

Geometry and Its Applications (GEOA)

Course Syllabus

WEEK 1		WHAT	HOW
<p>MONDAY (Day 1)</p> <p><u>Materials Needed:</u></p> <ul style="list-style-type: none"> - Copies of Pre-Test - Copies of Astrid and 8-pointed star WS - Copies of Pool Room Math WS 	<p>Morning</p>	<p>Introductions Honor Code Rules Ice Breaker</p> <p>Pre-Assessment</p> <p><u>Ch 0 – Geometry in Nature</u></p> <ul style="list-style-type: none"> - Discuss geometry in nature - Introduction on using geometry tools <p><u>Sec 1:3 – What’s a Widget?</u></p> <ul style="list-style-type: none"> - Define a widget - Discuss definitions and why they are important - Explanation on how to write a definition and what makes it sound <p><u>Sec 1:1 – Building Blocks of Geometry</u></p> <ul style="list-style-type: none"> - Generate definitions of point, line, and plane - As a class determine definitions for collinear, coplanar, line segment, ray, congruence, bisector <p><i>Mid-point Review</i></p> <p><u>Sec 1:2 – Pool Room Math</u></p> <ul style="list-style-type: none"> - Define angle and the associated terms - Review how to measure an angle - Explore incoming/outgoing angles 	<p>Pre-Assessment</p> <p>Demonstrate use and have students complete drawings (astrids, 8-pointed stars, etc.) <i>Graphing Calculator Exploration of Astrids Pg 132</i></p> <p>Class Discussion</p> <p>Students work in groups and collaboratively generate definitions.</p> <p>Discuss midpoint and how it’s found</p> <p>Investigate incoming/outgoing angles Pg 42 <i>Checkpoint Pg 43 7-19</i></p>
<p><u>Materials Needed:</u></p> <ul style="list-style-type: none"> - Copies of Tangram Activity - Copies of Vocabulary Review (Students can fill in while defining as a class/groups) 	<p>Afternoon</p>	<p><u>Sec 1:3 – What’s a Widget?</u></p> <ul style="list-style-type: none"> - Understanding counterexamples - How counterexamples are used to write definitions - Generate angle definitions <p><u>Sec 1:4 – Polygons</u></p> <ul style="list-style-type: none"> - What do we know/want to know/learn about polygons - Classifications/naming of polygons - Differentiating between concave vs. convex polygons 	<p>Groups are assigned specific definitions and generate the definitions of these angles <i>Checkpoint Pgs 51-52 9-20</i></p> <ul style="list-style-type: none"> - KWL chart on polygons Identify states which are concave and convex - Students make tangrams to reinforce identification of polygons <p><i>Checkpoint Pgs 56-57 9-19</i></p>
	<p>Evening</p>	<p>Finish Questions from Sec 1:2 – 1:4</p> <p><u>Journal Sharing</u></p> <ol style="list-style-type: none"> 1. What did you learn today? 2. What did you like most? 3. What would you change? 4. Anything additionally you would like to share? <p>** Work on Drawings from Ch 0 if time permits</p>	<p>Journals</p>

<p>TUESDAY (Day 2)</p>	<p>Morning</p>	<p><u>Sec 1:5 – Triangles and Special Quadrilaterals</u></p> <ul style="list-style-type: none"> - Discussion about assumptions - Markings in a triangle and how they are classified using definitions of triangles and quadrilaterals - Students continue filling in definitions on worksheet <p><u>Sec 1:6 - Circles</u></p> <ul style="list-style-type: none"> - Generate definitions of circle terms, including special features of arcs, and the central angle <p><u>Chapter 1 Review</u></p>	<p>Each group generate definitions of triangles <i>Checkpoint</i> Pgs 64-65 2-15</p> <p>Groups produce definitions – class collaboratively agrees</p> <p>Pgs 88-90 1-40 (evens if time does not allow).</p>
