Equivalent Ratios with Counters

Lesson Overview

In this lesson, the students will use yellow and red counters to explore equivalent ratios. An anticipation guide will be used to activate knowledge at the beginning of the lesson and to summarize learning at the end of the lesson.

Standards Addressed

6.RP.1   Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

Disciplinary Literacy Best Practices

Anticipation Guide

Highlighting

Elbow Partners

Lesson Plan

Time Required – One 57-minute Class Period

Disciplinary Vocabulary: ratio, fraction, numerator, denominator, equivalent ratios

Materials Needed:

- o   Yellow and red counters
- o   Highlighters
- o   student textbook

Assessment: Anticipation Guide

Engage

- o Students will complete the anticipation guide, identifying whether they agree or disagree with each statement on the left side of the anticipation guide.
- o After approximately 5 minutes, sets of red and yellow counters will be given to student pairs. Students will be shown pictures of strawberries and bananas.
- o How can you create groups that have the same number of bananas and the same number of strawberries?

Explore

- o Students will move the counters around until they can form groups that have the same number of red and yellow counters.
- o The students will be given various numbers of red and yellow counters and asked to make equal groups of counters.
- o For example, the students will be given 9 red counters and 18 yellow counters. Then the students will be asked to divide the counters into groups.

Explain

- o Students will work with partners and discuss how the number of counters is the same but may be grouped differently.
- o What is the comparison of number of red counters to yellow counters called?
- o How can we write the number of red counters to the number of yellow counters as ratios?
- o If the counters can be grouped differently, will the ratio be the same?
- o What do we call ratios that represent the same relationship between the red and yellow counters?
- o Students will complete the anticipation guide after the lesson.

Teacher Reflections and Biographical Information

The hands on manipulation helped the students see the relationship between equivalent ratios. They were able to group the counters differently to create their own equivalent ratios. In completing the anticipation guide at the end of class, the students were able to easily justify their responses.

Lesson Author: Susan Hammond, 6th grade math teacher at Carver-Edisto Middle School in Orangeburg School District 4 in Cordova, SC.

Equivalent Ratios Anticipation Guide

Directions: Read each statement and write if you agree or disagree with each statement. At the end of class you will reexamine the statements and mark your level of agreement. If your opinion changes, use details from the lesson and textbook to justify your changes.

Before Lesson		**After Lesson**
Agree/Disagree	1. Equivalent ratios express the same relationship between quantities.	Agree/Disagree
Agree/Disagree	2. Addition and subtraction is used to find equivalent ratios.	Agree/Disagree
Agree/Disagree	3. Two ratios are equivalent if they simplify to the same ratio.	Agree/Disagree
Agree/Disagree	4. There are different ways to determine if two ratios are equivalent.	Agree/Disagree
Agree/Disagree	5. A proportion is an equation stating that two ratios or rates are equivalent.	Agree/Disagree
Agree/Disagree	6. If the fractions are equivalent, the ratios are not equivalent.	Agree/Disagree

Did your level of agreement change due to the reading assignment? Why or Why not?

1.   4.

2.   5.

3.   6.