

Unit Plan Template

UNIT: Polygons, Trig Ratios, and Circles TIME FRAME: 3 Months TEACHER: Mark Gardella

Unit Summary and Rationale:

Understand similarity in terms of similarity transformations .
Define trigonometric ratios and solve problems involving right triangles.
Understand and apply theorems about circles.

Unit Standards:

Teachers should list the standards to be addressed within the unit.
HSG-CO.C.11, HSG-SRT.B.5, HSG-MG.A.1, HSG-MG.A.3, HSG-SRT.B.4, HSG-SRT.C.8, HSG-SRT.C.6, HSG-SRT-C.8, HSG-SRT.C.7, HSG-SRTR.D.9, HSG-SRT.D.10, HSG-SRT.D.11, HSG-CO.A.1, HSG-CO.A.2, HSG-C.A.4, HSG-C.A.1, HSG-C.A.2, HSG-CO.D.13, HSH-C.A.3, HSG-GPE.A.1, HSG-GPE.B.4

Learning Tasks: Teachers list the various tasks students will engage in throughout the unit. (Content) – Should be separated by Reading Tasks, Writing Tasks, Discussion Tasks, and Language/Vocabulary Tasks.

Practice Worksheet A and B
Puzzle Worksheets
Whiteboard review activity
Basic Skills Review WS

Skills: These are what the students need to be able to do in relation to the tasks. These skills are translated statements from the standards and represent measurable verbs, instructional targets, and descriptors for the sake of consistency across teachers in the same content area and grade level.

- construct and explain proofs of theorems about parallelograms including:
 - opposite sides are congruent;
 - opposite angles are congruent;
 - the diagonals of a parallelogram bisect each other;
 - rectangles are parallelograms with congruent diagonals.
- use coordinates to prove geometric theorems including:
 - prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle (or other quadrilateral);
 - prove or disprove that a given point lies on a circle of a given center and radius or point on the circle.
- locate the point on a directed line segment that creates two segments of a given ratio.
- find perimeters of polygons using coordinates, the Pythagorean theorem and the distance formula.
- find areas of triangle and rectangles using

	<p>coordinates.</p> <ul style="list-style-type: none"> ● show and explain that definitions for trigonometric ratios derive from similarity of right triangles. ● determine and compare sine and cosine ratios of complementary angles in a right triangle. ● solve right triangles (determine all angle measures and all side lengths) using trigonometric ratios and the Pythagorean Theorem.
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Key Terms / Vocabulary:
 Diagonal, equilateral polygon, equiangular polygon, regular polygon, parallelogram, rhombus, rectangle, square, trapezoid, isosceles trapezoid, midsegment of a trapezoid, kite, Pythagorean triple, geometric mean, trigonometric ratio, tangent, angle of elevation, sine, cosine, angle of depression, inverse tangent, inverse sine, inverse cosine, circle, center, radius, chord, diameter, secant, tangent, point of tangency, central angle, minor arc, major arc, semicircle, adjacent arcs, congruent circles, congruent arcs, similar arcs, inscribed angle, intercepted arc, inscribed polygon, circumscribed circle, circumscribed angle, segments of a chord, tangent segment, secant segment, external segment, standard equation of a circle

Assessments: List types of assessments that will be used throughout the course of the unit.
 If you do not have assessments for this unit, they should be created before moving on to the lesson design (Label Assessments as Diagnostic, Formative, or Summative)

7.1-7.3 Quiz
 Chapter 7 Test
 9.1-9.3 Quiz
 Chapter 9 Test
 10.1-10.3 Quiz
 Chapter 10 Test

<p>Learning Activities: Any agreed upon activities/lesson plans can be listed here.</p> <p>Independent work Group work</p>	<p>Resources / Text Selections: (generated by both teacher and student?) Teachers will list the titles/genres for study:</p> <p>Big Ideas worksheets and online assignments</p>
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Additional Notes: