Cord Geometry, Learning in Context, 3rd edition
correlation to Oklahoma Pass Mathematics Content Standards, Geometry

	Cord Geometry Lesson(s)
Standard 1: Logical Reasoning - The student will use deductive and inductive reasoning to solve problems.	
1. Identify and use logical reasoning skills (inductive and deductive) to make and test conjectures, formulate counter examples, and follow logical arguments.	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8
2. State, use, and examine the validity of the converse, inverse, and contrapositive of "if-then" statements.	2.3
3. Compare the properties of Euclidean geometry to non-Euclidean geometries (for example, elliptical geometry, as shown on the surface of a globe, does not uphold the parallel postulate).	Chapter 3 Cultural Connection, page 147
Standard 2: Properties of 2-Dimensional Figures - The student will use the properties and formulas of geometric figures to solve problems.	
1. Use geometric tools (for example, protractor, compass, straight edge) to construct a variety of figures.	1.4
2. Line and Angle Relationships	
a. Use the angle relationships formed by parallel lines cut by a transversal to solve problems.	1.5, 2.7
b. Use the angle relationships formed by two lines cut by a transversal to determine if the two lines are parallel and verify, using algebraic and deductive proofs.	2.8
c. Use relationships between pairs of angles (for example, adjacent, complementary, vertical) to solve problems.	1.3
3. Polygons and Other Plane Figures	
a. Identify, describe, and analyze polygons (for example, convex, concave, regular, pentagonal, hexagonal, n-gonal).	6.1, 6.2
b. Apply the interior and exterior angle sum of convex polygons to solve problems, and verify using algebraic and deductive proofs.	6.2
c. Develop and apply the properties of quadrilaterals to solve problems (for example, rectangles, parallelograms, rhombi, trapezoids, kites).	6.3, 6.4, 6.5, 6.6
d. Use properties of 2-dimensional figures and side length, perimeter or circumference, and area to determine unknown values and correctly identify the appropriate unit of measure of each.	8.1, 8.2, 8.3, 8.4, 8.5, 8.6

4. Similarity	
a. Determine and verify the relationships of similarity of triangles, using algebraic and deductive proofs.	4.2, 4.3, 4.4, 4.5
b. Use ratios of similar 2-dimensional figures to determine unknown values, such as angles, side lengths, perimeter or circumference, and area.	4.3, 4.4, 4.5, 8.6
5. Congruence	
a. Determine and verify the relationships of congruency of triangles, using algebraic and deductive proofs.	3.4, 3.5, 3.6, 3.7
b. Use the relationships of congruency of 2-dimensional figures to determine unknown values, such as angles, side lengths, perimeter or circumference, and area.	3.4, 3.5, 3.6, 3.7
6. Circles	
a. Find angle measures and arc measures related to circles.	9.3, 9.4, 9.5
b. Find angle measures and segment lengths using the relationships among radii, chords, secants, and tangents of a circle.	9.2, 9.3, 9.4, 9.5
Standard 3: Triangles and Trigonometric Ratios - The student will use the properties of right triangles and trigonometric ratios to solve problems.	
1. Use the Pythagorean Theorem and its converse to find missing side lengths and to determine acute, right, and obtuse triangles, and verify using algebraic and deductive proofs.	5.2
2. Apply the 45-45-90 and 30-60-90 right triangle relationships to solve problems, and verify using algebraic and deductive proofs.	5.3
3. Express the trigonometric functions as ratios and use sine, cosine, and tangent ratios to solve real-world problems.	5.4, 5.5
4. Use the trigonometric ratios to find the area of a triangle.	5.6

Standard 4: Properties of 3-Dimensional Figures - The student will use the properties and formulas of geometric figures to solve problems.	
1. Polyhedra and Other Solids	
a. Identify, describe, and analyze polyhedra (for example, regular, decahedral).	10.1, 10.2
b. Use properties of 3-dimensional figures; side lengths, perimeter or circumference, and area of a face; and volume, lateral area, and surface area to determine unknown values and correctly identify the appropriate unit of measure of each.	10.3, 10.4, 10.5, 10.6, 10.7, 10.8
2. Similarity and Congruence	
a. Use ratios of similar 3-dimensional figures to determine unknown values, such as angles, side lengths, perimeter or circumference of a face, area of a face, and volume.	10.8
b. Use the relationships of congruency of 3-dimensional figures to determine unknown values, such as angles, side lengths, perimeter or circumference of a face, area of a face, and volume.	10.8
3. Create a model of a 3-dimensional figure from a 2-dimensional drawing and make a 2-dimensional representation of a 3-dimensional object (for example, nets, blueprints, perspective drawings).	10.1, 10.2, 10.3, 10.5, 10.7
Standard 5: Coordinate Geometry - The student will solve problems with geometric figures in the coordinate plane.	
1. Use coordinate geometry to find the distance between two points; the midpoint of a segment; and to calculate the slopes of parallel, perpendicular, horizontal, and vertical lines.	7.1, 7.3, 7.4
2. Properties of Figures	
a. Given a set of points determine the type of figure formed based on its properties.	7.5
b. Use transformations (reflection, rotation, translation) on geometric figures to solve problems within coordinate geometry.	11.1, 11.2, 11.3, 11.4, 11.5