Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 6* / Grade 6 (Math Regional Curriculum)

Wednesday, October 31, 2012, 12:05PM

Standard/Module: Proficiency with Ratios and Proportions 6.RP.1 (Week 17, 8 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) Connects to 6.RP.3 and 6.EE.6

6 Grade CCS Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 6th Grade , Ratios & Proportional Relationships

6.RP Understand ratio concepts and use ratio reasoning to solve problems.

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

Enduring Understandings	Essential Questions
1. Comparison of at least two quantities over division. 2. Real-world and mathematical problems applications. 3. Ratios can be a part of a part, and part of a whole (which is the same as or similar to a fraction). 4. Order of terms in a ratio must match the order of terms in the question.	1. How do ratios and fractions differ? 2. Describe a comparison as both a description (Ex) 4 more girls jumped rope than played soccer) and a ratio (Ex)or every girl who played soccer, 2 girls jumped rope). *See illustrative math for 6.RP.1 "Games at Recess"

Critical Content

1. Ratio
   a. meaning of
   b. a:b, a/b, a to b
2. Quantities
3. Parts of a part
4. Parts or a whole
5. Order to write ratios

Skills	Vocabulary
1. Understand the concept of a ratio 2. Be able to describe a ratio relationship using appropriate ratio language	Tier 2: part whole total first term second term order Tier 3: ratio

Stage 2: Assessment Evidence

Assessments

Skill Based Task
Formative: Performance: Skill Demonstration

Analyze the table below to determine the missing values. Fill in the missing values on the table below.
Problem Task:
Graph the information from the table on the coordinate plane and explain the relationship of swimmers to life guards.

Swimmers	Life Guards
20	2
30	3
40	4
60	6
90	
100	

Stage 3: Learning Plan

Learning Activities	Resources

Illustrative math "Games at Recess"	http://engageny.org/common-core/
Recipe Re-Write Each ingredient in a recipe is added in a certain ratio to the other ingredients. You can write the relationship of two ingredients as a ratio: 2 eggs to 1 cup of flour, for example. Below is a recipe for quesadillas that serves 6 people. Work with your students to find the answers to the questions. Recipe: Quesadillas 2 cups shredded Colby cheese 6 flour tortillas 1 small tomato 1/4 cup chopped green onions 1/8 cup chopped green chilis Spread 1/3 cups of cheese on each tortilla. Mix the other ingredients. Spread over the tortillas. Fold, and bake at 350° for 5 minutes. Serves 6. Questions: What is the ratio of cheese to tomatoes? What is the ratio of tortillas to onions?	http://illustrativemathematics.org/ www.livebinders.com/play/play/52180 http://illuminations.nctm.org/ http://www.mathsisfun.com/geometry/polyhedron.html http://www.korthalsaltes.com/
Using a variety of situations, describe relationships using ratio, for example: 1. Part to part:Compare the number o fgirls to boys in the classroom using the different symbols for ratio (girls: boys, girls to boys, girls out of boys). Then compare the number of boys to girls in the same way. 2. Part to whole:Compare the number of girls to the whole class. Do the same thing for the boys in the class.	http://www.softschools.com/math/ratios/ratio_coloring_game/

Differentiation Opportunities

Proportional reasoning is a process that requires instruction and practice. It does not develop over time on its own. Grade 6 is the first of several years in which students develop this multiplicative thinking. Examples with ratio and proportion must involve measurements, prices and geometric contexts, as well as rates of miles per hour or portions per person within contexts that are relevant to sixth graders. Experience with proportional and nonproportional relationships, comparing and predicting ratios, and relating unit rates to previously learned unit fractions will facilitate the development of proportional reasoning.

Ratios and rates can be used in ratio tables and graphs to solve problems. Previously, students have used additive reasoning in tables to solve problems. To begin the shift to proportional reasoning, students need to begin using multiplicative reasoning. To aid in the development of proportional reasoning the crossproduct algorithm is ***not*** expected at this level. When working with ratio tables and graphs, whole number measurements are the expectation for this standard.

<< Previous Year

Last Updated: Sunday, October 7, 2012, 10:20AM

Atlas Version 7.2.6
© Rubicon International 2012. All rights reserved