

2 Develop the Concept: Interactive



10–15 min

Interactive Learning

Overview Students will look at arrangements of cubes and draw diagrams of the top, side, and front views.



Essential Question How can you get information about a solid from different views?

Materials Centimeter Cubes (8 cubes for each group of 3 students)



Set the Purpose Sometimes a figure can look different based on where it is viewed. Today you will learn how to describe views of stacked cubes.

Connect Stack 6 cubes in graduating columns to look like stairs. When you look at an arrangement of cubes from different positions, do you always see all of the cubes? [No]

Pose the Problem

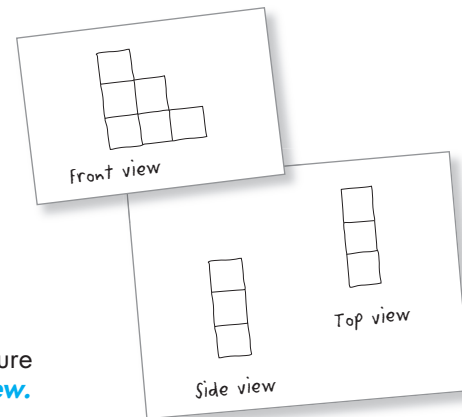
You will look at the stacked cubes from different views. Then you will sketch these cubes from a front, top and side view. Students should draw the front view. [Three rows of squares with 3 squares in the bottom row, 2 in the second, and 1 in the first]

Model/Demonstrate

Turn the stack of 6 cubes so that students see the front view. Draw that view on the board. Then turn the cubes so that students see other views and draw those on the board. What does the side view look like? Draw a sketch of the side view on the board. Do you see all the cubes in this view? [No] How many cubes are not visible? [3] What do you think the top view looks like? Draw a sketch of the top view on the board. Do you see all the cubes in this view? [No] How many cubes are not visible? [3]

Small-Group Interaction

Divide students into groups of three. Have each group build a solid structure using 8 cubes. Draw a diagram of a top view, a side view, and a front view. For each view, there are certain cubes that are not visible. Discuss this as a group and count the number of cubes that cannot be seen for each view. Have students share diagrams and findings.



Use 4 cubes to form a stack in which the front view is 1 cube wide and 3 cubes high. What does the side view look like? [3 cubes stacked vertically with 1 cube next to them]



eTools Geometry Drawing
www.pearsonsuccessnet.com

Link to Investigations, Second Edition

Joint-Usage Master Plan
Blended Instruction (Plan 1):
Topic 13 and Unit 2