

Core Content

Cluster Title: Reason with shapes and their attributes.

Standard 2: Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.⁴

⁴Students do not need to learn formal names such as “right rectangular prism.”

MASTERY Patterns of Reasoning:

Conceptual:

Students will understand that composite shapes are composed of two or more shapes.

Students will recognize defining attributes of three-dimensional shapes.

Procedural:

Students can identify and describe two-dimensional shapes (square, rectangle, trapezoid, triangle, etc.).

Students can identify and describe three-dimensional shapes (cube, rectangular prism, cone, cylinder, etc.).

Students can identify shapes used to create a composite shape.

Representational:

Students can compose two-dimensional shapes.

Students can compose three-dimensional shapes.

Students can compose composite shapes from two- or three-dimensional shapes.

Students can decompose composite shapes to create new shapes (e.g., rectangular prism into two cubes).

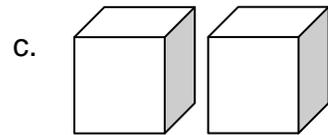
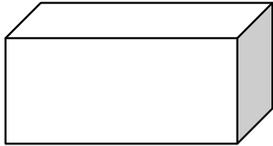
Supports for Teachers

Critical Background Knowledge	
<p>Conceptual: Students will understand the differences between two- and three-dimensional shapes. Students will understand the attributes of a two-dimensional shape. Students will understand the attributes of a three-dimensional shape.</p> <p>Procedural: Students can identify and name two- and three-dimensional shapes.</p> <p>Representational: Students can compose simple shapes to form larger shapes.</p>	
Academic Vocabulary and Notation	
<p>composite shape, compose, rectangular prism, geometric solid, two-dimensional, three-dimensional, face</p>	
Instructional Strategies Used	Resources Used
<p>Compose composite shapes using different methods (pattern blocks, clay, paper, etc.).</p> <p>Decompose composite shapes using different methods.</p> <p>Students use a set of shapes to create two different composite shapes, then compare/contrast how the composite shapes are alike and different.</p> <p>Use pattern block mats to compose and decompose new shapes.</p>	<p>Two- and Three-Dimensional Shapes Lesson Plan Ideas http://www.mcrel.org/pdf/curriculum/5021cm_shapes.pdf</p> <p>Castle Logix game from Educational Insights</p> <p>Smart Board Application—keyword “dimensional shapes”</p>

Assessment Tasks Used

Skill-Based Task:

Which two shapes could you use to create this composite shape?



Problem Task:

Create and record a composite shape using two or more shapes.

Create and record a different composite shape using those same shapes.