


## Geometry Year-Long

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September 2022

Content	Skills	Learning Targets	Assessment	Standards Reference	Resources & Technology
<p><b>NOTE: The topics covered in Geometry and in Advanced Geometry are basically the same. However, the Advanced Geometry course will cover topics with greater depth and assignments/assessments will include more difficult problems.</b></p> <p><b>CEQ:</b></p> <ul style="list-style-type: none"> <li>● <b>What are the properties of the basic elements of geometry?</b></li> <li>● <b>What are the properties of 2-dimensional shapes?</b></li> <li>● <b>What are the properties of 3-</b></li> </ul>	<p><b>A: The Tools of Geometry</b></p> <p>A1: Identify the basic building blocks of Geometry (Point-Line-Plane)</p> <p>A1: Identify and name the basic objects used in plane geometry (segments, angles, etc.)</p> <p>A1: Apply the properties of Parallel and Perpendicular Lines to determine angle measures.</p> <p>A1: Apply the properties of special angle pairs to determine angle measures.</p> <p>A2: Extend the symbols for</p>	<p><b>A: The Tools of Geometry</b></p> <p>LT1 I can understand basic terms of geometry.</p> <p>LT2 I can identify segments and rays.</p> <p>LT3 I can recognize parallel lines.</p> <p>LT4 I can find lengths of segments.</p> <p>LT5 I can find measures of angles.</p> <p>LT6 I can identify special angles pairs.</p> <p>LT7 I can find the distance between two points in a coordinate plane.</p> <p>LT8 I can find the coordinates of the midpoints of a segment in the coordinate plane.</p>	<p><b>A: The Tools of Geometry</b></p> <p>CSA: Chapter 1 Test</p> <p>CFA: Chapter 1 QUIZ (1-2 to 1-5)</p> <p>CFA: Chapter 1 QUIZ (1-7 to 1-8)</p> <p><b>B. Reasoning and Proof</b></p> <p>CSA: Chapter 2 Test</p> <p>CFA: Chapter 2 QUIZ (2-1 to 2-3)</p> <p>CFA: Chapter 2 QUIZ (2-4 to 2-6)</p>	<p><b>Chapter 1:</b></p> <p>MN State Standard 9.3.2.1</p> <p>MN State Standard 9.3.3.2</p> <p><b>Chapter 2:</b></p> <p>MN State Standard 9.2.3.7</p> <p>MN State Standard 9.3.2.1</p> <p>MN State Standard 9.3.2.2</p> <p>MN State Standard 9.3.2.3</p> <p>MN State Standard 9.3.2.4</p>	<p><b>Prentice Hall Geometry</b></p> <p>Chp 1: Lessons 1-2, 1-3, 1-4, 1-5, 1-6 (vocab only), 1-7, 1-8</p> <p>Chp 2: Lessons 2-1, 2-2, 2-3, 2-4, 2-5, 2-6</p> <p>Chp 3: Lessons 3-1, 3-2, 3-3, 3-5, 3-7, 3-8</p> <p>Chp 4: Lessons 4-1, 4-2, 4-3, 4-4, 4-5, 4-6</p> <p>Chp 7: Lessons 7-1, 7-2, 7-3, 7-4, 7-5</p> <p>Chp 5: Lessons 5-1, 5-2, 5-3, 5-4, 5-6, 5-7</p> <p>Chp 6: Lessons 6-1, 6-2, 6-3, 6-4, 6-5, 6-6,</p>

<p><b>dimensional shapes?</b></p> <p>● <b>What is mathematical proof and how is it used in geometry?</b></p> <p><i>UEQ: (1)</i></p> <p><i>What are the building blocks of geometry and their properties?</i></p> <p><i>What are the tools of geometry and their uses?</i></p> <p><i>What do the different mathematical symbols mean?</i></p> <p><i>What prior knowledge should students possess about geometry?</i></p> <p><b>A: The Tools of Geometry</b> A1: Basic elements of geometry and their properties. A2: Geometric symbols and their meaning.</p>	<p>Congruent, Parallel and Perpendicular to describe geometric objects A3: Determine the length of segments using ruler and numberline. A3: Determine the size of angles using a protractor. A4: Review coordinates of points. A4: Compare the length of segments using the distance formula. A4: Determine the coordinates of the midpoint of a segment.</p> <p><b>B. Reasoning and Proof</b></p> <p>B1. Recognize conditional statements and their parts B1. Write conditional statements and their</p>	<p><b>B. Reasoning and Proof</b></p> <p>LT1 I can recognize conditional statements and its parts. LT2 I can write converses of conditional statements. LT3 I can write biconditionals. LT4. I can write inverses and contrapositives. LT5 I can identify the truth value of a statement and use a counterexample to prove a statement is false when appropriate LT6 I can use the Law of Detachment. LT7 I can use the Law of Syllogism. LT8 I can connect reasoning in algebra and geometry.