Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 11:41AM

Standard/Module: Proficiency with Rational Numbers 6.NS.8 (Week 1, 4 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) 6.G.3, 6.EE.9

6th Grade CCS Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 6th Grade , The Number System

6.NS Apply and extend previous understandings of numbers to the system of rational numbers.

- 8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.

Enduring Understandings	Essential Questions
1. Understand that a line segment from one coordinate pair to another represents a distance. 2. Understand that if two coordinates have the same x or y value they are on the same line. 3. Understand that the distance from a point on a coordinate plan to an axis is an absolute value. 4. Understand that the units on a coordinate plane define the unit of distance measure. 5. Understand that the coordinate plane can be used to represent real word contexts.	1. How are maps connected to coordinate planes? 2. How can absolute value help you define the distance between two points on the coordinate plane?

Critical Content

1. Coordinate planes (4 quadrants)

    a. point

    b. quadrant

c. axis (x and y)

d. coordinates

e. origin

f. reflection

g. ordered pairs

h. plane

i. plotting

Skills	Vocabulary
1. Graphing points in all four quadrants of the coordinate plane 2. Find distances between points with the same first coordinate of the same second coordinate 3. Find the distance between two points 4. Find the length of a line segments	Tier 2: plane coordinate distance points length quadrant axis reflection Tier 3: absolute value

Stage 2: Assessment Evidence

Assessments

Skill based
Formative: Performance: Skill Demonstration

What is the distance between (-8, 7) and (-8, -2)?

Problem based
Formative: Performance: Skill Demonstration

Bills house is at (-4, 6), the library is at (-4, -2) and the Bakery is at (3, -2). What is the distance between Bill's house and the library? The library and the bakery? Show two different methods to find the difference.

Stage 3: Learning Plan

Learning Activities	Resources
-Find the length of BA and BC of a triangle on a coordinate plane	http://engageny.org/common-core/
Make a coordinate grid on the floor and have students stand on points then find the distance between students. Make sure that the two points have either the same first coordinate or the same second coordinate. Have the students figure out that when you are on the same x or the same y you are on the same line.	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

Guided practice with white boards with coordinate planes.

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