Cord Geometry, Learning in Context, 3rd edition
correlation to Washington State Geometry Core Content

	Cord Geometry Lesson(s)
G.1. Core Content: *Logical arguments and proofs*	
G.1.A Distinguish between inductive and deductive reasoning.	2.1, 2.2
G.1.B Use inductive reasoning to make conjectures, to test the plausibility of a geometric statement, and to help find a counterexample.	2.1
G.1.C Use deductive reasoning to prove that a valid geometric statement is true.	2.2, 2.4, 2.5
G.1.D Write the converse, inverse, and contrapositve of a valid proposition and determine their validity.	2.3
G.1.E Identify errors or gaps in a mathematical argument and develop counterexamples to refute invalid statements about geometric relationships.	2.2, 2.3, 2.4, 2.5
G.1.F Distinguish between definitions and undefined geometric terms and explain the role of definitions, undefined terms, postulates (axioms), and theorems.	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8
G.2. Core Content: *Lines and angles*	
G.2.A Know, prove, and apply theorems about parallel and perpendicular lines.	2.8
G.2.B Know, prove, and apply theorems about angles, including angles that arise from parallel lines intersected by a transversal.	2.7, 2.8
G.2.C Explain and perform basic compass and straightedge constructions related to parallel and perpendicular lines.	1.4
G.2.D Describe the intersections of lines in the plane and in space, of lines and planes, and of planes in space.	1.1
G.3. Core Content: *Two- and three-dimensional figures*	
G.3.A Know, explain, and apply basic postulates and theorems about triangles and the special lines, line segments, and rays associated with a triangle.	3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8
G.3.B Determine and prove triangle congruence, triangle similarity, and other properties of triangles.	3.4, 3.5, 3.6, 3.7, 3.8, 4.2, 4.3, 4.4, 4.5
G.3.C Use the properties of special right triangles (30°–60°–90° and 45°–45°–90°) to solve problems.	5.3

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G.3.D Know, prove, and apply the Pythagorean Theorem and its converse.	5.2
G.4.E Solve problems involving the basic trigonometric ratios of sine, cosine, and tangent.	5.4, 5.5
G.3.F Know, prove, and apply basic theorems about parallelograms.	6.4, 6.5
G.3.G Know, prove, and apply theorems about properties of quadrilaterals and other polygons.	6.1, 6.2, 6.3, 6.4, 6.5, 6.6
G.3.H Know, prove, and apply basic theorems relating circles to tangents, chords, radii, secants, and inscribed angles.	9.2, 9.3, 9.4, 9.5
G.3.I Explain and perform constructions related to the circle.	9.6
G.3.J Describe prisms, pyramids, parallelepipeds, tetrahedral, and regular polyhedral in terms of their faces, edges, vertices, and properties.	10.1, 10.2, 10.3, 10.4, 10.7
G.3.K Analyze cross-sections of cubes, prisms, pyramids, and spheres and identify the resulting shapes.	10.9
G.4. Core Content: *Geometry in the coordinate plane*	
G.4.A Determine the equation of a line in the coordinate plane that is described geometrically, including a line through two given pints, a line through a given point parallel to a given line, and a line through a given line, and a line through a given point perpendicular to a given line.	7.3, 7.4
G.4.B Determine the coordinates of a point that is described geometrically.	7.1, 7.5, 7.6
G.4.C Verify and apply properties of triangles and quadrilaterals in the coordinate plane.	7.5
G.4.D Determine the equation of a circle that is described geometrically in the coordinate plane and, given equations for a circle and a line, determine the coordinates of their intersection(s).	9.1
G.5. Core Content: *Geometric transformations*	
G.5.A Sketch results of transformations and compositions of transformations for a given two-dimensional figure on the coordinate plane, and describe the rule(s) for performing reflections about the coordinate axes or the line $y = x$.	11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7
G.5.B Determine and apply properties of transformations.	11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7
G.5.C Given two congruent or similar figures in a coordinate plane, describe a composition of translations, reflections, rotations, and dilations that superimposes one figure on the other.	11.4, 11.5, 11.7

G.5.D Describe the symmetries of two-dimensional figures and describe transformations, including reflections across a line and rotations about a point.	11.1, 11.2, 11.3, 11.4, 11.5
G.6. Additional Key Content	
G.6.A Derive and apply formulas for arc length and area of a sector of a circle.	9.3
G.6.B Analyze distance and angle measures on a sphere and apply these measurements to the geometry of the earth.	Cultural Connection, p. 147
G.6.C Apply formulas for surface area and volume of three-dimensional figures to solve problems.	10.3, 10.4, 10.5, 10.6, 10.7
G.6. D Predict and verify the effect that changing one, two, or three linear dimensions has on perimeter, area, volume, or surface area of two- and three-dimensional figures.	8.6, 10.8
G.6.E Use different degrees of precision in measurement, explain the reason for using a certain degree of precision, and apply estimation strategies to obtain reasonable measurements with appropriate precision for a given purpose.	Covered in *Cord Algebra 1*
G.6.F Solve problems involving measurement conversions within and between systems, including those involving derived units, and analyze solutions in terms of reasonableness of solutions and appropriate units.	not covered
G.7. Core Processes: *Reasoning, problem solving, and communication*	
G.7.A Analyze a problem situation and represent it mathematically.	covered throughout the textbook
G.7.B Select and apply strategies to solve problems.	covered throughout the textbook, especially in Math Applications feature (every chapter)
G.7.C Evaluate a solution for reasonableness, verify its accuracy, and interpret the solution in the context of the original problem.	covered throughout the textbook, especially in Math Applications feature (every chapter)
G.7.D Generalize a solution strategy for a single problem to a class of related problems, and apply a strategy for a class of related problems to solve specific problems.	covered throughout the textbook, especially in Math Applications feature (every chapter)
G.7.E Read and interpret diagrams, graphs, and text containing the symbols, language, and conventions of mathematics.	covered throughout the textbook, especially in Math Applications feature (every chapter)

G.7.F Summarize mathematical ideas with precision and efficiency for a given audience and purpose.	covered throughout the textbook, especially in Math Applications feature (every chapter)
G.7.G Synthesize information to draw conclusions and evaluate the arguments and conclusions of others.	covered throughout the textbook, especially in Activities and Math Labs (every chapter)
G.7.H Use inductive reasoning to make conjectures, and use deductive reasoning to prove or disprove conjectures.	covered throughout the textbook, especially in Activities and Math Labs (every chapter)