</p>	<p><b>C: Parallel and Perpendicular Lines</b></p> <p>CSA: Chapter 3 Test</p> <p>CFA: Chapter 3 QUIZ (3-1 to 3-3, 3-5)</p> <p>CFA: Chapter 3 QUIZ (3-7 to 3-8)</p> <p><b>D. Congruent Triangles</b></p> <p>CSA: Chapter 4 Test</p> <p>CFA: Chapter 4 QUIZ (4-1 to 4-3, 4-6)</p> <p><b>A-D.</b></p> <p>CSA: Cummulative Final Exam</p> <p><b>E: Similarity</b></p> <p>CSA: Chapter 7 Test</p> <p>CFA: Chapter 7 QUIZ (7-1 to 7-3)</p>	<p>MN State Standard 9.3.3.2</p> <p><b>Chapter 3:</b></p> <p>MN State Standard 9.3.2.4</p> <p>MN State Standard 9.3.3.1</p> <p>MN State Standard 9.3.3.2</p> <p>MN State Standard 9.3.4.4</p> <p><b>Chapter 4:</b></p> <p>MN State Standard 9.3.2.4</p> <p>MN State Standard 9.3.3.3</p> <p><b>Chapter 7:</b></p>	<p>6-7, 6-8, 6-9</p> <p>Chp 8: Lessons 8-1, 8-2, 8-3, 8-4</p> <p>Chp 10: Lessons 10-1, 10-2, 10-3, 10-4, 10-5, 10-6, 10-7</p> <p>Chp 11: Lessons 1-1 (nets only), 11-1 (cross-sections only), 11-2, 11-3, 11-4, 11-5, 11-6, 11-7</p> <p>Chp 12: Lessons 12-1, 12-2, 12-3, 12-4, 12-5</p> <p>Chp 9: Lessons 9-1, 9-2, 9-3, 9-4, 9-5</p> <p><b>Geometer's Sketchpad (optional - if software available)</b></p>
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<p>A3: Physical tools of geometry and their uses.</p> <p>A4: Prior mathematical knowledge necessary for the study of geometry.</p>  <p><i>UEQ: (2.1-2.5)</i></p> <ul style="list-style-type: none"> <li>· <i>What are conditional statements?</i></li> <li>· <i>How do we write converses of conditional statements and biconditionals?</i></li> <li>· <i>What are "good" definitions?</i></li> <li>· <i>How do we connect reasoning in algebra and geometry?</i></li> <li>· <i>How do we prove and apply theorems about angles?</i></li> </ul>	<p>converses</p> <p>B2. Write biconditionals</p> <p>B2. Recognize and evaluate good definitions</p> <p>B3. Write inverse and contrapositive statements</p> <p>B4. Apply deductive reasoning using the laws of detachment and syllogism</p> <p>B5. Connect reasoning in algebra and geometry</p> <p>B5, B6. Justify steps in a logical argument</p> <p>B6. Prove and apply theorems about angles</p> <p><b>C: Parallel and Perpendicular Lines</b></p> <p>C1: Differentiate the types of relationships of pairs of angles formed by a transversal and parallel lines.</p> <p>C2: Apply conjectures to prove that two lines</p>	<p>LT9 I can prove and apply theorems about angles.</p> <p><b>C: Parallel and Perpendicular Lines</b></p> <p>LT1 I can identify angles formed by two lines and a transversal.</p> <p>LT2 I can prove and use properties of parallel lines.</p> <p>LT3 I can use a transversal in proving lines parallel.</p> <p>LT4 I can classify triangles and find the measures of their angles.</p> <p>LT5 I can use exterior angles of triangles.</p> <p>LT6 I can name and classify polygons.</p> <p>LT7 I can graph lines given their equations.</p> <p>LT8 I can write equations of lines.</p>	<p><b>F. Triangles and Proof</b></p> <p>CSA: Chapter 5 Test</p> <p>CFA: Chapter 5 QUIZ (5-1 to 5-4)</p> <p>CFA: Chapter 5 QUIZ (5-6 to 5-7)</p> <p><b>G. Quadrilaterals</b></p> <p>CSA: Chapter 6 Test</p> <p>CFA: Chapter 6 QUIZ (6-1 to 6-6)</p> <p>CFA: Chapter 6 QUIZ (6-7)</p> <p><b>H: Side/Angle Relationships in</b></p>	<p>MN State Standards 9.3.3.6</p> <p>MN State Standards 9.3.4.7</p> <p><b>Chapter 5:</b></p> <p>MN State Standard 9.3.2.4</p> <p>MN State Standard 9.3.2.5</p> <p>MN State Standard 9.3.3.3</p> <p><b>Chapter 6:</b></p> <p>MN State Standards 9.3.2.5</p> <p>MN State Standards 9.3.3.7</p> <p>MN State Standards 9.3.4.4</p>	<p><b>Geogebra (optional - available free online)</b></p>
