Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 1:36PM

Standard/Module: Proficiency with Geometry: 8.G.1 (Week 1, 4 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) 8.G.2
  8.G.3
  8.G.4
  8.G.5
  8.EE.6

Grade 8 Map

Standards

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

8.G Understand congruence and similarity using physical models, transparencies, or geometry software.

- 1. Verify experimentally the properties of rotations, reflections, and translations:
- 1a. Lines are taken to lines, and line segments to line segments of the same length.
- 1b. Angles are taken to angles of the same measure.
- 1c. Parallel lines are taken to parallel lines.

Enduring Understandings	Essential Questions
Understand the transformation properties of lines and angles (only rotations, reflections, and translations).	What are the properties of rotations, reflections, and translations?

Critical Content

1. Congruency of line segments and angles

- Reflection
- Rotation
- Translation

2. Lines remain lines

- Reflection
- Rotation
- Translation

3. Parallel lines remain parallel lines

- Reflection
- Rotation
- Translation

Skills	Vocabulary
1. Verify that congruence of line segments and angles is maintained through rotation, reflection, and translation. 2. Verify that lines remain lines through rotation, reflection, and translation 3. Verify that when parallel lines are rotated, reflected, or translated, each in the same way, they remain parallel lines.	Tier 2: line, angle, parallel line, congruent Tier 3: line segment, center of rotation, line of reflection, line of symmetry, rotation, reflection, translation, transformation

Stage 2: Assessment Evidence

Assessments

Congurence & Similarity
Formative: Performance: Skill Demonstration

Students are given a polygon drawn on a coordinate plane and asked to perform rotations, reflections and translations given specific criteria (eg. reflect over the x-axis, rotate 45 degrees).

Students are asked to prove that two shapes are congruent when given two polygons on a coordinate plane, justifying congruency or non-congruency by explaining what rotations, reflections or translations would need to occur.

Stage 3: Learning Plan

Learning Activities	Resources
It is important that students have an opportunity to work with transformations in a "hands-on" setting. They should perform rotations, reflections and translations both on paper and using technology such as Math Warehouse Interactives and/or Geometry software. Students can use that technology to define rotations, reflections, and translations. Math Warehouse Interactives	www.illuminations.nctm.org www.mathwarehouse.com www.illustrativemathematics.org Math Warehouse Interactives Geogebra Software Geometer's Sketchpad v. 5.04 free download NCTM Illuminations Illustrative Mathematics Project

Differentiation Opportunities

The difficulty of tasks for this standard can be tiered. For example, struggling students could be doing reflections, rotations and translations with one step, students who are on grade-level could be doing two or three step problems. Students who need enrichment could be determining the steps that were taken to move a polygon from one position to another on a coordinate grid, or creating problems for other students to solve.

<< Previous Year

Last Updated: Wednesday, October 24, 2012, 1:33PM

Atlas Version 7.2.6
© Rubicon International 2012. All rights reserved