

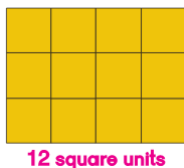
Dimensions Math

Grade 3 Letter Home

Chapter 13 Area and Perimeter

Home Connection

In this chapter, your child will be introduced to the concept of **area**; the space that a two-dimensional closed shape occupies. They will begin by counting areas of figures made with square units and then derive the formula for the area of a rectangle as length \times width or width \times length.



The area of rectilinear composite figures will be calculated by one of three strategies.

3 strategies

I made two rectangles this way.

$$2 \times 2 = 4$$
$$3 \times 4 = 12$$
$$4 + 12 = 16$$
 | Area = 16 cm²

I made two rectangles a different way.

$$5 \times 2 = 10$$
$$3 \times 2 = 6$$
$$10 + 6 = 16$$
 | Area = 16 cm²

I made a big rectangle first.

$$5 \times 4 = 20$$
$$2 \times 2 = 4$$
$$20 - 4 = 16$$
 | Area = 16 cm²

Although the strategies look different, the underlying idea for finding the area of the composite figure is simply finding a way to distinguish the different rectangles in the shape and then use the area formula for a rectangle.

Perimeter is the distance around the figure which can be determined by adding the lengths of the sides together.

Your child will learn different strategies to find the perimeter of rectangles.

	$2 \times 9 = 18$ $2 \times 5 = 10$ $18 + 10 = 28$ Perimeter = 28 in
	$9 + 5 = 14$ $2 \times 14 = 28$ Perimeter = 28 in
	$4 \times 6 = 24$ Perimeter = 24 in

What can we do at home?

- Students often confuse the terms area and perimeter. Try to include these terms in daily conversations, such as: the fence is the **perimeter** of your backyard or measure a room to see how much carpet you need to cover the **area**.
- Since your child will be using multiplication facts to determine the area and perimeter of shapes, fluent mastery of multiplication facts is foundational. This activity is a great way to practice math facts and reinforce the terms perimeter and area.

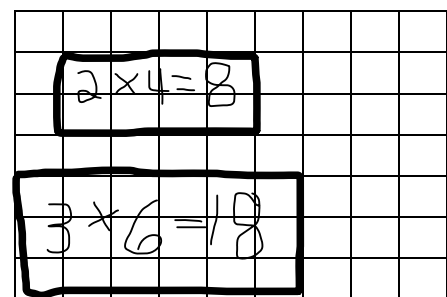
Capture! (Fences)

Materials:

- Graph paper, 2 dice, and 2 different colored pencils or markers

Directions:

- Play with two players.
- Player one rolls the two dice and makes one the number the length of the shape and the other the width of the shape. They enclose that many squares on the graph paper and write the multiplication problem in the rectangle.
- Player two plays the same way capturing a different group of squares.
- Example game:
- Player one rolls 2 and 4 and encloses an **area** of 8
- Player two rolls a 3 and 6 and encloses an **area** of 18
- The winner is the last player to complete a turn, before the graph paper is too full.
- Extension: Determine the **perimeter** of the rectangle by counting and adding the length of the sides.



- **A video demonstration of this activity is on our TCA website:**
<https://www.tcatitans.org/Domain/200>