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<p><b>B. Reasoning and Proof</b></p> <p>B1. Conditional statements</p> <p>B2. Biconditionals and definitions</p> <p>B3. Inverses and Contrapositives</p> <p>B4. Deductive reasoning</p> <p>B5. Reasoning in algebra</p> <p>B6. Proving angles congruent</p> <p>UEQ- (3)</p> <p><i>What are the names and properties of the pairs of angles formed when a transversal intersects 2 lines or 2 parallel lines?</i></p> <p><i>How do the slopes of parallel and perpendicular lines relate?</i></p> <p><i>How do you classify</i></p>	<p>are parallel based on information about the pairs of angles.</p> <p>C3: Define parallel and/or perpendicular lines.</p> <p>C4: Prove that the sum of the measures of the angles of any triangle is 180 degrees, using parallel lines conjectures.</p> <p>C5: Discover and develop the formula for finding polygon angle-measure sums, using the triangle-sum conjecture.</p> <p>C5: Apply the Triangle-Sum conjecture and the Polygon-Sum conjecture to solve problems.</p> <p>C6: Examine equations of lines on the coordinate plane.</p> <p>C7: Examine the relationships of slopes of parallel and perpendicular lines.</p>	<p>LT9 I can relate slope and parallel and perpendicular lines.</p> <p><b>D. Congruent Triangles</b></p> <p>LT1 I can recognize congruent figures and their corresponding parts.</p> <p>LT2 I can prove two triangles congruent using the SSS and SAS Postulates.</p> <p>LT3 I can prove two triangles congruent using the ASA Postulate and the AAS Theorem.</p> <p>LT4 I can use triangle congruence and CPCTC to prove that parts of two triangles are congruent.</p> <p>LT5 I can use and apply properties of isosceles triangles.</p> <p>LT6 I can prove triangles congruent</p>	<p><b>Right Triangles</b></p> <p>CSA: Chapter 8 Test</p> <p>CFA: Chapter 8 QUIZ (8-1 to 8-2)</p> <p><b>E-H.</b></p> <p>CSA: Cummulative Final Exam</p> <p><b>I: Area</b></p> <p>CSA: Chapter 10 Test</p> <p>CFA: Chapter 10 QUIZ (10-1 to 10-3, 10-5)</p> <p>CFA: Chapter 10 QUIZ (10-4, 10-6 to 10-7)</p> <p><b>J. Space Figures</b></p> <p>CSA: Chapter 11 Test</p> <p>CFA: Chapter 11 QUIZ (11-1, 11-2, 11-4)</p> <p>CFA: Chapter 11 QUIZ (11-3, 11-5, 11-</p>	<p><b>Chapter 8:</b></p> <p>MN State Standard 9.3.3.4</p> <p>MN State Standard 9.3.3.5</p> <p>MN State Standard 9.3.4.1</p> <p>MN State Standard 9.3.4.2</p> <p>MN State Standard 9.3.4.3</p> <p>MN State Standard 9.3.4.7</p> <p><b>Chapter 10:</b></p> <p>MN State Standard 9.3.1.2</p> <p>MN State Standard 9.3.1.3</p> <p>MN State Standard 9.3.1.4</p>
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<p><i>and what are the properties of various special polygons?</i></p> <p><b>C: Parallel and Perpendicular Lines</b></p> <p>C1: Properties of Parallel Lines  C2: Proving lines parallel  C3: Parallel and perpendicular lines  C4: Parallel lines and triangle-sum theorem  C5: The Polygon Angle-Sum Theorem  C6: Lines in the Coordinate Plane  C7: Slopes of Parallel and Perpendicular Lines</p> <p>UEQ: (4.1-4.7)</p> <p><i>How do we identify congruent figures and their corresponding parts?</i></p>	<p><b>D. Congruent Triangles</b></p> <p>D1. Recognize congruent figures and their corresponding parts  D2. Prove two triangles are congruent using the SSS and SAS Postulates  D3. Prove two triangles congruent using the ASA Postulate and the AAS Theorem  D4. Use triangle congruence and CPCTC to prove that parts of two triangles are congruent  D5. Use and apply properties of isosceles triangles  D6. Prove triangles congruent using the HL Theorem  D7. Identify congruent overlapping triangles  D7. Prove two</p>	<p>using the HL Theorem  LT7 I can prove two triangles congruent by first proving two other triangles are congruent.</p> <p><b>E. Similarity</b></p> <p>LT 1 I can recognize similar figures and their corresponding parts.  LT 2 I can solve a proportion.  LT 3 I can find side lengths using ratios in similar polygons.  LT 4 I can prove triangles are similar.  