Yearlong Geometry
Pacing Guide

First 9 Weeks		Second 9 Weeks	
Standard	Days	Standard	Days
Build Relationships & Establish Routines Spend at least 5-15 minutes each day with number sense routines *this is to continue at least 3 times a week throughout the rest of the course* Spiral Reviews will be done daily throughout the course	3	**Unit 4: Triangle Properties** Unit story: Students use spatial reasoning to form conjectures about whether three given lengths can form a triangle. Exploration is used to determine the relationship between the sides and angles of a triangle. Contextual situations allow for students to see the relevance of these concepts. Standards taught to proficiency: G.TR.1 G.TR.1 The student will determine the relationships between the measures of angles and lengths of sides in triangles, including problems in context.	11
Unit 1: Venn Diagrams and Introduction to Logic Unit story: Venn diagrams and logic provide vehicles through which we can understand and model relationships and categorizations, including geometric relationships. These key components to geometrical thinking are revisited throughout the year when working with theorems, postulates, definitions, and examples. Standards: G.RLT.1 G.RLT.1 The student will translate logic statements, identify conditional statements, and use and interpret Venn diagrams	12	**Unit 5: Similarity & Congruence** Unit story: Students have been working with similar and congruent figures in various contexts since elementary school. This course provides for a formalized definition of congruent and similar figures. Through exploration, students discover some postulates about congruent and similar figures that allow for some shortcuts to prove whether two figures are congruent or similar. These concepts are used to solve abstract and contextual problems. Standards: G.TR.2, G.TR.3 G.TR.2 The student will, given information in the form of a figure or statement, prove and justify two triangles are congruent using direct and indirect proofs, and solve problems involving measured attributes of congruent triangles. G.TR.3 The student will, given information in the form of a figure or statement, prove and justify two triangles are similar using direct and indirect proofs, and solve problems, including those in context, involving measured attributes of similar triangles.	20
Unit 2: Parallel Lines Unit story: The angle relationships formed when parallel lines are cut by a transversal are foundational to the study of geometry. We will apply logic and deductive reasoning to develop the proofs of these angle relationships and explore, analyze, and use the relationships to solve problems. Standards: G.RLT.2 G.RLT.2 The student will analyze, prove, and justify the relationships of parallel lines cut by a transversal.	14	**Unit 6: Similarity & Right Triangle Ratios** Unit story: Having worked with similar triangles, students narrow their focus to similar right triangles. Beginning with special right triangles, students apply geometric concepts to determine relationships between the legs and hypotenuse. Expanding to all right triangles allows for the introduction of trigonometric functions. These ratios are used to solve problems. Standards: G.TR.4 G.TR.4 The student will model and solve problems, including those in context, involving trigonometry in right triangles and applications of the Pythagorean Theorem.	22
Unit 3: Symmetry and Transformations Unit story: Students have been working with symmetry and transformations since elementary school in both geometric and algebraic contexts. This unit provides an opportunity to formalize these ideas. Standards: G.RLT.3 G.RLT.3 The student will solve problems, including contextual problems, involving symmetry and transformation.	12		
Standards covered = 3	41	Standards covered = 3	42
Third 4.5 Weeks		**Fourth 4.5 Weeks**	

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Standards	Days	Standards	Days
Unit 7: Quadrilaterals & Polygons Unit story: Quadrilaterals and polygons have special characteristics. These characteristics are discovered through exploration. A Venn diagram showing the relationship between different quadrilaterals provides a great representation of which properties are true for which quadrilaterals. Standards taught to proficiency: G.PC.1; G.PC.2 G.PC.1 The student will prove and justify theorems and properties of quadrilaterals, and verify and use properties of quadrilaterals to solve problems, including the relationships between the sides, angles, and diagonals. G.PC.2 The student will verify relationships and solve problems involving the number of sides and measures of angles of convex polygons.	16	**Unit 9: Circles** Unit story: Students move their thinking from polygons to circles in the final unit. Students apply coordinate geometry when working with the equation of the circle. Circles are also considered outside of the coordinate plane when looking at the proportional relationships that exist between parts of the circle and the entire circle. Standards: G.PC.3, G.PC.4 G.PC.3 The student will solve problems, including those in context, by applying properties of circles. G.PC.4 The student will solve problems in the coordinate plane involving equations of circles.	24
Unit 8: Three-Dimensional Figures Unit story: Students begin with nets of solid figures and use these to develop formulas for surface area and lateral area. This thinking allows for students to calculate surface area and volume of composite figures. Students further expand on this thinking to determine the effect changing one or more dimensions of a figure has on any derived measures of the new figure. Standards: G.DF.1; G.DF.2 G.DF.1 The student will create models and solve problems, including those in context, involving surface area and volume of rectangular and triangular prisms, cylinders, cones, pyramids, and spheres. G.DF.2 The student will determine the effect of changing one or more dimensions of a threedimensional geometric figure and describe the relationship between the original and changed figure.	20		
		Review for SOL	18
Standards covered = 3	36	Standards covered = All	42
		Total =	161