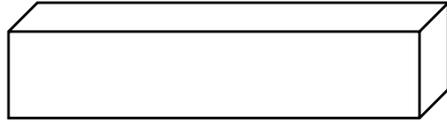
SOL 2.13 - Just in Time Quick Check

Use the word bank to name the shapes in each question.

Word Bank:

Circle	Cube	Rectangle
Rectangular Prism	Sphere	Square

1. Write the name of the shape below each picture.

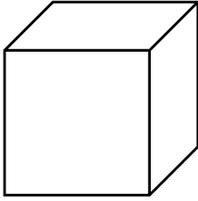


Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

Same: _____

Different: _____

2. Write the name of the shape below each picture.

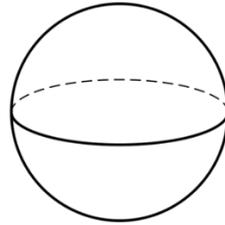
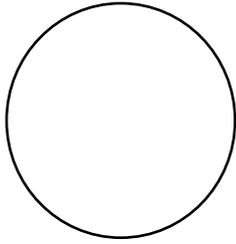


Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

Same: _____

Different: _____

3. Write the name of the shape below each picture.



Write about how these shapes are the same. Then write about how they are different.

Same: _____

Different: _____

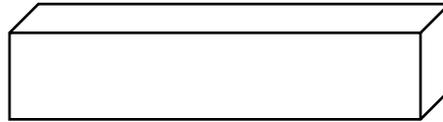
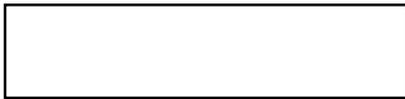
SOL 2.13 - Just in Time Quick Check Teacher Notes
Common Errors/Misconceptions and their Possible Indications

Use the word bank to name the shapes in each question.

Word Bank:

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Rectangular Prism	Sphere	Square

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Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

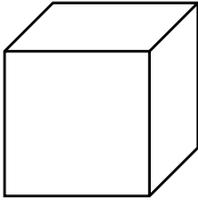
Same: _____

Different: _____

Students may describe the rectangular prism as having three faces, seven vertices, and nine edges. This indicates students are only counting faces, vertices, and edges that they can see. These students will benefit from more experiences with physical models to manipulate, hold, and count as they consider attributes and compare and contrast figures. Building polygons and solids with materials like toothpicks and marshmallows, or folding nets of solid figures, can help students conceptualize the attributes of solid and plane figures.

Students may misuse or confuse some 2-D and 3-D vocabulary, especially “sides” and “edges” and/or “angles” and “vertices,” or they may refer to both figures as rectangles. More experience hearing and using the vocabulary for attributes of plane and solid figures during classroom discussions will help students acquire this vocabulary.

2. Write the name of the shape below each picture.



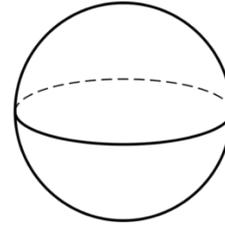
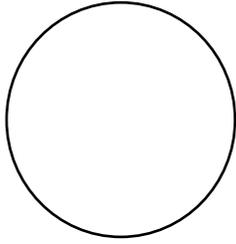
Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

Same: _____

Different: _____

Students may identify both figures as squares. This may indicate that students are considering the faces of the cube rather than the cube as a whole. These students would benefit from more experiences with physical models of cubes. Both tracing faces of the cube (deconstructing, in a sense) and constructing a cube from the six square faces will help students develop understanding for the similarities and differences among these 2-D and 3-D figures. Students may also benefit from additional modeling of the use of the mathematical vocabulary used to describe plane and solid figures.

3. Write the name of the shape below each picture.



Write about how these shapes are the same. Then write about how they are different.

Same: _____

Different: _____

Students may name both figures as circles, or they may have difficulty explaining how the figures are related. Activities using real-world examples may be helpful. For example, cutting a spherical piece of fruit like an orange in half and using that half as a circular “stamp” may build connections between the attributes of these figures.