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Mathematics
4th Grade Equivalent Fractions Lesson Plan (Video Lesson)

1. **Goal** –
    A. The learning goal for this lesson is to find equivalent fractions. Students will use understanding of equivalent fractions to recognize and generate equivalent fractions. Students will have already used models and number lines to find equivalent fractions. In this lesson they will extend this understanding by using multiplication to find equivalent fractions.

2. The **national and/or state standard** addressed is Mathematics Common Core State Standard:
    A. **4. NF.1.** Explain why a fraction a/b is equivalent to a fraction (n x a)/(n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

3. **Objective(s)** –
    A. During this lesson, students will be able to find equivalent fractions.
    B. Students will be able to interpret a recipe by finding the equivalent fractions using a given fraction.
    C. Students will be able to describe observations about how equivalent fractions are created using multiplication
    D. Students will be able to compare how equivalent fractions change when the denominator is larger or smaller.

4. **Connections** –
    A. This lesson builds on previous lessons by having students use their understanding of fractions. Students have used the fraction tiles and number lines from the previous day's lesson to represent fractions. They will utilize this information to help them apply it to recognizing and generating equivalent fractions. This lesson scaffolds student learning toward the next lesson by allowing students to apply this understanding of equivalent fractions to help compare fractions and determine which fractions are greater or less than others.

5. **Instructional Activities**
    Introduction:
    Ask students to model the fraction 3/4 with their fraction tiles on their desks. Ask students what an equivalent fraction would be if you were using the 1/8 fraction tiles? If they were using 1/12 fraction tiles?

    Ask students to model 1/3 with their fraction tiles on their desks. Ask students what an equivalent fraction would be if you were using the 1/6 fraction tiles? If they were using 1/12 fraction tiles?

*Prompt students to make an observation about what happens when the denominator is larger? (The pieces are smaller, so you need more pieces to create the equivalent fraction)

Activity:
1) Find your Match: Each student will be given a fraction card. Students will walk around the room and mingle, trying to find the person that has the equivalent fraction to their fraction card. Once students have found their match, they will write the two fractions on the board and have a seat.

After all students have their list of equivalent fractions on the board, ask them to make an observation about how to create the equivalent fractions using multiplication. What would both the numerator and denominator be multiplied by to create the equivalent fraction? Can students connect the fact above to why you can multiply numerator and denominator by the same number and you have an equivalent fraction?

2) Banana Bread Recipe: (Draw a cartoon to tell the story) Tell students that fractions are used in everyday life when someone is baking. Provide the story that the teacher wanted to bake banana bread for the class, but she lost all of her measuring cups but one- the 1/12 cup. In order to bake the bread, the recipe needs to have the fractions written in 1/12s. Students will be given the task to find the fraction equivalent so that the recipe can be followed using only a 1/12 measuring cup.

Exit slip/Self-Assessment: Students will complete the day's check yourself self-assessment worksheet. After writing down the topic and the objective for the lesson, students apply their understanding of the day's topic by solving a word problem, then writing about their work. After the class has completed this, we will go over the answer, allowing students to share how they solved it. Students then grade their response based on a rubric that was designed with the teacher and the students collaboratively.

6. **Instructional resources and materials** –
   Projector and Elmo to display worksheet pages on board
   My Math Grade 4 Volume 2 textbook
   Fraction tiles
   Equivalent Fractions Match Game cards
   Banana Bread Recipe
   Individual whiteboards

7. **Assessment –**
   Informal assessments for this lesson will occur when students are using fraction tiles to find equivalent fractions, students are matching the equivalent fractions using the fraction match cards during find your match, and when students are completing the recipe.
   The formal formative assessment for this lesson will be the student's completion of the "Check Yourself" self-assessment worksheet. This is not only used by the teacher, but for each student to assess whether they understand the day's objective or not.