Campbell County Schools
GEOMETRY
2nd Nine Weeks

Mathematical Practices:	Common Core Coding Explanation:
1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	**Conceptual Category Cluster Standard #** **G.SRT.A.1** **Domains Examples:** SRT - Similarity, Right Triangles, and Trigonometry CO - Congruence GPE – Expressing Geometric Properties with Equations

Common Core State Standard	Aligned Activities	Aligned Text	Suggested Pacing
			3 WEEKS
G.GPE.B.4. *Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1, $\sqrt{3}$) lies on the circle centered at the origin and containing the point (0, 2).*			
G.GPE.B.5. Prove the slope criteria for parallel and perpendicular lines and uses them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).			
G.GPE.B.6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.			
G.GPE.B.7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.★			

G.C.A.1. Prove that all circles are similar.			
G.C.A.2. Identify and describe relationships among inscribed angles, radii, and chords. *Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*			
G.C.A.4. (+) Construct a tangent line from a point outside a given circle to the circle.			2 WEEKS
G.C.B.5. Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.			
G.GPE.A.1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.			
G.GPE.A.2. Derive the equation of the parabola given a focus and directrix.			

G.GMD.A.1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. *Use dissection arguments, Cavalieri's principle, and informal limit arguments.*				
G.GMD.A.3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems. ★				4 WEEKS
G.GMD.B.4. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects				
G.MG.A.1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*				
G.MG.A.2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).*				
G.MG.A.3 Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios.				

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