

## Flat or Solid

### Purpose

Students will build models of prisms and pyramids by working from instructions and from pictures.

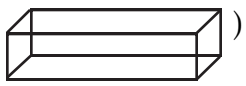
### Materials

*For the teacher:* shoebox with sides that have different colors, picture of a shoebox, chalkboard, chalk, straws, gumdrops

*For each student:* 12 colored plastic straws, 8 gumdrops or miniature marshmallows, copy of Black Line Master (BLM) *Flat or Solid*

### Activity

#### A. Introduction

1. Say to students: "Pictures on paper can be a picture of something that is not flat."
2. Show a picture of a shoebox and a real shoebox.
3. Discuss how the picture does not show all of the shoebox. Have students identify which sides of the shoebox they can see in the picture.
4. Draw the shoebox on the board (e.g., ) and color in the parts according to the shoebox colors.

#### B. Individual Activity

1. Give each student 12 straws and eight gumdrops. Have each student build a square box from gumdrops and straws, one straw for each side (students' boxes should look like the drawing on the chalkboard).
2. Have each student compare his/her box to the others in the class.
3. Have students use three straws and three gumdrops to make an equilateral triangle. Direct students to use three more straws and one gumdrop to make a pyramid.
4. Give students the BLM *Flat or Solid* and direct them to compare their pyramid with the picture of a pyramid.

#### C. Group Activity

1. Divide the students into groups of three or four.
2. Have them build the other shapes on the BLM.

EXTENDING  
THE



ACTIVITY

Have students use blocks to make solid houses and buildings from drawings of those objects.

INCORPORATING



TECHNOLOGY

Find Web sites that show drawings of three-dimensional objects so that students can move the objects around and look at them from different points of view.


Standards Links  
5.5.3, 5.5.4


## Questions for Review


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### Basic Concepts and Processes

During the activity, discuss the following questions with your students:

 How do you “read” a drawing of a three-dimensional object?

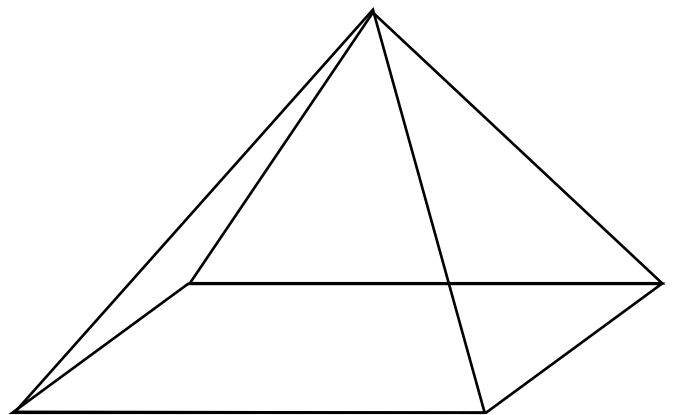
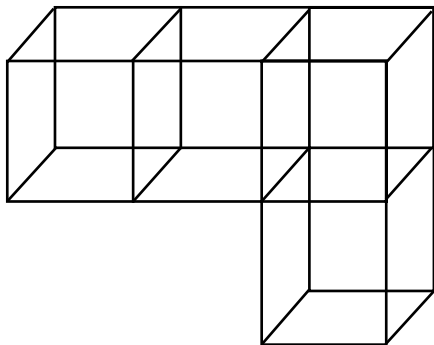
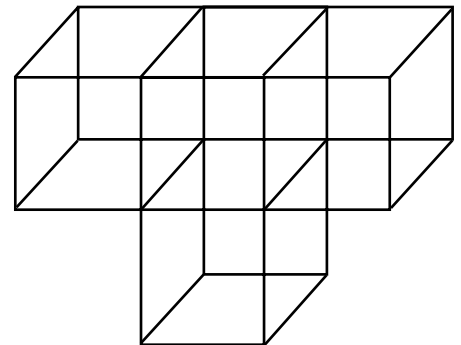
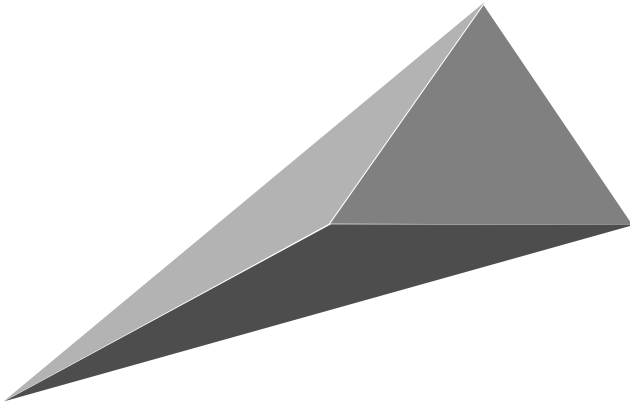
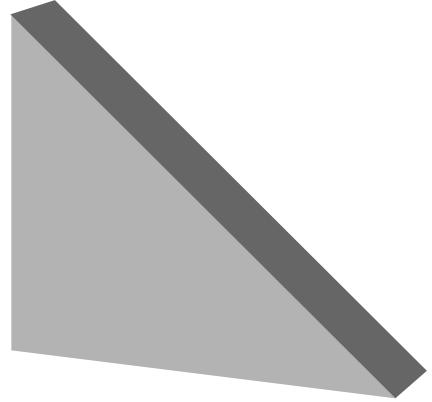
 What does this drawing look like as a three-dimensional object?

 How many edges/faces does your box have?

 How are those edges/faces joined together?

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## Teacher Directions

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Distribute one copy of the BLM *Flat or Solid* to each student. Have students use the drawings of three-dimensional objects on the BLM to make the objects.

## Answer Key

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Not Applicable.