LT 5 I can write ratios in similar right triangles.  LT 6 I can use the side-splitter theorem.  LT 7 I can solve for side lengths or angle measures in similar triangles using proportions.</p>	<p>6)</p> <p><b>K. Circles</b></p> <p>CSA: Chapter 12 Test  CFA: Chapter 12 QUIZ (12-1 TO 12-3)</p> <p><b>L. Transformations</b></p> <p>CSA: Chapter 9 Test  CFA: Chapter 9 QUIZ (9-1 TO 9-3)</p> <p><b>I-L.</b></p> <p>CSA: Cumulative Final Exam</p> <p><b>M. Constructions - if time allows</b></p> <p>CSA: Construction Test - if time allows</p>	<p>MN State Standard 9.3.1.5</p> <p><b>Chapter 11:</b></p> <p>MN State Standard 9.3.1.1  MN State Standard 9.3.1.2  MN State Standard 9.3.1.3  MN State Standard 9.3.1.4  MN State Standard 9.3.1.5</p> <p><b>Chapter 12:</b></p> <p>MN State Standard 9.3.3.8  MN State Standard 9.3.4.5</p>	
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<p>· <i>How do we prove two triangles are congruent using triangle congruence postulates?</i></p> <p>· <i>What is CPCTC and how do we use it to prove that parts of two triangles are congruent?</i></p> <p>· <i>How do we use and apply properties of isosceles triangles?</i></p> <p><b>D. Congruent Triangles</b></p> <p>D1. Congruent Figures D2. Triangle Congruence by SSS and SAS D3. Triangle Congruence by ASA and AAS D4. Using Congruent Triangles: CPCTC D5. Isosceles and Equilateral Triangles D6. Congruence in Right Triangles</p>	<p>triangles congruent by first proving two other triangles congruent</p> <p><b>E. Similarity</b></p> <p>E1. Write ratios and solve proportions E2. Identify similar polygons E2. Apply properties of similar polygons E3. Use and apply AA, SAS, and SSS similarity statements E4. Find and use relationships in similar right triangles E5. Use the Side-Splitter Theorem E5. Use the Triangle-Angle-Bisector Theorem</p> <p><b>F: Triangles and Proof</b></p> <p>F1: Build Triangle Midsegments and determine their</p>	<p><b>F: Triangles and Proof</b></p> <p>LT1 I can identify and use properties of midsegments to solve problems. LT2 I can identify and use properties of perpendicular bisectors and angle bisectors. LT3 I can identify and use properties of perpendicular bisectors/circumcenters and angles bisectors/incenters. LT4 I can identify properties of medians/centroids and altitudes/orthocenters of a triangle. LT5 I can use inequalities involving angles of triangles. LT6 I can use inequalities involving sides of triangles.</p> <p><b>G. Quadrilaterals</b></p>	<p>CFA: Constructions Review Worksheet - if time allows</p>	<p><b>Chapter 9:</b></p> <p>MN State Standard 9.3.4.6</p> <p><b>Construcitons Unit:</b></p> <p>MN State Standards 9.3.2.5</p>	
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<p>D7. Using Corresponding Parts of Congruent Triangles</p> <p><i>UEQ: (7.1-7.5)</i></p> <ul style="list-style-type: none"> <li>· <i>How do we write ratios and solve proportions?</i></li> <li>· <i>What are similar polygons and how can we apply them in real-life situations?</i></li> <li>· <i>How do we use and apply AA~, SAS~, and SSS~ similarity statements?</i></li> <li>· <i>What relationships do similar right triangles have and how can we use them?</i></li> <li>· <i>How can we use properties of split</i></li> </ul>	<p>properties.</p> <p>F2: Examine the properties of perpendicular bisectors including the distance from a point to a line.</p> <p>F3: Examine the properties of angle bisectors.</p> <p>F4: Distinguish between Altitudes and Medians.</p> <p>F5: Examine the different points of concurrency in a triangle including Circumcenter, Incenter, Centroid and Orthocenter and determine any special properties they may have.</p> <p>F6: Analyze the relationships between the size of an angle and the size of the side opposite that angle.</p> <p><b>G. Quadrilaterals</b></p>	<p>LT1 I can define and classify special types of quadrilaterals.</p> <p>LT2 I can find the sums of the measures of the interior and exterior angles of polygons.</p> <p>LT3 I can use relationships among sides and among angles of parallelograms.</p> <p>LT4 I can use relationships involving diagonals of parallelograms or transversals.</p> <p>LT5 I can determine whether a quadrilateral is a parallelogram.</p> <p>LT6 I can use properties of diagonals of rhombuses and rectangles.</p> <p>LT7 I can determine whether a parallelogram is a rhombus or a rectangle.</p>			
