

# Learning Targets

## Area and Surface Area

### Lesson 1: Tiling the Plane

- I can explain the meaning of area.

### Lesson 2: Finding Area by Decomposing and Rearranging

- I can explain how to find the area of a figure that is composed of other shapes.
- I know how to find the area of a figure by decomposing it and rearranging the parts.
- I know what it means for two figures to have the same area.

### Lesson 3: Reasoning to Find Area

- I can use different reasoning strategies to find the area of shapes.

### Lesson 4: Parallelograms

- I can use reasoning strategies and what I know about the area of a rectangle to find the area of a parallelogram.
- I know how to describe the features of a parallelogram using mathematical vocabulary.

### Lesson 5: Bases and Heights of Parallelograms

- I can identify pairs of base and height of a parallelogram.
- I can write and explain the formula for the area of a parallelogram.
- I know what the terms "base" and "height" refer to in a parallelogram.

### Lesson 6: Area of Parallelograms

- I can use the area formula to find the area of any parallelogram.

### Lesson 7: From Parallelograms to Triangles

- I can explain the special relationship between a pair of identical triangles and a parallelogram.

### Lesson 8: Area of Triangles

- I can use what I know about parallelograms to reason about the area of triangles.

### **Lesson 9: Formula for the Area of a Triangle**

- I can use the area formula to find the area of any triangle.
- I can write and explain the formula for the area of a triangle.
- I know what the terms “base” and “height” refer to in a triangle.

### **Lesson 10: Bases and Heights of Triangles**

- I can identify pairs of base and corresponding height of any triangle.
- When given information about a base of a triangle, I can identify and draw a corresponding height.

### **Lesson 11: Polygons**

- I can describe the characteristics of a polygon using mathematical vocabulary.
- I can reason about the area of any polygon by decomposing and rearranging it, and by using what I know about rectangles and triangles.

### **Lesson 12: What is Surface Area?**

- I know what the surface area of a three-dimensional object means.

### **Lesson 13: Polyhedra**

- I can describe the features of a polyhedron using mathematical vocabulary.
- I can explain the difference between prisms and pyramids.
- I understand the relationship between a polyhedron and its net.

### **Lesson 14: Nets and Surface Area**

- I can match polyhedra to their nets and explain how I know.
- When given a net of a prism or a pyramid, I can calculate its surface area.

### **Lesson 15: More Nets, More Surface Area**

- I can calculate the surface area of prisms and pyramids.
- I can draw the nets of prisms and pyramids.

### **Lesson 16: Distinguishing Between Surface Area and Volume**

- I can explain how it is possible for two polyhedra to have the same surface area but different volumes, or to have different surface areas but the same volume.
- I know how one-, two-, and three-dimensional measurements and units are different.

### **Lesson 17: Squares and Cubes**

- I can write and explain the formula for the volume of a cube, including the meaning of the exponent.
- When I know the edge length of a cube, I can find the volume and express it using appropriate units.

### **Lesson 18: Surface Area of a Cube**

- I can write and explain the formula for the surface area of a cube.
- When I know the edge length of a cube, I can find its surface area and express it using appropriate units.

### **Lesson 19: Designing a Tent**

- I can apply what I know about the area of polygons to find the surface area of three-dimensional objects.
- I can use surface area to reason about real-world objects.