Grade 7 Math Grade 7 Math Start Date: January 22, 2013 End Date : March 08, 2013

Unit Overview	Content Elaborations	Unit Resources
Students will be able to:		Common core Model Curriculum
		Holt Middle School Math Course 2: Lessons:
solve problems using geometric figures to		7-1, 7-2, 7-3, 7-4, 7-5, 7-6, 7-7, 7-8, 7-9, 8-1, 8-
compute lengths and areas		2, 8-3, 8-4, 8-5, 8-6, All of Chapter 9
		Smart Board Resources
reproduce scale drawings at a different scale		United Streaming Video
		Study Island
draw, construct, and describe geometrical		Hands-On Standards
figures with given conditions		Calculator
		Laptops - Geometer's SketchPad
construct triangles from three measures of		Document Camera
angles or sides		Unlimited Manipulatives or Tools
		Angle Ruler
decide when given measures will produce a		Ruler
unique triangle, more than one triangle, or no		Protractor
triangle		Grid Paper
		Straws
describe the two-dimensional figures that result		Sticks
from cross sections of three-dimensional		Clay
figures, such as right rectangular prisms and		String
right rectangular pyramids		Road Maps
		Circular Objects Several Different Sizes
know, understand the relationships, and apply		String or Yarn
the formulas for the area and circumference of		Tape Measures
a circle		Paper Plates
in a multi-step problem, write and solve simple		
equations involving an unknown angle in a		

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figure using knowledge of supplementary, complementary, vertical, and adjacent angles know area, volume, and surface area of two- and three-dimensional objects which are made up of triangles, quadrilaterals, polygons, cubes, and right prisms for use in real-world and mathematical problems		
Unit Vocabulary Similar, Corresponding Sides, Corresponding Angles (in polygons), Indirect Measurement, Scale Model, Scale Factor, Scale, Scale Drawing, Line Segment, Congruent, Angle, Vertex, Right Angle, Acute Angle, Obtuse Angle, Straight angle, Adjacent Angle, Polygon, Side, Regular Polygon, Scalene Triangle, Isosceles Triangle, Equilateral Triangle, Acute Triangle, Obtuse Triangle, Right Triangle, Vertical Angle, Transversal, Parallel Lines, Quadrilateral, Parallelogram, Rhombus, Rectangle, Square, Cube, Trapezoid, Kite, Diagonal, Side-Side-Side (SSS) Rule, Perimeter, Circumference, Area, Face, Edge, Base, Polyhedron, Prism, Right Rectangular Prism, Right Rectangular Pyramid, Volume, Surface Area, Pi, Circle, Center of a Circle, Radius, Diameter, Chord, Arc, Central Angle, Sector	Enduring Understandings (Big Ideas) Students will be able to draw, construct, and describe geometrical figures and describe the relationships between them. They will solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	Connections Real world applications. Read scales on maps and determine the actual distance (length). Correlations to other subjects or project applications.

Standards

CC_Common Core State Standards - Mathematics (2010) - Grade 7 Domain 7.G Geometry

Grade 7 Math Geometry

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Cluster Draw, construct, and describe geometrical figures and describe the relationships between them.

Standard 7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

Standard 7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

Standard 7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids. Cluster Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

Standard 7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

Standard 7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure. Standard 7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Student Assessment	Unit Refection	
Common Core Short Cycles	Teacher Comments following instruction and	
	assessment.	
Benchmark Test		
	This could provide a topic for discussion at	
Chapter Tests for Holt Middle School Math	denartment meetings	
Chapter Tests for Holt Middle School Main	department meetings.	
Course 2: Chapters / Lessons 1-9, Chapter 8		
Lessons 1-6, All of Chapter 9		
Formative Assessments		
Summative Assessments		
Geometry		
Content	Skills	Assessment
A. Solve problems using proportional reasoning to find the	A. Solve problems using proportional reasoning to find the	
relationships between real objects and their scale models	relationships between real objects and their scale models	
B. Draw geometric shapes	1. define scale model, scale factor, scale, scale drawing	
C. Describe two-dimensional figures that result from slicing	2. identify the scale factor	
three-dimensional figures	3. describe how to find the scale factor	
D. Know and solve problems for the area and circumference	4. given a scale factor, explain how you can tell whether	
of a circile	a model is bigger or smaller than the original object	
E. Use facts about supplementary, complementary, vertical,	5. find a measurement of an object whose scale drawing	

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and adjacent angles to write and solve equations for an	is smaller than the object	
unknown angle in a figure	6. find the measurement of an object whose scale	
F. Solve word problems involving area, volume and surface	drawing is larger than the object	
area of two-and three-dimensional objects composed of	7. create and complete a table to record the shape,	
triangles, quadrilaterals, polygons, cubes, and right prisms.	original measurement, created measurement and scale	
	relationshp of created to the original	
	8. find scale factors using fractions and decimals	
	9. draw and label the dimensions of the new shape	
	10. extend table to find the perimeter and area of the	
	original and created shape	
	B. Draw geometric shapes	
	1. visualize and then represent geometric figures on	
	paper	
	2. explore side and angle measures and determine what	
	conditions form triangles	
	3. transfer exploration of triangles and classify triangles	
	according to its sides and angles	
	4. justify reasoning by drawing the triangle	
	C. Describe two-dimensional figures that result from slicing	
	three-dimensional figures	
	1. physically create three-dimensional figures, slice them	
	in different ways, and describe in pictures and words the two-	
	dimensional figures that have been found	
	D. Know and solve problems for the area and circumference	
	of a circile	
	1. understand and derive through exploration the formula	
	for area of a circle	
	2. explore and discover the fact that the diameter is two	
	times the radius	
	3. correctly apply the formula for area of a circle	
	4. understand and derive through exploration the formula	
	for circumference of a circle	
	5. explore the relationship between the radius and the	
	length measure of the circle (circumference) finding an	
	approximation of pi	
	6. correctly apply the formula for circumference of a	
	E. Use facts about supplementary, complementary, vertical,	
	and adjacent angles to write and solve equations for an	
	unknown angle in a figure	

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 identify angles formed by a transversal by measuring and finding the patterns draw triangles in polygons and have students speculate on the total number of degrees in each figure 	
relationship of the measure of an angle in figures (N-2)180 or	
180N - 360	
 180N - 360 6. solve equations for multi-step problems F. Solve word problems involving area, volume and surface area of two-and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. 1. derive through exploration the formulas for area of two-dimensional figures made of triangles, quadrilaterals and polygons (irregular figures) 2. derive through exploration the formulas for volume and surface area of three-dimensional figures 3. explain the difference between square units and cubic units 4. solve multi-step problems using formulas with whole numbers fractions decimals ratios 	
5. solve multi-step problems using formulas in various	
units of measure with the same system conversions	

Friday February 01, 2013 - Grade 7 Math Geometry Grade 7 Math Grade 7 Math

Daily Activities	Daily Vocabulary	Daily Resources
Daily Lesson Notes		

Instructional Strategies	Differentiation Strategies	Methodology
Student Use of Technology	Differentiation Details	