<p><u>Materials Needed:</u> - Copies of Logic Puzzles</p>	<p>Afternoon</p>	<p><u>Finish Chapter 1 Review</u></p> <p><u>Sec 2:1 and 2:2 – Inductive and Deductive Reasoning</u></p> <ul style="list-style-type: none"> - Identify the differences between the two forms of reasoning - Explain the benefits of using each type - The use of “if/then” statements and paradoxes - Applications of reasoning to prove definitions <p><i>Nature walk to draw geometry concepts discussed in class which are found in nature</i></p>	<p><i>Checkpoint</i> – Pgs 103-104</p> <p>Logic Puzzles</p> <p>Cooperative learning HO</p> <p>Pg 171 Spelling Card Trick Pg 372 “Chew on this for a while” Pg 397 “Logical Liars” Pg 441 “Code Equations”</p>
<p><u>Materials Needed:</u> - Copies of Chapter 1 Quiz</p>	<p>Evening</p>	<p><u>Geometry Jeopardy</u></p> <p><u>Chapter 1 Quiz</u></p> <p><u>Journal</u></p>	<p>Jeopardy Review Game</p> <p>Quiz</p>
<p>WEDNESDAY (Day 3)</p> <p><u>Materials Needed:</u> - LCD Projector and Laptop - Copies of Exploration Hand-outs - Meter sticks - Pineapple, bananas, and apples</p>	<p>Morning</p>	<p><u>Sec 2:3 – Finding the nth Term</u></p> <ul style="list-style-type: none"> - Identify patterns of numbers - Find the rule to different table of values <p><u>Sec 2:4 – Mathematical Modeling</u></p> <ul style="list-style-type: none"> - Discuss diagrams , graphs, or pictures of situations as models 	<p>LCD Projector on website of Fibonacci Sequence Golden Ratio of the human body Handouts Explore Patterns in nature using pineapple, banana, and apple</p> <p>Party Handshake Scenario</p>
<p><u>Materials Needed:</u> - Copies of Sec 2:2 and 2:4 Worksheets</p>	<p>Afternoon</p>	<p><u>Introduction to Logic</u></p> <ul style="list-style-type: none"> - Construct logic chains - Introduction to proofs - Hand-out to reinforce logic and it’s connection to proofs <p><u>Sec 2:5 – Angle Relationships</u></p> <ul style="list-style-type: none"> - Use inductive and deductive reasoning to prove conjectures - Explain paragraph proof and two-column proof methods - Discuss converse and applications 	<p>Each student creates a logic chain to share Class generation of the paragraph proof and 2-column proof of Vertical Angles <i>Generated handout – Complete Sec 2:2 9-24 and Sec 2:4 9-19</i></p> <p>Investigation 1 and 2 Pgs 120-122</p>
<p>COMPUTER LAB ONLY IF OPEN</p>	<p>Evening</p>	<p><i>Finish handout Packet</i></p> <p><i>Review Algebra Skills – Slope</i></p> <p><i>Exploration – Circuits Page 118-119</i></p>	<p>Pg 134 1-10</p>

		<p><u>Sec 2:6 – Special Angles on Parallel Lines</u></p> <ul style="list-style-type: none"> - Discuss parallel lines, transversals and the angles formed - GSP Investigations which review concepts in Sec 2:5 and 2:6 <p><u>Sec 2:5 and 2:6 Checkpoint</u></p> <p><u>Journals</u></p>	<p>Investigation 1 and 2 pgs 126-129</p> <p><u>Checkpoint</u> – Pgs 122-123 1-11 <u>Checkpoint</u> – Pgs 129-131 1-20</p>
<p>THURSDAY (Day 4)</p> <p>COMPUTER LAB</p> <p><u>Materials Needed:</u></p> <ul style="list-style-type: none"> - Handouts for GSP (check to see if packets are accurate) - Copies of GSP Introduction Explanation WS 	Morning	<p><u>Chapter 3 Introduction and Investigation</u></p> <ul style="list-style-type: none"> - Investigations to introduce Chapter 3 (Perpendicular Bisectors, Angle Bisectors, Points of Congruency, and the Centroid). <p><u>Chapter 3 – Geometric Constructions Project</u></p> <ul style="list-style-type: none"> - Pair groups by concept (example: Group 1 – Perpendicular Bisector Construction and Circumcenter Construction, Group 2 – Angle Bisector Construction and Incenter Construction, Group 3 – Duplicating line segment, duplicating an angle, and Copy/Construct a Triangle from Sec 3:6, etc.) 	<p>COMPUTER LAB – GSP and hand-out Packet of Investigations</p> <p>Groups of two or three work collaboratively to explore constructions. These groups then share their results on the assigned section with the class demonstrating the constructions and concepts.</p>
	Afternoon	<u>Chapter 3 – Geometric Constructions Project (cont.)</u>	Finish group work on constructions, begin student presentations on assigned sections.
