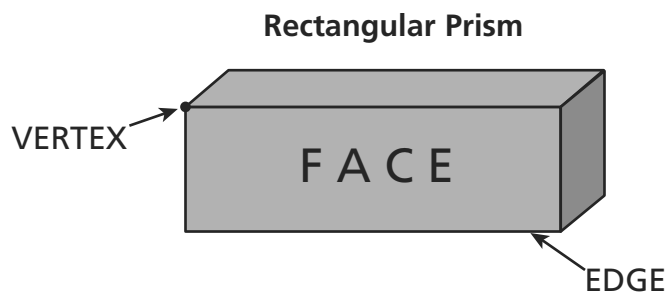


Teaching Unit E (Continued)

Math Background

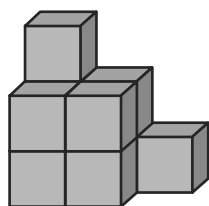
Concept-Building Activities

Three-Dimensional Figures In the previous grades, students explored cubes, prisms, cylinders, cones, and spheres informally. In this unit, students are provided with an opportunity to further develop their skills for identifying, constructing, and analyzing three-dimensional figures. They will compare and contrast characteristics of these figures, and analyze attributes such as flat and curved surfaces, and number of faces, vertices, and edges.



Spatial Sense Students will use nets to build cubes, other prisms, and cylinders. These activities develop spatial sense by helping students to visualize how two-dimensional figures fold into three dimensions to create solid figures.

Students will also develop spatial sense by analyzing two-dimensional drawings of stacks of cubes. They use reasoning skills to identify hidden cubes and determine the number of cubes needed to build the real object.



3 cubes you cannot see
7 cubes you can see
10 cubes altogether

Surface Area The surface area of a three-dimensional figure is the total area of all its faces. Surface area can be measured even for figures with curved surfaces such as spheres, cones, and cylinders. In Lesson 2 of Unit E, students calculate the surface area of rectangular and triangular prisms. Through their previous work with nets, they will understand that the area of the surface of a three-dimensional figure is the same as the area of its two-dimensional net.

