

Unit 5

Family Letter

Florida Reveal
MATH[®]

Dear Family,

In this unit, Multiply Multi-Digit Whole Numbers, your child will learn how to estimate products, find the products of multi-digit numbers. using partial products or an algorithm, and solve multi-step problems involving multiplication.

STEM Career Kid for this Unit

Hi, I'm Owen.

I want to be an entomologist. I will use math in my job when I study populations of insects. I will show students how I will multiply multi-digit numbers in this unit.



What math terms will your child use?

Term	Student Understanding
algorithm	a particular math process used to solve a problem that provides a correct solution every time
area model	a visual model used to determine the partial products and the product
estimate	to approximate the answer to see if it is reasonable
partial products	the result of multiplying a decomposed factor that can then be added together to determine the product



What can your child do at home?

Throughout this unit, help your child practice multiplying multi-digit numbers. Provide experience with multiplying 1-digit numbers by up to 4-digit numbers, as well as 2-digit numbers by up to 4-digit numbers. The more your child practices multiplying, the easier the procedure will become.

What Will Students Learn in This Unit?

Using Area Models and Partial Products

Your child will use area models to represent multiplication of multi-digit factors. The place value of each digit is used to find the area of the smaller rectangles, which are the partial products. Then these partial products are added to find the total product.

Example:

A clothing store is 57 feet long and 43 feet wide. What is the area of the clothing store?

		57	
		50	+ 7
43	40	2,000	280
	+ 3	150	21

Add the partial products.

$$2,000 + 280 + 150 + 21 = 2,451$$

The area of the clothing store is 2,451 square feet.

Using Partial Products and an Algorithm

Your child will learn an algorithm for multiplying by using the place values of each digit to find the partial products.

$$\begin{array}{r} 143 \\ \times 26 \\ \hline 20 \times 100 = 2,000 \\ 20 \times 40 = 800 \\ 20 \times 3 = 60 \\ 6 \times 100 = 600 \\ 6 \times 40 = 240 \\ 6 \times 3 = + 18 \\ \hline 3,718 \end{array}$$

Using an Algorithm

Your child will learn an algorithm for multiplying multi-digit numbers. They can use this process without using partial products.

$$\begin{array}{r} 21 \swarrow \text{Regroup.} \\ 143 \\ \times 26 \\ \hline 858 \\ + 2,860 \\ \hline 3,718 \end{array}$$