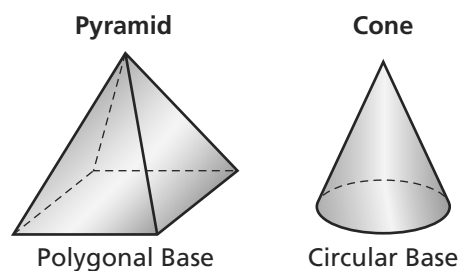


# Math Background

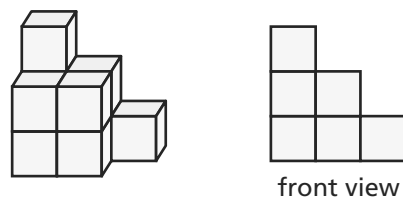
## Concept-Building Activities

**Three-Dimensional Figure** In 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, such as the shapes of bases and whether they have flat and curved surfaces.



**Spatial Sense** In the previous grade, students built prisms from nets. Students will now use nets to build cylinders, pyramids, and cones. 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. In the previous grade, they used reasoning skills to identify hidden cubes and determine the number of cubes that would be needed to build the real object. Now they apply those skills to draw two-dimensional views of the objects.



**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. Students will calculate the surface area of prisms and pyramids with given measurements. 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.