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<p><i>triangles to solve for missing parts?</i></p> <p><b>E. Similarity</b></p> <p>E1. Ratios and Proportions E2. Similar Polygons E3. Proving Triangles Similar E4. Similarity in Right Triangles E5. Proportions in Triangles</p> <p><i>UEQ: (5)</i></p> <p><i>What relationships exist between the sides and angles of a triangle?</i></p> <p><i>What are the properties of segments within triangles?</i></p> <p><i>What is indirect reasoning and how can it be applied to geometrical proofs?</i></p> <p><b>F: Triangles and</b></p>	<p>G1: Investigate the definitions of different polygons to aid in classifying them. G2: Examine properties of parallelograms and apply the properties of parallelograms to solve problems and to complete proofs. G3: Apply properties of a parallelogram to prove that certain quadrilaterals are parallelograms. G4: Examine the properties of special quadrilaterals and apply the properties of special quadrilaterals in proving conjectures. G5: Examine and apply the properties of kites and rhombi. G6: Place plane figures on the coordinate plane to aid in proving properties of quadrilaterals. G7: Solve proofs utilizing coordinate</p>	<p>LT8 I can verify and use properties of trapezoids and kites. LT9 I can name coordinates of special figures by using their properties. LT10 I can prove theorems using figures in the coordinate plane.</p> <p><b>H: Side/Angle Relationships in Right Triangles</b></p> <p>LT 1 I can find a side length of a triangle using the Pythagorean Theorem LT 2 I can find a side length using the relationships between the sides of a 45-45-90 triangle. LT 3 I can find a side length using the relationships between the sides of a 30-60-90 triangle. LT 4 I can use Sine, Cosine, and Tangent</p>			
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<p><b>Proof</b> F1: Special Segments in triangles. F2: Side and Angle Relationships in Triangles.</p> <p><i>UEQ- (6) What are the properties of parallelograms and other special quadrilaterals?</i></p> <p><i>How are quadrilaterals classified?</i></p> <p><i>How are quadrilaterals placed on the coordinate plane based on their properties?</i></p> <p><i>How are properties of figures verified using coordinate techniques?</i></p> <p><b>G. Quadrilaterals</b></p>	<p>geometry.</p> <p><b>H: Side/Angle Relationships in Right Triangles</b></p> <p>H1: Apply the Pythagorean Theorem and its converse to Right Triangles. H2: Classify Triangles as Acute, Right, or Obtuse using the Pythagorean Theorem H3: Determine the relationship between the sides and angles of 45-45-90 and 30-60-90 triangles. H4: Determine missing side and angle measurements by applying the 45-45-90 and 30-60-90 Triangle properties. H5: Apply the Sine, Cosine and Tangent ratios in finding the measures of angles and sides in any right triangle.</p>	<p>in right triangles to find missing sides or angles. LT 5 I can solve word problems using angles of elevation and depression.</p> <p><b>I: Area</b></p> <p>LT 1 I can find the area of a parallelogram. LT 2 I can find the area of a triangle. LT 3 I can find the area of a rhombus, a trapezoid, and a kite. LT 4 I can find the area of a regular polygon. LT 5 I can find and use the relationships between the side lengths and area of similar figures. LT 6 I can find circumference and arc length in a circle. LT 7 I can find the area of a circle and parts of a circle.</p>			
