Unit 8 - Chapter 8: Multiply Fractions by Whole Numbers

Content Area: **Mathematics**
Course(s): **Math 4**
Time Period: **January**
Length: **2 weeks**
Status: **Published**

Unit Summary

In this unit, students will learn to build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Students will learn how to multiply fractions by a whole number.

Standards

MA.4.NF.B.4a	Understand a fraction a/b as a multiple of $1/b$.
MA.4.NF.B.4b	Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number.
MA.4.NF.B.4c	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.
TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.5.A.CS2	Select and use applications effectively and productively.

Student Learning Objectives

Students will learn to:

- write a fraction as a product of a whole number and a unit fraction.
- write a product of a whole number and a fraction as a product of a whole number and a unit fraction.
- use a model to multiply a fraction by a whole number.
- multiply a fraction by a whole number to solve a problem.
- use the strategy Draw a Diagram to solve comparison problems with fractions.

Essential Questions

- How can you write a fraction as product of a whole number and a unit fraction?
- How can you write a product of a whole number and a fraction as a product of a whole number and a unit fraction?
- How can you use a model to multiply a fraction by a whole number?
- How can you multiply a fraction by a whole number to solve a problem?
- How can you use the strategy *draw a diagram* to solve comparison problems with fractions?

Enduring Understandings

Students understand that:

- the product of a number and a counting number is a multiple of the number.
- models are helpful when multiplying a fraction by a whole number.
- drawing diagrams is useful to solve comparison problems.

Application

Students will be able to independently use their learning to:

- write a fraction as a product of a whole number and a unit fraction.
- write a product of a whole number and a fraction as a product of a whole number and a unit fraction.
- use a model to multiply a fraction by a whole number.
- multiply a fraction by a whole number to solve a problem.
- use the strategy *draw a diagram* to solve comparison problems with fractions.

Skills

Students will be skilled at:

- writing fractions as a product of a whole number and a unit fraction.
- writing products of a whole number and a fraction as a product of a whole number and a unit fraction.
- using models to multiply a fraction by a whole number.
- multiplying fractions by a whole number to solve a problem.
- using the strategy *draw a diagram* to solve comparison problems with fractions.