Title: Multiplying Fractions with a Whole number (Lesson 5)

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Date:

Curriculum Area: operations with fractions	**Length of Learning Experience:** 60 min

Core Competencies:

Acquiring and presenting information: acquire information from a variety of sources and present information for many purposes.

Understanding and Solving: students visualize to solve problems and apply multiple strategies to solve abstract and contextualized questions

Questioning and investigating: They develop and refine questions; create and carry out plans; gather, interpret, and synthesize information and evidence; and reflect to draw reasoned conclusions.

Connect and engaging with others: Students engage in informal and structured conversations.

Building relationships: Students build and maintain diverse, positive peer and intergenerational relationships. They are aware and respectful of others' needs and feelings and share their own in appropriate ways. They adjust their words and actions to care for their relationships.

Big Idea:

Number represents, describes, and compares the quantities of ratios, rates and percents.

Learning Standards (Curricular Competencies and Content)

- Use reasoning and logic to explore, analyze, and apply mathematical ideas
- Apply multiple strategies to solve problems in both abstract and contextualized situations
- Explain and justify mathematical ideas and decisions
- Represent mathematical ideas in concrete, pictorial, and symbolic forms

Learning Target	**Assessment Strategies**
- Students can multiply fractions with whole numbers - Students can create a image to represent multiplying a fraction with a whole number	- Students will be working in groups on vertical white boards - Assessment will take place through walking around, listening to students reasoning and asking questions - Students will draw out or create pictures to represent questions and I will be able to evaluate their understanding based on the pictures they create

Scaffolds & Accommodations: - Students will be work in groups so they can review content with peers	**Extensions:** - Extension question below - Students will also be asked to show their answer a different way if they are finished before the majority of groups

FPPL

Learning is holistic, reflexive, reflective, experiential and relational (focused on connectedness, on reciprocal relationships, and a sense of place)

- Students are working together
- Students are using past knowledge and applying their thinking to new challenges

Materials and Technologies/Resources/Pre Class Preparation

- White board markers
- Materials for drawing fractions

Learning Progression

Intro: Engage/Explore (10 min)

- attendance
- Begin with students gathered around one board
- 1/3 + 1/3 + 1/3 + 1/3 + 1/3
- Is there another way to write this? Introduce multiplication

Practice: Extend (25 min)

- Students work in groups at different white boards
- Students are given scaffolded questions to practice multiplying fractions by whole number

Practice: historical connection in groups (20 min):

- Egyptian unit fractions
- Students work to rewrite proper fractions as a sum of unit fractions
- Why would this possibly be useful?

Closure: Exit/Evaluate (15 min)

- Students have time to summarize their learning in a quadrant note structure and have 10 minutes to work on practice questions

Notes and Reflection:

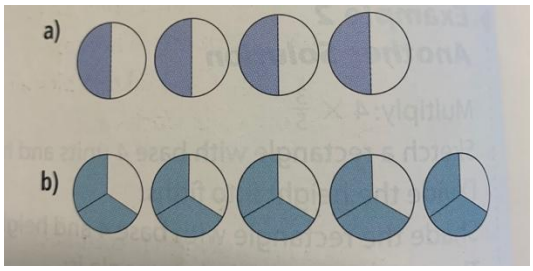
Scaffolding of questions: begin visually, start with one whole number, then scenario questions, extension: two proper fractions

Questions:

Show visually: a) $7 \times \frac{3}{4}$ b) $\frac{1}{5} \times 4$ c) $2 \times 3\frac{1}{5}$

Solve: a) $\frac{1}{3}$ of 21 b) $\frac{5}{9}$ of 45 c) $4 \times \frac{5}{12}$

Write a multiplication statement to describe the picture:



Naruko went to the mall with $28. She spent $\frac{4}{7}$'s of her money. How much did Naruko spend? Use a model.

Unit fractions activities (historical method):

$\frac{5}{7}$ $\frac{2}{7}$ 13/12 as 1/2 + 1/3 + 1/*