Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 4* / Grade 4 (Math Regional Curriculum)

Wednesday, October 31, 2012, 10:40AM

Standard/Module: Proficiency in Geometry - 4.G.2 (Week 18, 5 Weeks)

Stage 1: Desired Results

Standards Focus

- Additional (10%) Connects with 4.G.1 and 4.G.3

4th Grade Proficiency Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 4th Grade , Geometry

4.G Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

- 2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Enduring Understandings

1. The existence of parallel or perpendicular lines helps us to identify two-dimensional figures.
2. Two-dimensional figures can be classified by the presence or absence of acute, right, obtuse, and straight angles.
3. All right triangles will contain one right angle.
4. An isosceles right triangle contains a right angle along with two or more congruent sides.
5. A scalene right triangle contains a right angle and has no congruent sides.
6. An isosceles triangle has two congruent sides.
7. A scalene triangle has no congruent sides.

Essential Questions

1. What is a two-dimensional figure?
2. How do parallel and perpendicular lines help us to classify two-dimensional figures?
3. How does the presence or absence of acute, right, obtuse and straight angles help us identify two-dimensional figures?
4. How can we classify right triangles from other triangles?

Critical Content

1. Two-dimensional objects
2. Lines
3. Parallel lines
4. Perpendicular lines
5. Angle
6. Right angle
7. Triangle
8. Right triangle
9. Acute angle
10. Obtuse angle

11. Straight angle
12. Isosceles right triangle
13. Scalene right triangle
14. Congruent sides

Skills	Vocabulary
1. Students will classify two-dimensional figures by the presence or absence of parallel or perpendicular lines. 2. Students will classify two-dimensional figures by the presence or absence of angles of a specified size. 3. Students will identify right triangles by recognizing the right angle that can be found in every right triangle. 4. Students will recognize the difference between an isosceles right triangle and a scalene right triangle.	Tier 2: line, angle, triangle Tier 3: parallel line, perpendicular line, right angle, right triangle, two-dimensional, classify, isosceles, scalene, congruent

Stage 2: Assessment Evidence

Assessments

Formative: Written: Persuasive Essay

Students will be given four two- dimensional figures with a classification(name). Students will have to write a paragraph for each figure either defending the classification if they agree with how the figure was named according to the picture given. If students disagree with how the figure was classified they will have to re-name the figure and give supporting details as to why they are classifying the figure the way they did.

Stage 3: Learning Plan

Learning Activities	Resources
Two-dimensional shapes are classified based on relationships by the angles and sides. Students can determine if the sides are parallel or perpendicular, and classify accordingly. Characteristics of rectangles (including squares) are used to develop the concept of parallel and perpendicular lines. The characteristics and understanding of parallel and perpendicular lines are used to draw rectangles. Repeated experiences in comparing and contrasting	GeoGebra (a free software for learning and teaching); http://www.geogebra.com. www.illustrativemathematics.org www.illuminations.nctm.org

shapes enable students to gain a deeper understanding about shapes and their properties. Play the game, "What Am I?", where you describe characteristics of a special quadrilateral and have your students draw the quadrilateral based on the clues to help determine what the quadrilateral is. Divide class into groups and have each group create a poster with respect to a specific two-dimensional figure. Be specific with the criteria you would like to be on the poster and then have the groups present their poster to the class. This activity will hopefully reinforce properties of two-dimensional figures. Inquiry- based TI-Nspire activities or geometer sketchpad activities	

Differentiation Opportunities

Students may use transparencies with lines to arrange two lines in different ways to determine that the 2 lines might intersect in one point or may never intersect. Further investigations may be initiated using geometry software. These types of explorations may lead to a discussion on angles.

Differentiated group activities should be used to assess and give multiple practice activities to students at all developmental levels.

<< Previous Year

Last Updated: Wednesday, October 24, 2012, 1:45PM

Atlas Version 7.2.6
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