Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 10:39AM

Standard/Module: Proficiency in Geometry - 4.G.1 (Week 18, 5 Weeks)

Stage 1: Desired Results

Standards Focus

- Additional (10%) Connects with 4.G.2, 4.G.3, and 4.MD.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.

- 1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Enduring Understandings

1. Perpendicular lines meet to form a right angle.
2. Parallel lines are two straight lines that will never meet.
3. A right angle measures 90 degrees.
4. An acute angle measures less than 90 degrees.
5. An obtuse angle measures more than 90 degrees.
6. A straight angle measures 180 degrees.
7. Rays, angles, points, line segments, parallel lines, and perpendicular lines can be found in a variety of two-dimensional geometric objects.
8. Lines, line segments, rays, and angles are all created from points.

Essential Questions

1. What is the difference between perpendicular and parallel lines?
2. How are right, acute, obtuse, and straight angles different from one another?
3. How can we identify lines, points, line segments, rays, and angles in two-dimensional figures?
4. What is the difference between two-dimensional and three-dimensional objects?

Critical Content

1. Angle
2. Right angle
3. Acute angle
4. Obtuse angle
5. Line
6. Parallel line
7. Perpendicular line
8. Line segment
9. Ray
10. Point
11. Two-dimensional figure

12. Straight angle
13. Symmetry

Skills	Vocabulary
1. Students will draw points, lines (perpendicular, parallel), line segments, rays, angles (right, acute, obtuse). 2. Students will identify points, lines (perpendicular, parallel), line segments, rays, angles (right, acute, obtuse) in two-dimensional figures. 3. Students will classify shapes by the existence of lines of symmetry in sorting activities.	Tier 2: shapes, points, angles, identify Tier 3: classify, properties, lines, line segment, ray, right angle, acute angle, obtuse angle, parallel line, perpendicular line, two-dimensional figure, symmetry, three-dimensional object

Stage 2: Assessment Evidence

Assessments

Formative: Performance: Authentic Task

Students will be given a list of geometric terms (points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines) and then will be asked to draw a picture, which includes all geometric terms. Students will be given a choice to either present their picture to the class or write about their picture. Their presentation or written essay would have to explain where the geometric terms were drawn in their picture and explain the properties of each geometric term as well.

Stage 3: Learning Plan

Learning Activities	Resources
Have students identify points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines daily in the classroom setting. Students can and should make geometric distinctions about angles without measuring or mentioning	www.illustrativemathematics.org www.illuminations.nctm.org

degrees. Angles should be classified in comparison to right angles, such as larger than, smaller than or the same size as a right angle. Students can use the corner of a sheet of paper as a benchmark for a right angle. They can use a right angle to determine relationships of other angles. Students believe a wide angle with short sides may seem smaller than a narrow angle with long sides. Students can compare two angles by tracing one and placing it over the other. Students will then realize that the length of the sides does not determine whether one angle is larger or smaller than another angle. The measure of the angle does not change.	

Differentiation Opportunities

Tiered activities such as flash card practice with pictures and definitions, given a term have students draw it (perhaps students struggling can use their flash cards or notes), and given a picture have students identify certain terms (students struggling can again use flash cards or notes for support).

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