<p><u>Materials Needed:</u></p> <ul style="list-style-type: none"> - Copies of the Construction Review Packet 	Evening	<p><u>Geometric Constructions Presentations</u></p> <p><u>Finish Sec 2:5 and 2:6 Checkpoints (if needed)</u></p> <p><u>Chapter 3 Review and Chapter 3 Construction Review Packet</u></p> <p><u>Journals</u></p>	<p>Student Presentations of constructions on assigned sections</p> <p>Pages 191-193 1-25</p>
<p>FRIDAY (Day 5)</p> <p><u>Materials Needed:</u></p> <ul style="list-style-type: none"> - Copies of Stain Glass Window Project 	Morning	<u>Stain Glass Window Project</u>	Stain Glass Window Project
	Afternoon	<u>Continue Working on Stain Glass Window Project</u>	Stain Glass Window Project
<p>SUNDAY</p> <p><u>Materials Needed:</u></p> <ul style="list-style-type: none"> - Copies of Origami 	Evening	<p><u>Finish Chapter 3 Packet</u></p> <p><u>Complete Day 4 and 5 Vocabulary Review</u></p> <p><u>Finish Stain Glass Window Project</u></p> <p><u>Perspective Drawing and Origami</u></p>	Pgs 172-175 and HO

WEEK 2		WHAT	HOW
MONDAY (Day 6)	Morning	<p><u>Work on Chapter 3 Review Packet/Stain Glass Window Project as needed</u></p> <p><u>Class Derive/Proof Review...</u></p> <ul style="list-style-type: none"> - Class complete overlapping segment postulate proof using the segment addition postulate - Groups complete and present proofs on Angle Addition Postulate, Proving Lines parallel using the converse of Parallel Lines Conjecture, and a proof involving triangle properties within a polygon <p><u>Sec 4:1 – Triangle Sum Conjecture</u></p> <ul style="list-style-type: none"> - Explore how many degrees are in a triangle - Groups derive Triangle Sum Conjecture by paragraph proof or two-column proof <i>without</i> book <p><u>Sec 4:2 – Properties of Special Triangles</u></p> <ul style="list-style-type: none"> - Identify the parts of a triangle - Derive Isosceles Triangle Conjecture 	<p>Further discussion on proofs Class generate proofs for overlapping segments, Angle and Segment Addition Postulates</p> <p><i>Triangle Sum Exploration</i> – students create an acute and obtuse triangle, and use the angles to form a straight line</p> <p>Investigations 1 and 2 on Pgs 205-206</p>
<p><u>Materials Needed:</u> - Pull-and-Peel Twizzlers (1 bag)</p>	Afternoon	<p><u>Finish Sec 4:2 – Investigations and Discussions</u></p> <p><i>Algebra Review – Writing Linear Equations</i></p> <p><u>Sec 4:3 – Triangle Inequalities</u></p> <ul style="list-style-type: none"> - Identify the triangle inequality conjectures - Develop Exterior Angle Theorem Triangle Conjecture 	<p><i>Checkpoint</i> – Pgs 210-212</p> <p>Use Pull-and-Peel Twizzlers to complete inequality investigation Develop a formal proof to develop theorem</p>
<p><u>Materials Needed:</u> - Copies Vocabulary Review Worksheet</p>	Evening	<ol style="list-style-type: none"> 1. Finish Sec 4:3 2. Start Sec 4:1 – 4:3 Review 3. Finish Algebra Review Questions 4. Vocabulary Review 5. Journal and Origami 	<p>Voc. Review Worksheet</p> <p><u>Sec 4:1 – 4:3 Review</u> Pg 201-202 2-9 Pg 203 17-22 Pg 206-207 1-7 Pg 209 21-22 Pg 216-218 1-20</p>