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<p>G1: Classifying Quadrilaterals  G2: Properties of Parallelograms  G3: Proving That a Quadrilateral is a Parallelogram  G4: Special Parallelograms  G5: Trapezoids and Kites  G6: Placing Figures in the Coordinate Plane  G7: Proofs Using Coordinate Geometry</p> <p><i>UEQ: (8)</i></p> <p><i>What is the Pythagorean Theorem and how can it be used to determine side lengths and types of triangles?</i></p> <p><i>What are the special Right Triangles and the relationships between their sides</i></p>	<p><b>I: Area</b></p> <p>I1. Find the area of a parallelogram  I1. Find the area of a triangle  I2. Find the area of a trapezoid  I2. Find the area of a rhombus or kite  I3. Find the area of a regular polygon  I4. Using the scale factor, find the perimeters and areas of similar figures.  I5. Find the area of a regular polygon using trigonometry  I5. Find the area of a triangle using trigonometry  I6. Find the measures of central angles and arcs  JI. Find circumference and arc length</p>	<p><b>J: Space Figures</b></p> <p>LT 1 I can draw nets of a 3-dimensional figure.  LT 2 I can describe cross sections of a 3-dimensional figure.  LT 3 I can find the surface area of a prism and cylinder.  LT 4 I can find the volume of a prism and cylinder.  LT 5 I can find the surface area of a pyramid and cone.  LT 6 I can find the volume of a pyramid and cone.  LT 7 I can find the surface area of a sphere.  LT 8 I can find the volume of a sphere.  LT 9 I can use relationships between side lengths, areas, and volumes of similar solids.</p> <p><b>K: Circles</b></p>			
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<p><i>and angles?</i></p> <p><i>What other relationships exist between the sides and angles of all right triangles?</i></p> <p><b>H: Side/Angle Relationships in Right Triangles</b>  H1: Pythagorean Theorem  H2: Special Right Triangles  H3: Right Triangle Trigonometric Ratios    UEQ: (10.1-10.8)</p> <ul style="list-style-type: none"> <li>· <i>How do we find the area of different polygons?</i></li> <li>· <i>How do we find the perimeter and area of similar figures?</i></li> <li>· <i>How can we use trigonometry to find</i></li> </ul>	<p>I7. Find the areas of circles, sectors, and segments of circles</p> <p><b>J: Space Figures</b></p> <p>J1: Draw nets for 3-dimensional figures.  J2. Identify faces, edges, vertices and cross sections of various space figures.  J3: Apply the Surface Area of Prisms and Cylinders to various real-life examples.  J4: Apply the Volume of Prisms and Cylinders to various real-life examples.  J5: Apply the Surface Area of Pyramids and Cones to various real-life examples.  J6: Apply the Volume of Pyramids and Cones to various real-life examples.  J7: Apply the Surface Area and Volume of</p>	<p>LT 1 I can apply the relationship between a radius and tangent line to find missing information.  LT 2 I can find chord lengths in circles.  LT 3 I can find the measures of inscribed angles in a circle.  LT 4 I can find the measure of arcs using given angles.  LT 5 I can find segment lengths related to a circle.  LT 6 I can write the equation of a circle.</p> <p><b>L. Transformations</b></p> <p>LT 1 I can recognize whether a figure has reflectional or rotational symmetry and draw all lines of symmetry, and identify angles of symmetry when appropriate.  LT 2 I can perform translations.</p>			
