Dear Parents,
We will begin our next unit of study in math soon. The information below will serve as an overview of the unit as you work to support your child at home. If you have any questions, please feel free to contact me. I appreciate your on-going support.
Sincerely,
Your Child's Teacher

Unit Name: Multiplying Fractions by Whole Numbers

Common Core State Standards:

4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
a. Understand a fraction *a/b* as a multiple of *1/b*.
b. Understand a multiple of *a/b* as a multiple of *1/b*, and use this understanding to multiply a fraction by a whole number.
c. Solve word problems involving multiplication of fraction by a whole number, e.g., by using visual models and equations to represent the problem.

Essential Vocabulary:

- Operations
- Fraction
- Unit fraction
- Multiple/multiply
- Equivalent
- factor

- Reason
- Denominator
- Numerator
- Decomposing
- Whole number

Unit Overview:

In this unit, students will apply their understanding of adding fractions and extend their understanding by multiplying fractions. Just as students see repeated addition as multiplication students will develop understanding that all fractions are made up of repeated unit fractions (7/5 = 1/5 + 1/5 + 1/5 + 1/5 + 1/5 + 1/5 + 1/5 or 7/5 = 7 x 1/5). Students are expected to use and create visual fraction models to multiply fractions by whole numbers.

Strategies/Skills:

Students will build on their understanding of fractions from 3rd grade to make sense of larger fractions when adding, subtracting and equivalence. They are expected to use a variety of models to support their reasoning about numbers.

- Area model
- Number line
- Collection/set models

Video Support:

Video support can be found on The WCPSS Academics YouTube Channel.
- http://tinyurl.com/WCPSSAcademicsYouTube
  o Multiply Fraction by Whole Number 1
  o Multiply Fraction by Whole Number 2
Video support can be found on LearnZillion.
- http://learnzillion.com

Wake County Public Schools, Unit Overview for Parents
This document should not replace on-going communication between teachers & parents.

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o Multiply fractions by whole numbers: using repeated addition
https://learnzillion.com/student/lessons/122-multiply-fractions-by-whole-numbers-using-repeated-addition

o Multiply fractions by whole numbers: using models
https://learnzillion.com/student/lessons/126-multiply-fractions-by-whole-numbers-using-models

o Represent a fraction as the sum of unit fractions using number line
https://learnzillion.com/student/lessons/2971-represent-a-fraction-as-the-sum-of-unit-fractions-using-number-line

o Represent a fraction as the sum of the unit fraction using area model
https://learnzillion.com/student/lessons/3026-represent-a-fraction-as-the-sum-of-unit-fractions-using-an-area-model

o Estimate products in multiplication of whole numbers and fractions
https://learnzillion.com/student/lessons/2927-estimate-products-in-multiplication-of-whole-numbers-and-fractions

o Use a number line for multiplication of fractions and whole numbers
https://learnzillion.com/student/lessons/2938-use-a-number-line-for-multiplication-of-fractions-and-whole-numbers

o Use a fraction model for multiplication of fractions and whole numbers
https://learnzillion.com/student/lessons/2939-use-a-fraction-model-for-multiplication-of-fractions-and-whole-numbers

o Use repeated addition for multiplication of fractions and whole numbers
https://learnzillion.com/student/lessons/3076-use-repeated-addition-for-multiplication-of-fractions-and-whole-numbers

Additional Resources:

If you have limited/no internet access, please contact your child's teacher for hard copies of the resources listed in this document.

- NCDPI Unpacking Document: 4th Grade Unpacking Document

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