TUESDAY (Day 7) COMPUTER LAB <u>Materials Needed:</u> - Handouts for GSP	Morning	<p><u>Triangle Congruency Shortcuts</u></p> <ul style="list-style-type: none"> - Use straw and yarn activity using the concept of rigidity to test SSS - Use WS and activity to test ASA and SAS - Use GSP to test remaining (Only use WS 4:4-4:5 and 4:8) <p><u>Sec 4:6 – CPCTC</u></p> <ul style="list-style-type: none"> - Accurately label triangles and identify corresponding parts - Use congruent triangles to identify corresponding parts 	<p><u>COMPUTER LAB</u> – GSP Investigations/Lecture</p> <p>Sec 4:6 – Complete 1-9</p>
	Afternoon	<p><u>Review Concepts from Sec 4:4 – 4:6 and Computer Lab Activity</u></p> <p><u>Proof Puzzles – Using Triangle Congruence Shortcuts</u></p> <p>Sec 4:1 – 4:3 Review and Sec 4:6 -- 1-9</p> <p><u>Chapter 4 Review</u></p>	<p>Class Discussion</p> <p>Sec 4:1 – 4:3 Review</p> <p>Pgs 249-252 1-35</p>

	Evening	<p>1. <u>Geometric Pictionary</u></p> <p>2. <u>Chapter 3 and 4 Quiz</u></p>	<p>Students compete on teams to draw different geometric figures, and have their teammates guess what they are drawing</p> <p>Quiz</p>
<p>WEDNESDAY (Day 8)</p> <p><u>Materials Needed:</u> - Copies of 5:1 Worksheet</p>	Morning	<p><u>Sec 5:1 – 5:2</u></p> <ul style="list-style-type: none"> - Groups explore and generate the Polygon Sum Conjecture and Exterior Angles of a polygon - Work on 5:1 Worksheet then complete 5:2 investigation from text <p><u>Sec 5:3 – 5:7 Lesson Presentations</u></p> <ul style="list-style-type: none"> - Complete the investigations and derive conjectures of the properties of various polygons as groups - Groups prepare presentations <p><u>Begin Group Presentations</u></p>	<p>Group Exploration (2-3 people max)</p> <p>Students work in groups, generate the conjectures and present their investigations with the class</p>
	Afternoon	<p><u>Finish Group Presentations</u></p> <p><i>Amazing Geometric Race</i></p>	Student Presentations
	Evening	<p><u>Chapter 5 Review</u></p> <p><u>Sec 6:1 – Chord Properties</u></p> <ul style="list-style-type: none"> - Review terms of circles - Generate conjectures and definitions 	<p>Pgs 300-302 1-19</p> <p>Review properties as a class Complete investigations as a class to generate conjectures</p>
<p>THURSDAY (Day 9)</p> <p>COMPUTER LAB</p> <p><u>Materials Needed:</u> - Handouts for GSP</p>	Morning	<p><u>Sec 6:1 – Chord Properties (continued)</u> <i>Investigate and derive the following Conjectures</i></p> <ul style="list-style-type: none"> - Chords and their central angles - Chords and the center of the circle - Perpendicular bisector of a chord <p><u>Sec 6:2 – Tangent Properties</u> <i>Investigate and derive the following Conjectures</i></p> <ul style="list-style-type: none"> - Tangent line to a circle - Tangent segments <p><u>Sec 6:3 – Arcs and Angles</u> <i>Investigate and derive the following Conjectures:</i></p> <ul style="list-style-type: none"> - Inscribed angle properties - Inscribed angles intercepting the same arc - Angles inscribed in a semicircle - Cyclic quadrilaterals - Arcs by parallel lines 	<p>COMPUTER LAB – Use GSP and Investigations from Chapter 6</p> <p>As a class review conjectures and practice problems from Sec. 6:1 – 6:3</p>
