

Gumdrop Geometry

Purpose

Students will construct various geometric shapes and describe the shapes according to the number of faces, edges, and vertices (corners).

Materials

For the teacher: construction paper, cereal box, cube-shaped box

For each student: 35-40 gumdrops, 50 or more toothpicks, copy of Black Line Master (BLM) *All About Shapes*

Activity

A. Pre-Activity Preparation

1. From construction paper, cut a large triangle, square, and rectangle.
2. Cover the cereal box and cube-shaped box with construction paper.
3. On each shape, clearly write the name of the shape.

B. Introduction

1. Display each shape in a location that is visible to all students during the activity.
2. Teach the students the name of each shape and give its definition.
3. Explain the meaning of the terms: *edge*, *face*, and *vertex/vertices*.

C. Student Activity

1. Give each student the toothpicks and gumdrops.
2. Instruct students to construct each of the shapes from the materials given.
3. Upon completion of the constructions, have students complete the BLM *All About Shapes*.

D. Partner Activity

1. Divide class into groups of two.
2. Using the information in the BLM *All About Shapes*, have students take turns describing a shape.

(continued)

connecting
across the
curriculum



Science

Set up an area in the room for students to bring in objects the same shapes as those in the activity. Have students classify and sort the objects by shape.

MEETING
INDIVIDUAL
NEEDS



For students having difficulty with descriptions of shapes, work individually with them pointing at each edge, face, and corner as they count the number of each.

Standards Link
2.1.12

Activity (continued)

E. Class Discussion


Consider the following questions during discussion:


- Do triangles always have sides of equal length?
- Can a square be a rectangle? A rectangle a square? Why or why not?
- Can a cube be a rectangular prism? A rectangular prism a cube? Why or why not?
- What shapes are the faces of the cube and rectangular prism?


Questions for Review


Basic Concepts and Processes


After the partner activity, discuss the following questions with your students to gauge their understanding of the Standard Indicators:


 Did your constructed shapes look similar to the shapes displayed?

 If not, how did you construct the shapes differently?

 If so, how might you construct the shapes differently?

 Were you able to accurately identify the shapes described during the partner activity?

 How did you decide if the description or identification was incorrect?

 Explain the meaning of the terms *edge*, *face*, and *corner*.

Name: _____

All About Shapes

Fill out the table below to help you describe the shapes.
Answer "yes," "no," or "maybe" for the last row "Equal Sides?"

	TRIANGLE	SQUARE	RECTANGLE	CUBE	RECTANGULAR PRISM
Number of Edges					
Number of Faces					
Number of Vertices					
All Sides Equal?					

All About Shapes

Teacher Directions

Provide each student with a copy of the BLM *All About Shapes*. Have students fill out the table to help in their descriptions of the shapes.

Answer Key

	TRIANGLE	SQUARE	RECTANGLE	CUBE	RECTANGULAR PRISM
Number of Edges	3	4	4	12	12
Number of Faces	1	1	1	6	6
Number of Vertices	3	4	4	8	8
All Sides Equal?	maybe	yes	maybe	yes	maybe