Instructional Unit Title: Fraction Reaction

The teacher may provide contexts for students to fair share a provided number of objects among a provided number of people so that students can explore the connection between division and fractions.

The teacher may provide a variety of fractions (e.g., 2/3, 3/5, 1/8, 7/9) so that students can explore the creation of fair share story problems using these fractions.

The teacher may provide the context of a story (e.g., multiplying jar) that multiplies or scales objects so that students can consider the impact of scaling a quantity by numbers greater than, less than, or equal to one.

The teacher may provide the context of a story (e.g., multiplying jar) that multiplies or scales objects so that students can explore how to find product when they know the value of the multiplier.

The teacher may provide word problems containing situations where whole numbers are multiplied by fractions and vice versa so that students can begin developing efficient strategies for solving these types of problems.

The teacher may revisit the scaling context (e.g., multiplying jar) so that students can explore the connections between multiplication and division with whole numbers and unit fractions.

The teacher may provide contexts for finding the area of rectangles with fractional sides and sides with mixed numbers so that students can connect their understanding of fractional multiplication to area.

The teacher may provide a variety of fraction multiplication expressions (e.g., 1/2 x 2/3) so that students can use what they know about scaling to predict size of product.

The teacher may provide a variety of equivalent fractions so that students can explore the role of the number one in creating equivalent fractions.

The teacher may provide fraction multiplication word problems so that students can begin developing efficient strategies for solving these types of problems.



The teacher may provide word problems involving the division of a unit fraction by a whole number so that students can explore the connections between multiplication and division with unit fractions and whole numbers.

The teacher may provide word problems involving the addition and subtraction of fractions with unlike denominators (e.g., Jerry was making two different types of cookies. One recipe needed 3/4 cup of sugar and the other needed 2/3 cup of sugar. How much sugar did he need to make both recipes?) so that students can explore the importance of equivalent fractions when composing and decomposing fractions.

The teacher may provide word problems, equations, and visual models (e.g., card sets) so that students can begin to recognize appropriate operations for word problems and make connections to equations and visual model.

PERFORMANCE ASSESSMENT: As a writer of children's literature, a publishing company has hired you to create a storybook about fractions for elementary students similar to the *Math Curse* by Jon Scieszka. Your story should include real world situations/scenarios about adding, subtracting, multiplying, and dividing fractions. Your story should include drawings and number sentences for each situation.

This unit was authored by a team of Colorado educators. The unit is intended to support teachers, schools, and districts as they make their own local decisions around the best instructional plans and practices for all students. To see the entire instructional unit sample with possible learning experiences, resources, differentiation, and assessments visit http://www.cde.state.co.us/standardsandinstruction/instructionalunitsamples.