	Afternoon	<p>1. Finish Chapter 5 Review 2. Review Sec 6:1 – 6:3 Conjectures</p> <p><u>Sec 6:4 – Proving Circle Conjectures</u></p> <ul style="list-style-type: none"> - Use deductive proofs to arrive at Inscribed Angle Conjecture - Pattern of light rays from object to the eye <p><u>Sec 6:1 – 6:3 Checkpoint</u></p>	<p>Discuss conjectures discovered from both GSP Labs and Book Investigations</p> <p>Class generate proofs of circle conjecture</p> <p>Science connection investigation</p> <p>Pgs 310-311 1-12</p>

			Pgs 315-317 1-10, 15, 16 Pgs 322-323 1-18, 22
<u>Materials Needed:</u> - One Apple and One Cherry Pie - Plates and Forks - String/Yarn - Rulers	Evening	<i>Algebra Skills Check – Finding Circumcenter</i> <u>Sec 6:5 – The Circumference/Diameter Ratio</u> - The history of Pi - Pi Investigations/using pie <u>Sec 6:7 – Arc Length</u> - Applications of arc lengths - Derive Arc Length Conjecture <u>Circles/Arcs in Nature</u> <u>Chapter 6 Review</u> <u>Journals/Origami</u>	Pgs 329-330 Measure and eat Pie Pg 332 “A Taste of Pi” Investigation Pg 342 Pgs 349-351 1-19, 25, 26, 34-57
FRIDAY (Day 10)	Morning	<u>Sec 7:1 – Transformations and Symmetry</u> - Discuss rigidity/isometry vs. nonrigid transformations - Rotations on the plane - Reflections on the plane <u>Sec 7:2 – Properties of Isometries</u> - Use the ordered pair rule to show basic rotations and reflections - Derive Coordinate Transformation Conjecture <u>Sec 7:3 – Compositions of Transformations</u> - Discover if pairs of reflections can yield translation or rotation - Use combination of reflection and translation <i>Finish Chapter 6 Review Questions</i> <i>Brief Review of Chapter 4 and 5</i>	Class Discussion/Lecture Group Exploration – Investigation on Page 367 Investigations on Pages 374-375 Pgs 349-351 1-19, 25, 26, 34-57
<u>Materials Needed:</u> - Copies of the Chapter 6 Quiz	Afternoon	<u>Chapter 6 Quiz</u>	Quiz
SUNDAY <u>Materials Needed:</u> - Copies of the Tessellation Activity	Evening	<i>Checkpoint 7:1 – 7:3</i> <u>Sec 7:4 – 7:8 Tessellations</u> - Discussion of tessellations - Applications of tessellations - Generating tessellations	Pgs 362-364 1-16 Pgs 370-372 1-18 Pgs 376-377 1-9 Class Discussion/Student Work
WEEK 3		WHAT	HOW
MONDAY (Day 11) COMPUTER LAB <u>Materials Needed:</u> - Copies of the Mathematician Research Project	Morning	Mathematician Research Project Present Mathematician Research Project	COMPUTER LAB – Use computer lab to research a famous mathematician, create a PowerPoint presentation on the mathematician (with ALGA class?).

