

Can You See What I See?

Purpose

Students will draw and visualize two-dimensional views of three-dimensional objects made from rectangular solids.

Materials

For the teacher: set of interlocking cubes, 18 sheets of construction paper (three sheets each of six different colors), chalkboard, chalk, three shoeboxes

For each student: graph paper, pencil, set of six markers as described below

For each group of 3-4 students: 12 interlocking cubes

Activity

A. Pre-Activity Preparation

1. Cover the six sides of each shoe box, each side with a different color of construction paper.
2. Assemble a set of six markers or colored pencils for each student. Choose six colors that correspond to the colors used on the boxes.
3. Obtain a set of interlocking cubes. These are unit cubes with connectors on all six sides and can be purchased from an educational supply store.

B. Introducing the Activity

1. Tell students that they are going to make drawings on paper of things that are three-dimensional.
2. Stack the boxes in different ways, and have students make three different drawings of the stack (one from the top, another from the front, and another from the back).
3. Ask students to use the colored markers in their drawings to identify the different sides of boxes.
4. Inspect students drawings as they complete them.

C. Activity

1. Divide the class into groups of two or three students.
2. Give each group a variety of 12 interlocking cubes.
3. Write the following list of letters on the board: “E,” “F,” “H,” “I,” “L,” and “T.”

(continued)

MEETING INDIVIDUAL



NEEDS

Take a picture of the letter with an instant camera. Students who have difficulty visualizing on their own might find it easier to see the letter as a two-dimensional object.

EXTENDING THE



ACTIVITY

Use boxes to create a replica of buildings in your town. Have students draw street scenes including drawings of these replicas.

Standards Link
6.4.6




Activity (continued)

4. Direct students to form these letters from their interlocking cubes.
5. Ask students to take turns in their groups forming the letters using the cubes.
6. Instruct each member of the group to draw the letter from four different views, and remind students that color and location are important as they draw their views.
7. Ask for volunteers to come to the board and share drawings with the class.

Classroom Assessment

Basic Concepts and Processes

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

-  Are there cubes that make up the letter that are hidden from your view?
 -  Why are these letters the only letters we will use?
 -  Why do we want to draw flat pictures of things that are not flat?
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