Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 8* / Grade 8 (Math Regional Curriculum)

Wednesday, October 31, 2012, 2:13PM

Standard/Module: Proficiency with Geometry: 8.G.7 (Week 32, 8 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) 8.EE.2
  8.NS.1
  8.NS.2

Grade 8 Map

Standards

NYS: CCLS:Mathematics, NYS: 8th Grade , Geometry

8.G Understand and apply the Pythagorean Theorem.

- 7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Enduring Understandings	Essential Questions
Using the Pythagorean Theorem	1. What can the Pythagorean Theorem be used for? 2. Do you need to find the length of one of the legs or the hypotenuse?

Critical Content

1. Missing sides of a right triangle
2. Real-world context
   - two-dimensional
   - three-dimensional

Skills	Vocabulary
1. Solve equations using squares and square roots. 2. Apply the Pythagorean Theorem to find an unknown length of a side of a right triangle. 3. Use the Pythagorean Theorem to solve real-world problems including three-dimensional	Tier 2: right triangle, square of a number, square root, square root symbol, three-dimensional, two-dimensional

figures.	Tier 3: hypotenuse, leg, Pythagorean Theorem

Stage 2: Assessment Evidence

Assessments

Using Pythagorean Theorem in the Real World
Formative: Performance: Skill Demonstration

Students are presented with a problem in which they have to accurately set up and solve for Pythagorean Theorem, including correctly identifying the legs and hypotenuse. Students justify their answer and determine whether it is reasonable, while demonstrating an understanding that the hypotenuse is always the longest side in a right triangle.

Stage 3: Learning Plan

Learning Activities	Resources
Students find examples of right triangles in the real world and bring in examples or photos. Students should also take at least two measurements if possible, and find the third measurement using Pythagorean Theorem. Examples should include 2D and 3D representations.	www.illustrativemathematics.org www.illuminations.nctm.org

Differentiation Opportunities

Help students to find the right angle when the triangle is rotated or displayed as part of a 3D drawing.

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