	Afternoon	<p><u>Sec 8:1 – Area of Rectangles and Parallelograms</u></p> <ul style="list-style-type: none"> - Use the area of a square to derive the formula for the area of a rectangle - Use the area of a rectangle to derive the area of a parallelogram <p><u>Sec 8:2 – Area of Triangles, Trapezoids, and Kites</u></p> <ul style="list-style-type: none"> - Use the formula for the area of a rectangle/square to derive the formula for the area of a triangle - Show various algebraic derivations for the formula for the area of a trapezoid 	<p>Investigations on Pg 417</p> <p><i>Checkpoint</i> – Pgs 413-415 1-13 20-23</p> <p><i>Checkpoint</i> – Pgs 418-419 1-18</p>
	Evening	<p><u>Finish 8:1 – 8:2 Checkpoints</u></p> <p><u>Sec 8:4 – Area of Regular Polygons</u></p> <ul style="list-style-type: none"> - Develop the Regular Polygon Area Conjecture breaking each polygon into triangles <p><u>Sec 8:5 – Area of Circles</u></p> <ul style="list-style-type: none"> - Derive the area of a circle <p><i>Checkpoints Sec 8:4 – 8:6</i></p> <p><u>Geometric Probability</u></p> <p><u>Journals</u></p>	<p>Investigation Pgs 426-427</p> <p>Investigation Pgs 433-434</p> <p><i>Checkpoint</i> – Pgs 427-428 1-13 <i>Checkpoint</i> – Pg 435 1-12 <i>Checkpoint</i> – Pg 439 1-13</p> <p>Explorations using targets and coin toss on Pgs 442-443 and review concepts on Pgs 86-87</p>
<p>TUESDAY (Day 12)</p> <p><i>Materials Needed:</i></p> <ul style="list-style-type: none"> - Toothpicks and Mini-Marshmallows - Copies of Polyhedron Activities 	Morning	<p><u>Sec 10:1 – Geometry of a Solid</u></p> <ul style="list-style-type: none"> - Explanation of polyhedron - Introduction to terms associated with polyhedron <p><u>Euler’s Formula for Polyhedron</u></p> <p><u>Introduction to Nets</u></p> <p><u>More Investigations on polyhedrons</u></p> <p><u>Polyhedron Game</u></p> <p><u>Five platonic Solids</u></p> <ul style="list-style-type: none"> - Study the five regular polyhedrons/ platonic solids - Further investigate various nets of polyhedron, generating solids 	<p>Discussion/Investigation</p> <p>Students use toothpicks and marshmallows to arrive at Euler’s Formula</p> <p>Students recall definition of a net and generate basic nets of prisms and pyramids (<i>construct cube to use for Polyhedron Game</i>).</p> <p>Worksheet reinforcing vertices edges, and faces in polyhedron Students use toothpicks and marshmallows to re-create various given polyhedron and identify vertices, edges, and faces</p> <p>Polyhedron Game</p> <p>Exploration on Page 528 Construct various polyhedron given the nets</p>

<p><u>Materials Needed:</u> - Copies of various proofs of the Pythagorean Theorem</p>	<p>Afternoon</p>	<p><u>Finish Polyhedron Game and Chapter 8 Checkpoints</u></p> <p><u>Review Geometric Probability Solutions</u></p> <ul style="list-style-type: none"> - Explain steps to follow when solving geometric probability with the given circumstances - Find, then test, probability of coin flip scenario <p><u>Sec 9:1 – The Pythagorean Theorem</u></p> <ul style="list-style-type: none"> - Discuss the history of the Pythagorean Theorem and how the proof is applicable - Investigate dissection showing the premise of the Theorem 	<p>Class Discussion, exploration of coin flip, and work out solutions to target probability example</p> <p>Lecture Investigation 1 Pgs 462-463</p>
