Michelle Dale
7th/8th Grade Math
Equivalent Fractions Lesson

Mathematical Concept:
- Students will use *Equivalent Fractions Pointer* to visually experiment with the relationship between the values of equivalent fractions.

Standards:
- Number and Operations Standard
  - Compare and order fractions, decimals and percents efficiently and find their approximate locations on the number line.

Objectives:
- Students will create smaller equal size sections within each empty shape.
- Students will color in the sections within each empty shape to represent different fractions.
- Students will observe that each square is connected to a point on the number line corresponding to each fraction.
- Using the given fraction, students will manipulate the number of equal size sections in each of the two empty shapes to create equivalent fractions.
- After completion, students will check their answers and record two sets of equivalent fractions, illustrations and corresponding points on a number line on their worksheet.
- Students will observe and record the methods they use to find equivalent fractions.
- Students will compare the illustrations in a set of equivalent fractions and record similarities and differences between the three illustrations.
- Students will compare the numbers in each of the three fractions they found to be equivalent and describe any patterns they find.
- Students will participate in a class discussion about the activity to better their understanding of equivalent fractions.

Vision:
- Teacher's Role

 The *Equivalent Fractions Pointer* program can be used to develop the concept of equivalent fractions, practice simplifying fractions, compare fractions and order fractions on a number line. I will introduce equivalent fractions and how to use the program the previous day. This lesson will allow the students to visually and numerically explore the relationships between equivalent fractions. After reviewing the concept of equivalent fractions and the use of the program, I plan on allowing my students to work in pairs. First, the students will be given time to experiment with making different fractions and exploring how the program works. Then I will instruct them to begin working to find equivalent sets of fractions. I will ask each partner to complete at least one set that is eventually recorded on their worksheet. If students are struggling, I will ask for groups to

share suggestions and I will circulate around the room. Before recording answers on the worksheet, the students will check their answers on the computer. After each group successfully finds and records two sets of equivalent fractions they will be instructed to answer the three questions on the back of the worksheet. For closure, I will facilitate a class discussion about the activity. The groups of students will be asked to share findings and discuss results and answers to the questions. Groups will be asked to model examples of equivalent fractions on the board that can be used throughout the discussion. Student learning will be assessed based on participation in the activity, finding of equivalent fractions, completion of the worksheet and participation in class discussion.

- Student's Role

    After reviewing the concept of equivalent fractions and learning the basics of how to use the program, the students will explore the relationships between equivalent fractions. At first, the students will experiment with adding and subtracting rows and coloring in those rows to make different fractions. Once an understanding of how to use the program is established the pairs of students will work to find sets of equivalent fractions. Each student in the pair should find at least one set of equivalent fractions. After checking their answers on the computer, the students will record the fractions, illustrations and corresponding points on the number line. They will then work with their partner to discuss and answer the questions on the back of the worksheet. At the end of class, the groups will participate in a discussion about the activity and the questions on the worksheet to better their understanding of equivalent fractions.