

Unit 6

Family Letter

Reveal
MATH

Dear Family,

In this unit, *Connect Area and Multiplication*, your child will learn how to find area of rectangles and composite figures by counting square units, and connecting multiplication to area. He or she will learn how to decompose composite figures to find the area.

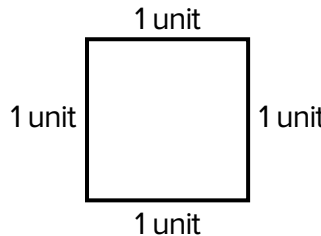
STEM Career Kid for this Unit

Hi, I'm Sam.

I want to be an architectural drafter. I will use math in my job when I design and draw buildings. I'll show students how I will use area in my work.



What math terms will your child use?

Term	Student Understanding
area	the amount of surface inside a 2-dimensional shape
composite figure	a shape made up of two or more figures
square unit	the units that are used to measure area
unit square	a square that has a side length of 1 unit 

What can your child do at home?

Search the home with your child for rectangles and composite figures. Have your child use the skills he or she learns in this module to find the area of the shapes you find. Try using various units as you measure the length and width of each shape.



What Will Students Learn in This Unit?

Area of Rectangles

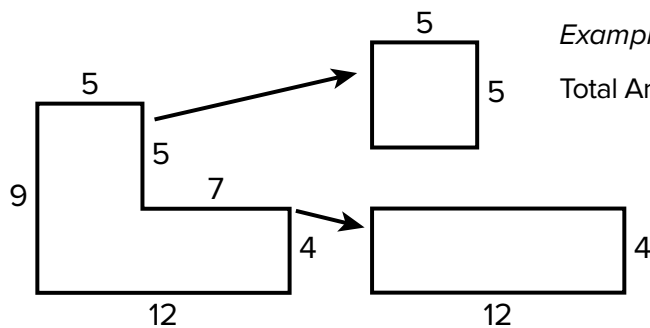
Your child will be introduced to measuring area by tiling shapes with unit squares. The number of unit squares that can fit into a shape with no gaps or overlaps is equal to the area of the shape. For example, a 5-inch by 6-inch rectangle can be tiled with 6 rows of unit squares with 5 squares in each row. Since 30 unit squares can tile the rectangle with no gaps or overlaps, the area of the rectangle is 30 square inches.

Your child will also use multiplication to find the area of rectangles. The length and width of a rectangle can be multiplied to find its area.

Area of Composite Shapes

Your child will use what he or she knows about finding the area of rectangles to calculate the area of composite shapes. Students will learn how to decompose a composite shape into smaller rectangles. The area of the composite shape is equal to the sum of the areas of the rectangles into which it is decomposed.

Example:



Total Area = Area of Square + Area of Rectangle

$$= 5 \times 5 + 12 \times 4$$
$$= 25 + 48$$
$$= 73 \text{ square units}$$

Finding Area by Decomposing

Your child will learn how to decompose a length to find the area of rectangles with larger dimensions. This involves splitting one dimension into two shorter lengths. For example, students may treat a rectangle that is 18 units long as two rectangles: one that is 10 units long and one that is 8 units long.

Example:

$$\text{Area} = 18 \times 4$$

$$= 10 \times 4 + 8 \times 4$$

$$= 40 + 32$$

$$= 72 \text{ square units}$$

