

# Multiplying Fractions and Whole Numbers

### Today's Standard

5.NF.B5b - Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $a/b = (n \times a)/(n \times b)$  to the effect of multiplying a/b by 1.

#### Real-World Applications for this Standard

Doubling a recipe for cooking or baking; Calculating discounts during shopping; Scaling up or down in art or design projects; Understanding proportions in maps or models; Converting units in measurements

#### Today I Learned

Today we learned about multiplying fractions and whole numbers. When you multiply by a fraction bigger than 1, the number gets bigger. When you multiply by a fraction smaller than 1, the number gets smaller.

# **Common Stumbling Blocks**

Some students think that multiplying always makes numbers bigger, but that's not true with fractions. Others mix up multiplying and adding fractions.

## Quiz Me

- What happens when you multiply a number by 1?
- What happens when you multiply by a fraction bigger than 1?
- What happens when you multiply by a fraction smaller than 1?
- Can you show me how to multiply two fractions?
- What is fraction equivalence?

# Help Me

Multiplying fractions is like cutting a pizza into smaller pieces or combining ingredients in a recipe. It helps us understand how parts of a whole work together.