<p><u>Materials Needed:</u> - Copies of the Wheel of Theodorus Worksheet</p>	<p>Evening</p>	<p><u>Sec 9:1 – The Pythagorean Theorem (continued)</u></p> <ul style="list-style-type: none"> - Generate various proofs to the Theorem <p><u>Finish Pythagorean Theorem Applications</u></p> <ul style="list-style-type: none"> - Discuss Pythagorean Triples - Derive 45-45-90 Special Right Triangle shortcut by drawing a square and its diagonal to form two 45-45-90 triangles. Then use the Pythagorean Theorem to find the remaining side lengths. Complete three square divisions (side lengths of 1, 2, and 3) to find the pattern, thus the shortcut - Derive the 30-60-90 Special Right Triangle shortcut by drawing to an equilateral triangle and its altitude to form two 30-60-90 triangles. Then use the Pythagorean Theorem to find the remaining side lengths. Complete three equilateral triangle divisions (side lengths of 1, 2, and 3) to find the pattern, thus the shortcut - Complete activity on application <p><u>Journals</u></p>	<p>Groups/Individual assignments of various proofs of the Theorem</p> <p>Class Discussion and Lecture</p> <p>Complete the Wheel of Theodorus</p>
<p>WEDNESDAY (Day 13)</p>	<p>Morning</p>	<p><u>Finish Tessellations and Polyhedron</u></p> <p><u>Sec 11:2 and 11:3 – Similar Triangles and Measurement with Similar Triangles</u></p> <ul style="list-style-type: none"> - Investigate similarity shortcuts - Applications of similarity incorporating the Pythagorean Theorem - Applications using similarity <p><u>Review Problems from Sec 9:1 – 9:3 and 11:2 – 11:3</u></p>	<p>Discussion and review of similarity, ratio, and proportions</p> <p><i>Pg 465 1-11</i> <i>Pgs 477-478 1-11</i> <i>Pgs 574-575 1-15</i> <i>Pgs 582-583 1-7</i></p>
<p><u>Materials Needed:</u> - Copies of Questions and Answers</p>	<p>Afternoon</p>	<p><u>MATH OLYMPICS!!</u></p>	<p>Students from all math classes are placed on teams and compete, answering as many questions correctly at stations on campus</p>

	Evening	<p><u>Finish Review Problems from Sec 9:1 – 9:3 and 11:2 – 11:3 as needed</u></p> <p><u>Begin Sec 12:1 – 12:4 – Trigonometry</u></p> <ul style="list-style-type: none"> - Introduction to Trigonometry - Discussion of the application of Trigonometric Ratios, The Law of Sines and The Law of Cosines <p><u>Review Problems from 12:1 – 12:2</u></p> <p><u>Journals</u></p>	<p>Lecture</p> <p>Application problems from Sec 12:2 completed as a class</p> <p><i>Pgs 624-625 1-20</i> <i>Pg 628 1-5</i></p>
<p>THURSDAY (Day 14)</p> <p><i><u>Materials Needed:</u></i></p> <ul style="list-style-type: none"> - Site Evaluations - Meter sticks - Yarn and Protractor 	Morning	<p><u>Site Program Evaluations</u></p> <p><u>Finish Sec 12:1 – 12:2 Problems</u></p> <p><u>Sec 12:3 – 12:4 – Law of Sines and Cosines</u></p> <ul style="list-style-type: none"> - Discuss triangles which are not right triangles and how to find missing side and angle measurements - Practice cases where the Law of Sines can be used and cases where the Law of Cosines MUST be used <p><u>Application of Similarity and Trigonometry</u></p>	<p>Class Lecture/Discussion</p> <p>Measurement of trees and buildings around campus using protractors and meter sticks. Find the measurements of objects through indirect similarity measurement and check these results using trigonometric shortcuts</p>
<p><i><u>Materials Needed:</u></i></p> <ul style="list-style-type: none"> - Copies of Post-Tests - Certificates from the office 	Afternoon	<p><u>Practice/Review for Post-Test</u></p> <p><u>Post-Test</u></p> <p><u>Distribution of Certificates</u></p>	Post-Test
<p>FRIDAY (Day 15)</p>	Morning	<p>Yearbooks</p> <p>Class Clean-up/Wrap-up</p> <p>Number Auction</p>	<p>Number Auction – Groups are given 100 units they may use to “buy” the numbers 1-20. The group that has the highest sum of the numbers they “bought” wins.</p>