Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 12:06PM

Standard/Module: Proficiency with Ratios and Proportions 6.RP.2 (Week 17, 8 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) Links to 6.RP.3 and 6.NS.2

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.

- 2. Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship.

Enduring Understandings	Essential Questions
1. A rate is a specific ratio that compares two units of different quantities. 2. A unit rate is a ratio with a second term of 1	1. What is the relationship between ratios, rates, and unit rates? 2. What distinguishes the difference between a rate and unit rate?

Critical Content

1. Unit Rate

2. Determine the difference between rates, ratios, and unit rates.

Skills	Vocabulary
1. Understand how a rate is a special kind of ratio 2. Understand the concept of a unit rate (a ratio with a second term of 1)	Tier 2: part whole

3. Be able to create a unit rate from a given rate. 4. Fluent with division, multiplication, and subtraction	total first term second term order proportion per Tier 3: ratio rate unit rate unit price equivalent ratio

Stage 2: Assessment Evidence

Assessments

Skill based
Formative: Performance: Skill Demonstration

Identify (given examples) the difference between a ratio and a rate.

Problem Task
Formative: Performance: Skill Demonstration

Is the following example a ratio or rate? [60 heartbeats per minute] Explain your answer.

Stage 3: Learning Plan

Learning Activities	Resources
Best Buy Plan a trip to the grocery store that will take a little extra	

time. Involve your student in the search for the best product or the best size of product to buy. **Give as a homework activity OR bring in examples from the store for unit rate. ** Be sure you have a pad of paper and a pencil. Together, look over all the selections available at the store. If you are shopping for cereal, for instance, you can approach this in two ways: 1.Decide which brand of cereal you want, then ask your student to find the unit rate for the different sizes offered. The smaller the unit rate, the better bargain that size will be. 2.If you know you need a certain size box, ask your student to compare the unit rate for several different brands of cereal. Encourage your student to help you shop on future trips, too. This exercise will encourage your student to become better informed consumers. _____ 1. Show examples of rates: 300 miles on 10 gallons of gas, $15 for 5 ounces, $30 for 6 hours. 2.Connect rates from number 1 with their unit rates:30 miles per gallons, $3 per 1 ounce, $5 per 1 hour. 3.Quick write: Students brainstorm examples of unit rates in the real world (e.g., 4 candy bars per $1, 55 miles per hour, 6 points per touchdown).	http://engageny.org/common-core/ http://illustrativemathematics.org/ www.livebinders.com/play/play/52180 http://illuminations.nctm.org/ http://www.mathsisfun.com/geometry/polyhedron.html http://www.korthalsaltes.com/

Differentiation Opportunities

A rate is a ratio where two measurements are related to each other. When discussing measurement of different units, the word rate is used rather than ratio. Understanding rate, however, is complicated and there is no universally accepted definition. When using the term rate, contextual understanding is critical. Students need many opportunities to use models to demonstrate the relationships between quantities before they are expected to work with rates numerically.

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