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<p><i>the area of different polygons?</i></p> <p>· <i>How do we find the measures, lengths and areas of different parts to a circle?</i></p> <p><b>I. Area</b></p> <p>I1. Areas of Parallelograms and Triangles I2. Areas of Trapezoids, Rhombuses, and Kites I3. Areas of Regular Polygons I4. Perimeters and Areas of Similar Figures I5. Trigonometry and Area I6. Circles and Arcs I7. Areas of Circles and Sectors</p> <p><i>UEQ: (11)</i></p> <p><i>What are the defining elements of space figures?</i></p>	<p>Spheres to various real-life examples. J8: Compare the Surface Areas and Volumes of similar space figures and develop a relationship. J9: Using the scale factor, determine SA and Vol of space figures knowing the SA and Vol of a similar figure.</p> <p><b>K: Circles</b></p> <p>K1: Apply circle properties to solve problems. K2: Examine properties of a circle dealing with central angles and their intercepted arcs. K3: Apply properties of inscribed angles and their intercepted arcs to solve problems. K4: Apply properties of circles and the</p>	<p>LT 3 I can perform reflections. LT 4 I can perform rotations. LT 5 I can perform dilations.</p> <p><b>M: Constructions - if time allows</b></p> <p>LT1. I can duplicate, by construction, a given segment and angle. LT2. I can construct a perpendicular bisector and angle bisector. LT3. I can construct a line parallel or perpendicular to a given line.</p>			
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<p><i>How are Surface Area and Volume Calculated for different space figures?</i></p> <p><i>How are the surface area and volume of similar space figures related?</i></p> <p><b>J: Space Figures</b>  J1: Defining Space Figures and their Cross Sections  J2: SA of Prisms, Cylinders, Pyramids, Cones and Spheres  J3: Volume of Prisms, Cylinders, Pyramids, Cones and Spheres  J4: Areas and Volumes of Similar Space Figures.</p> <p><i>UEQ- (12)</i>  <i>What are the properties of circles and of lines and segments that intersect</i></p>	<p>relationships of angle measures and segment lengths that intersect the circle.</p> <p>K5: Identify the center and radius of a circle, given the coordinate equation of the circle.</p> <p>K5: Identify the equation of a circle, given critical information of the circle.</p> <p><b>L. Transformations</b></p> <p>L1: Identify images and corresponding parts for a transformation.</p> <p>L1: Develop rules to describe translations.</p> <p>L2: Identify reflection images for a transformation.</p> <p>L2: Demonstrate how to draw reflection images.</p> <p>L3: Demonstrate how to draw a rotation image.</p> <p>L3: Identify a rotation image.</p>				
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<p><i>circles?</i></p> <p><i>How are the angles formed by intersecting lines and segments with a circle related to the intercepted arcs?</i></p> <p><b>K. Circles</b></p> <p>K1: Tangent Lines K2: Chords and Arcs K3: Inscribed Angles K4: Angle Measures and Segment Lengths K5: Circles in the Coordinate Plane</p> <p><i>UEQ-Chapter 9</i></p> <p><i>How are transformations used to create a congruent image of a given shape?</i></p> <p><i>How are transformations used to relate two given congruent shapes to each other?</i></p> <p><i>What effects does applying two consecutive transformations have?</i></p>	<p>L4: Identify lines of symmetry.</p> <p>L4: Identify rotational and/or point symmetry.</p> <p>L5: Explain how to find a scale factor.</p> <p>L5: Demonstrate how to graph a dilation image.</p> <p>L6: Recognize and interpret the transformation being applied.</p> <p><b>M: Constructions - if time allows</b></p> <p>M1: Construct duplicate segments and angles using a compass and straightedge.</p> <p>M2: Construct perpendicular bisectors.</p> <p>M2: Construct angle bisectors</p> <p>M3: Construct parallel and perpendicular lines.</p>				
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<p><b>L. Transformations</b></p> <p>L1: Translations L2: Reflections L3: Rotations L4: Symmetry L5: Dilations</p> <p><b>M. Constructions - if time allows</b></p> <p>M1: Physical tools of geometry and their uses. M2: Constructing perpendicular and angle bisectors. M3: Constructing parallel and perpendicular lines.</p>					
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