

Exploring Three-Dimensional Figures

NCTM Standards 3, 6, 7, 8, 9, 10
Common Core State Standards 1.G.2

Lesson Planner

STUDENT OBJECTIVES

- To use three-dimensional shapes to build composite shapes
- To compose new shapes from composite shapes

2 Teach and Practice

MATERIALS

- A Naming and Describing Three-Dimensional Figures** (TG pp. 700–701)
- B Shape Hunt** (TG p. 720)
- C Sorting Three-Dimensional Figures**
Silent Teaching (TG p. 703)
- D Identifying Attributes** (TG p. 704)
- E Building Composite Shapes** (CCRG p. CC 11)

Added
Activity

- CCRG: Activity Master, Three-Dimensional Figures
- blocks or other examples of three-dimensional figures including rectangular prisms, cubes, cylinders, and cones

Lesson Notes

Activity E has been added to **Lesson 10.11**. Introduce Activity E after children complete Activity D.

About the Activity

In Activity E, children continue their explorations of three-dimensional figures. Children will combine three-dimensional shapes to make composite shapes and compose composite shapes to make new composite shapes.

2 Teach and Practice

E Building Composite Shapes

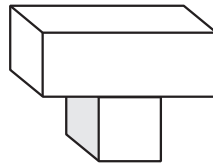
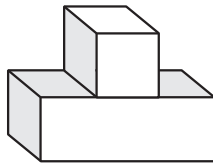
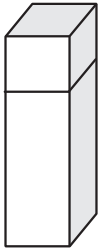
whole class



15 MIN

Purpose To compose three-dimensional shapes

Introduce Display a selection of three-dimensional blocks. Show children a cube and a rectangular prism. Ask a volunteer to put the two blocks together to make a new shape. Have children put a cube and a rectangular prism together in different ways to make composite shapes.



Materials

- For each child: AM: Three-Dimensional Figures, blocks or other examples of three-dimensional figures including rectangular prisms, cubes, cylinders, and cones

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CCSS 1.G.2

Task Have children build a structure using four or five blocks.

On a separate sheet of paper, ask them to draw their structure or cut out figures from Activity Master: Three-Dimensional Figures and glue them to the page to represent their structure on the page.

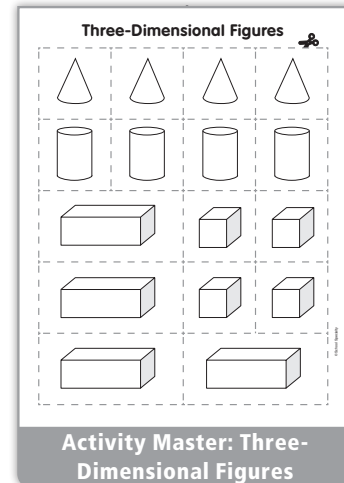
Share Bring the class back together and share the composite shapes that children made.

Talk Math

- What blocks did you use to make your shape? Possible answers: The most likely answers are cubes, rectangular prisms, and cylinders. Cones may have been used in the top layer.
- How would you describe your shape? Possible answers: It looks like a castle with towers. It looks like a big box.

Collect the drawings of the structures. Select one or two drawings and ask the class to match the drawings to the actual structures.

Extend Have pairs of children build a new structure by composing their composite shapes. Ask each pair to identify the different types of shapes in their new structure and the number of each.



Ongoing Assessment

- Are children able to differentiate between different types of three-dimensional shapes?
- Do children demonstrate an understanding that three-dimensional shapes can be composed in many different ways?

Three-Dimensional Figures



