

SORT IT OUT AND MATCH IT UP

Performance Standard (9B/9C).B

Observe various two- and three-dimensional objects and verbally compare and contrast their attributes.

- *Mathematical knowledge*: Identify the attributes of geometric solids, identify and extend geometric patterns;
- *Strategic knowledge*: Compare and contrast geometric solids using their attributes; and
- *Explanation*: Explain completely what was done and why it was done.

Procedures

1. ***In order to identify, describe, classify, and compare relationships using points, lines, planes, and solids(9B), and construct convincing arguments and proofs to solve problems (9C)***, students should experience sufficient learning opportunities to develop the following:
 - Identify objects that are the same shape and size.
 - Compare and contrast attributes of two- and three- dimensional objects using appropriate vocabulary.
 - Justify an extension of a geometric pattern.
2. This task should be done individually and videotaped in order to assess the explanation part of the standard rubric. Teachers will also take notes about the ways the students decide to compare and contrast the objects.
3. Assess using the standard rubric. Mathematical Knowledge can be assessed by checking the geometric vocabulary and sortings. Strategic Knowledge can be assessed by listening to the audiotapes for insights into the comparisons and contrasts portion of the assessment. Explanation can also be assessed by listening for correct vocabulary.

Examples of Student Work not available

Time Requirements

- 10 - 15 minutes

Resources

- One set of geometric solids (sphere, cone, rectangular prism, cube, cylinder, pyramid)
- Various household/classroom items to match the solids (cereal box, dice, ball...) possibly 3 or 4 of each shape and size
- Teacher Recording Sheet
- Mathematics Rubric

ASSESSMENT (9B/9C).B

NAME _____ DATE _____

SORT IT OUT

Teacher Recording Sheet

Teacher: "I'm going to point to these shapes and solids and I want you to tell me their names and find a real object that matches it's size and shape." Use the geometric solids and shapes for this portion.

_____ rectangular prism _____ cube _____ cone _____ cylinder _____ pyramid _____ sphere

Teacher: "Where can you find these shapes on the solids in front of you?"

_____ square _____ circle _____ triangle _____ rectangle

Teacher: "I want you to close your eyes and pick out two shapes and/or solids and tell me how they are alike and how they are different. "

1. Student chose a _____ and a _____

Comments _____

2. Student chose a _____ and a _____

Comments _____

3. Student chose a _____ and a _____

Comments _____

Teacher: "Now I am going to start a pattern with these real objects and I want you to extend it and explain it to me."

Pattern #1 Comments _____

Pattern #2 Comments _____
