Curriculum Units by Fellows of the National Initiative
2023 Volume III: Transitions in the Conception of Number: From Whole Numbers to Rational Numbers to Algebra

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Using a Length Model of Fractions to Compare Fractions

Guide for Curriculum Unit 23.03.02, published September 2023
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This unit is intended for third-grade students at Kayenta Elementary School. It is imperative for Kayenta Elementary School to improve in all areas of mathematics to help the school get a passing Grade from Arizona Department of Education. I developed this unit because fraction is one the hardest lessons to teach and even harder for students because fractions forces students to think of integers in a different way. Up to this point, students have been taught in base-ten whole numbers. The difficulties come from the mind-set that larger numbers mean more in terms of relative size, however, that is not the case with the denominators of fractions.

Third graders are expected to identify and create fractions using shapes with fractions that are chopped into intervals of 1/2, 1/3, 1/4, 1/6, and 1/8. An additional standard states that a number line can be utilized. After the initial introduction to fractions expected by Arizona Department of Education, I will extend the lesson by teaching students to create number lines, learn to plot number lines, and use number line to compare fractions, and finally use number lines to find equivalent fractions. While using number lines, I will emphasize that number lines are intended to measure length and distance. The goal is to establish fraction number sense.

(Developed for Mathematics, Diné Studies, and Social Studies, grade 3; recommended for Mathematics and Social Studies, grades 2-4)