Unit **11**
Family Letter

Reveal MATH®

Dear Family,

In this unit, Multiply Fractions by Whole Numbers, your child will learn how use different strategies to multiply fractions and mixed numbers by whole numbers.

STEM Career Kid for this Unit

Hi, I'm Saffron.
I want to be a pastry chef. I will use math in my job when I make recipes. Students will see how multiplying fractions by whole numbers helps me double and triple recipes.

What math terms will your child use?

Term	Student Understanding
fraction	a number that represents one or more parts of a whole that has been divided into equal parts
unit fraction	a fraction with a numerator of 1; For example, $\frac{1}{2}$ and $\frac{1}{4}$ are unit fractions.
decompose	to break down a number into smaller parts; For example, $4\frac{1}{2}$ can be decomposed as $4 + \frac{1}{2}$
mixed number	a number that has a whole-number part and a fraction part; For example, $5\frac{1}{3}$ is a mixed number.

What can your child do at home?

Math @ Home Activity

Help your child develop fluency with multiplication of fractions and whole numbers. Create a template for multiplying a fraction by a whole number. Write the numbers 1-15 on index cards. Have your child randomly select 2 cards and place them on the template in the whole number and numerator spots. Choose one of the following numbers for the denominator: 2, 3, 4, 5, 6, 8, 10, and 12. He or she should then apply the strategies he or she has learned to find the product

What Will Students Learn in this Unit?

Using a Number Line to Multiply a Fraction by a Whole Number

Your child will learn how to use number lines to show multiplying a fraction by a whole number. Students learn how to show the whole number in the expression as the number of jumps. The width of each jump is equal to the fraction in the expression.

Example:

$8 \times \frac{3}{8} = ?$

$$+\frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8}$$
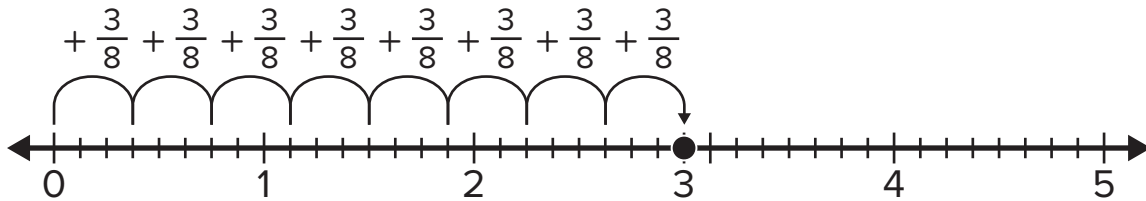
$8 \times \frac{3}{8} = \frac{24}{8}$ or 3

Multiplying a Mixed Number by a Whole Number

Your child will learn how to multiply a mixed number by a whole number. Students will learn the steps used to perform this type of multiplication.
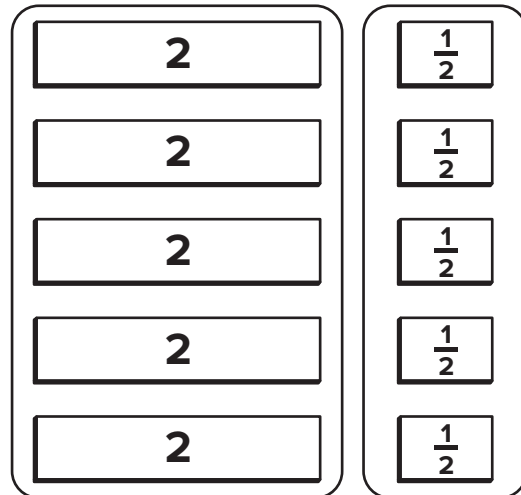
Example:

$5 \times 2\frac{1}{2} = ?$

1. Decompose $2\frac{1}{2}$ into 2 and $\frac{1}{2}$.

2. Multiply 2 by 5.

3. Multiply $\frac{1}{2}$ by 5.

4. Add the two products together.

$$10 + \frac{5}{2} = 10 + 2\frac{1}{2} = 12\frac{1}{2}$$

$5 \times 2 = 10$ $5 \times \frac{1}{2} = \frac{5}{2}$

Solving Problems that Involve Fractions and Mixed Numbers

Your child will learn how to solve word problems that require computations involving fractions and mixed numbers. Students will apply the strategies they learned throughout the unit to solve these problems. Encourage your child to identify important information given in the problem, what he or she needs to find, and a strategy that can be used to find the answer before solving the problem.