Lesson Created by: Katie Brandon

Title: Fraction Sugar Cookies      Length: 30-45 minutes for two days

Grade Level: 5th grade

Indiana Academic Standard(s): 5.2.2 Math Add and subtract fractions (including mixed numbers) with different denominators.
Example: $3\frac{4}{5} - 2\frac{2}{3} = ?$.

Objectives: Given a handout with five mixed numbers with different denominator fraction problems, the students will answer 4 out of 5 correctly.

Advanced Preparation by Teachers: The teacher will have to collect mammal cookie cutters. The teacher will also have to purchase all ingredients needed to make sugar cookies. The teacher will prepare cookie examples for the class. The teacher will have to create a recipe sheet with fraction problems. The teacher will pre-select groups and reserve the cafeteria for the cooking day.

Procedure:

Introduction/Motivation: How many of you like eating cookies? How many of you have made cookies before? How many of you have measured and mixed the dough? (Bloom’s Taxonomy- Knowledge) Today we are going to make our own cookies after we work on mixed fractions with different denominators.

Step-by-Step Procedure:
1. The students will receive the recipe hand-out and will be given time to work on the given problems.
2. After the students have completed the problems the class will discuss the answers and how they got them.
3. The class will then discuss how to properly make mammal sugar cookies and the teacher will show the sample cookies.
4. The teacher will put the students in the pre-selected groups and head to the cafeteria to make the cookies.
5. After mixing the cookies the students will cut out the mammals of their choice.
6. The cookies will then be placed in the oven, by the teacher.
7. While the cookies are baking, the students will play mammal charades.
8. The children will then enjoy the cookies.
This lesson includes Gardner’s Multiple Intelligences of Logical/Mathematical, Visual Spatial, and Interpersonal.

**Closure:** I hope that you all enjoyed the mammal cookie cooking experience. I also hope that you learned a lot about mammals during the last week.

**Adaptations/Enrichment:** For a student that is learning disabled in math, an adult will be available to help the student with the mixed fractions with different denominator problems. For a student that is gifted and talented the teacher will allow the students to create and solve their own problems with mixed fractions and different denominators.

**Self-Reflection:** The teacher will observe the students as they are working on their math problems and while cooking. The teacher will look to see that the students enjoyed the activity and were engaged.
Recipe Handout with Fraction Problems

Name ____________________________________________

Sugar Cookie Recipe

1 1/2 cups sugar
2/3 cup butter
2 eggs
2 tablespoons milk
1 teaspoon vanilla extract
3 1/4 cups flour
2 1/2 teaspoons baking powder
1/2 teaspoon salt

Mix ingredients listed above and bake at 400° F for 8 minutes or until golden brown.

Directions: Solve the problems by filling in the amount of each item from the recipe above.

1. Butter + Flour

2. Butter – Salt

3. Flour + Baking Powder ÷ Eggs

4. Eggs × Milk + Baking Powder – Flour

5. Vanilla × Salt × Eggs