Geometry Syllabus

Grading:
40% Measure of Progress
60% Mastery of Content

Topics that we will cover this year in Geometry:

Unit 1: Readiness for Geometry
- Naming angles, points, segments, and lines
- Angle and segment addition postulates
- Angle Pair Relationships

Unit 2: Logic
- Conditional Statements
- Symbolic Notation of Statements
- Counter-Examples
- Laws of Logic

Unit 3: Parallel Lines
- Parallel Angle Relationships
- Proving Parallel Lines
- Midpoint and Distance Formulas
- Slope
- Parallel and Perpendicular Slope

Unit 4: Congruent Triangles
- Corresponding Parts of Congruent Triangles are Congruent
- Congruence Theorems (SSS, SAS, ASA, AAS HL)

Unit 5: Triangle Inequalities
- Triangle Angle Sum
- Isosceles, Equilateral, and Right Triangles
- Pythagorean Theorem and Its Converse
- Triangle Inequality Theorem

Unit 6: Similar Triangles
- Ratios and Proportions
- Similar Figures
- Similar Triangle Theorems (AA, SAS, SSS)
- Scale Factors

Unit 7: Trigonometry
- Trig Ratios (SOHCAHTOA)
- Solving for Missing Sides
- Solving for Missing Angles
- Word Problems

Unit 8: Quadrilaterals
- Trapezoids, Kites, Parallelograms, Rhombuses, Rectangles, and Squares
- Proving Quadrilaterals

Unit 9: Polygons
- Identifying and Naming Polygons
- Convex and Concave
- Interior Angles of Polygons
- Exterior Angles of Polygons
- Tessellation

Unit 10: Equations of Circles
- Writing Algebraic Equations of Circles
- Graphing Circles from Equations
- Points on a Circle

Unit 11: Area and Circumference
- Central Angles and Intercepted Arcs
- Arc Length
- Sector Area

Unit 12: Surface Area and Volume of 3D Shapes
- Surface Area and Volume
- Ratios of Similar Shapes
- Changing an Attribute of a Shape

These units can fit in multiple places in the curriculum, so have been left separate for flexibility:

Unit A: Transformations
- Symmetry
- Rotations
- Translations
- Reflections
- Dilations

Unit B: Constructions with a Straight-Edge and Compass

Unit C: Secant, Tangents, and Chord Properties of Circles

Unit D: Special Right Triangles