

Argenta-Oreana High School
Freshmen Geometry **
Textbook: Geometry Prentice Hall, 2007

Date Semester	IL Lrning Stnds	IL Assmnt Stnds	Unit and/or Essential Question Content and/or Skills	Assessment and/or Products
Semester I August September	7. A. 7. A. 4b 8. A. 4b 9. A 9. B 9. B. 4	7.11.03 8.11.04 9.11.06 9.11.07 9.11.09 9.11.10 9.11.17	Chapter 1: Tools of Geometry <ul style="list-style-type: none"> ▪ Patterns/Inductive Reasoning ▪ Drawings, nets and other models • Undefined terms <i>point, line and plane</i> • Draw representation of points, lines and planes (Collinear points, coplanar points, parallel & skew lines) • Symbolic notation for point, line, segment, ray, distance • Addition of segments and angles • Measure segments and angles Use ruler (both English and Metric measures) and protractor. • Postulates and theorems for points, lines and planes. • Basic constructions (compass and straightedge) • Coordinate plane – Distance formula & Midpoint formula • Perimeter, Area & Circumference – Squares, Rectangles, & Circles 	Homework Worksheets Quizzes/Chapter Test
September October	8. D. 3a 9. B. 4 9. C. 4b, 9. C. 4c	6.11.05 8.11.21 9.11.17 9.11.18 10.11.03	Chapter 2: Reasoning and Proof <ul style="list-style-type: none"> • Conditional statements - Identify and write in if-then form • Hypothesis, conclusion, converse, inverse and contrapositive – identify and write • Counterexamples • Biconditional statements • Algebraic properties • Congruence properties • Define, draw representations and use theorems for: Vertical angles, perpendicular lines, supplementary angles, complementary angles 	Homework Worksheets Quizzes/Chapter Test

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			<ul style="list-style-type: none"> • Plan and write two column proofs 	
October November	9. A 9. B 9. B. 4 9. C. 4c	8.11.12 8.11.13 9.11.04 9.11.05 9.11.17	Chapter 3: Perpendicular & Parallel Lines <ul style="list-style-type: none"> • Vocabulary for two lines intersected by (a) transversal(s) <ul style="list-style-type: none"> Alternate interior and alternate exterior angles corresponding angles same-side interior angles • Parallel lines and angle relationships (congruent/not congruent and parallel/not parallel) • Triangles <ul style="list-style-type: none"> Classify by sides and angles Sum of all angle measures Exterior angle equals sum of two remote exterior angles Possible lengths of the three sides of a triangle • Polygons- Convex, non-convex and regular <ul style="list-style-type: none"> Sum of interior angles Sum of exterior angles • Lines in the Coordinate Plane <ul style="list-style-type: none"> Slope, writing equations of lines, graphing lines. Slopes of parallel and perpendicular lines Constructing parallel and perpendicular lines 	Homework Graphing calculator activities for investigation Worksheets Quizzes/Chapter Test
November December	9. A 9. B. 4	9.11.05 9.11.13 9.11.16 9.11.17	Chapter 4: Congruent Triangles <ul style="list-style-type: none"> • Corresponding parts of congruent figures CPCTC • Congruent triangles methods: <ul style="list-style-type: none"> SSS – Side, side, side SAS – Side, angle, side ASA – Angle, side, angle • Isosceles & Equilateral Triangles – Vocabulary & Properties • Congruence in right triangles - HL 	Homework Worksheets Quizzes/Chapter Test

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Semester II January	9. C 9. C. 4b 9. C. 4c	9.11.17	Chapter 5: Relationships Within Triangle <ul style="list-style-type: none"> • Triangles Midsegments, bisectors, points of concurrency • Inequalities in triangles • Inverses, contrapositives 	Homework Construct the centroid of any type of triangle using cardboard triangle Worksheets Quizzes/Chapter Test
January	9. A 9. B 9. B. 4 9. C. 4c	9.11.04 9.11.05 9.11.09 9.11.17	Chapter 6: Quadrilaterals <ul style="list-style-type: none"> • Classify quadrilaterals • Define parallelogram and its properties • Proving a quadrilateral a parallelogram • Special parallelograms • Trapezoid & kites • Placing figures in the coordinate plane 	Homework Graphing calculator activities Worksheets Quizzes/Chapter Test
February	6. D 6. D. 4 9. B. 4 9. C. 4c	6.11.17 9.11.05 9.11.12 9.11.16 9.11.17	Chapter 7: Similarity <ul style="list-style-type: none"> • Ratio and proportion • Similar polygons • AA~, SAS ~, SSS~ • Right Triangle Similarity • Proportions in Triangles 	Homework Enlarge cartoon or famous painting Worksheets Quizzes/Chapter Test
March	9. A 9. D 9. D.4	9.11.01 9.11.04 9.11.19	Chapter 8: Right Triangles and Trigonometry <ul style="list-style-type: none"> • Pythagorean Theorem and its converse 	Homework Graphing Calculator activities

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		9.11.20 9.11.22	<ul style="list-style-type: none"> • 45-45-90 and 30-60-90 Triangles • Sine, Cosine, and Tangent Ratio • Angles of Elevation and Depression 	Worksheets Quizzes/Chapter Test
	9. A 9. A 4b	9.11.02 9.11.03	Chapter 9: Transformations (Optional) <ul style="list-style-type: none"> • Translations • Reflections • Rotations • Symmetry • Dilations • Compositions of Reflections • Tessellations 	Homework Tessellation activity Tiling patterns Kaleidoscope designs Worksheets Quizzes/Chapter Test
March April	7. A. 4b 9. A 9. D 10. C	7.11.03 7.11.05 7.11.06 9.11.10 10.11.09	Chapter 10: Area <ul style="list-style-type: none"> • Area of Parallelograms, Triangles, rhombuses, trapezoids, kites and regular polygons. • Perimeter and area of similar figures • Circles and arcs • Area formulas for circles and sectors • Geometric Probability 	Homework Hands on investigations Graphing Calculator Worksheets Quizzes/Chapter Test
April May	7. A. 4b	7.11.03 7.11.05 7.11.06	Chapter 11: Surface Area and Volume <ul style="list-style-type: none"> • Space figures and cross sections • Surface areas of prisms, cylinders, pyramids and cones 	Homework Hands on investigations

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			<ul style="list-style-type: none"> • Volume of prisms, cylinders, pyramids and cones • Surface area and volume of spheres • Area and volume of similar solids 	Graphing Calculator Worksheets Quizzes/Chapter Test
May	9. A	8.11.20 9.11.09 9.11.10	Chapter 12: Circles <ul style="list-style-type: none"> • Tangent lines • Chords and Arcs • Inscribed angles • Angle Measures and Segment lengths • Circles in the Coordinate Plane • Locus: A set of points 	Homework Graphing Calculator Quizzes/Chapter Test

**The course content of Freshmen Geometry and Formal Geometry is the same. At the honors level, a student demonstrates an in-depth understanding of the work presented by the instructor. Challenge problems are discussed and presented to the students. All answers should be concise, complete and accurate. There should be detail in both written explanations and hand drawn work. The work should show application and analysis of the concepts as well as utilizing creative and critical thinking skills. It is no longer enough just to given an answer to the problem, but how we go beyond and use the answer to discover other relationships about our topic(s).