Reavis High School
Geometry Curriculum Snapshot

Unit 1: Basic Geometric Figures and Understandings

13 Days	Students are introduced to the basic elements of geometry: points, lines, planes, segments, and angles. They will develop reasoning and observational skills that they will continue to use throughout the year. Students will sketch diagrams using points, lines, planes, and their intersections. Students will also measure segments, add their lengths, and be introduced to constructions. Angles will be measured and classified.

Unit 2: Segments and Angles

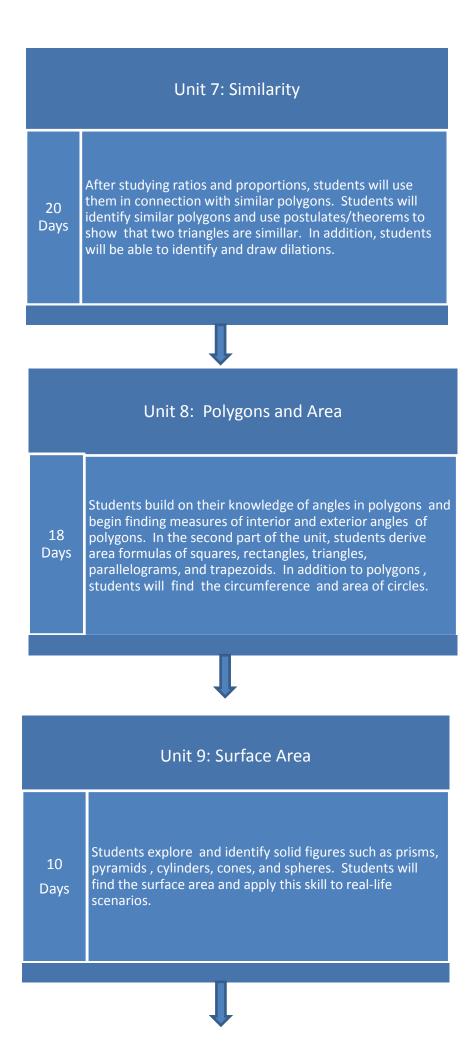| 26 Days	Students will be introduced to special angles and their properties. Students will use properties of equality/congruence to justify mathematical statements. Special attention will be given to segment and angle bisectors, identifying complementary, supplementary, vertical, and linear pair angles. In addition, the class will focus on parallel and perpendicular lines. Students will identify relationships among the angles formed by a transversal, especially when it cuts parallel lines. Students will use properties of parallel and perpendicular lines to find angle measures.

Unit 3: Triangle Relationships

17 Days	Students will learn to recognize a variety of triangles and to compute angle measures and side lengths. Several fundamental theorems related to triangles will be explored. Students will classify triangles according to angle measures and side lengths. They will also use the Triangle Sum Theorem, the Base Angles Theorem, the Pythagorean Theorem, and the Triangle Inequality Theorem. The relationship between the medians of a triangle and its centroid are discovered. Finally, students will find patterns in 45-45-90 and 30-60-90 special right triangles.

Unit 4: Translations/Rigid Motion

| 6 Days | Students will discover and use translations on the coordinate plane. They will also work with reflections and lines of symmetry using their prior knowledge of distance. Students will be introduced to rotational symmetry using angles and centers of rotation. |

Unit 5: Congruent Triangles

| 14 Days | Students will discover corresponding parts of congruent triangles and learn to show that two triangles are congruent using the SSS, SAS, ASA, AAS, and HL Congruence Theorems. They will use angle bisectors and perpendicular bisectors to compute angle measures and segment lengths in congruent triangles. |

Unit 6: Quadrilaterals

| 20 Days | Students will identify and classify polygons based on their properties. They will use the properties of parallelograms, rhombuses, rectangles, squares, and trapezoids to find their side lengths and angle measures. Additionally, students will investigate the midsegment of a trapezoid. |

Unit 7: Similarity

20 Days

After studying ratios and proportions, students will use them in connection with similar polygons. Students will identify similar polygons and use postulates/theorems to show that two triangles are simillar. In addition, students will be able to identify and draw dilations.

Unit 8: Polygons and Area

18 Days

Students build on their knowledge of angles in polygons and begin finding measures of interior and exterior angles of polygons. In the second part of the unit, students derive area formulas of squares, rectangles, triangles, parallelograms, and trapezoids. In addition to polygons, students will find the circumference and area of circles.

Unit 9: Surface Area

10 Days

Students explore and identify solid figures such as prisms, pyramids, cylinders, cones, and spheres. Students will find the surface area and apply this skill to real-life scenarios.

Unit 10: Volume

12 Days	Students develop an understanding of volume using solid figures such as prisms, pyramids , cylinders, cones, and spheres. Students will investigate the relationship between the volume of a pyramid versus a prism with the same base.

Unit 11: Circles

10 Days	Students begin identifying parts of a circle and learning their properties. Then, students will study and use properties involving tangents, secants, and chords of circles. The unit concludes with students investigating and solving problems involving central angles, inscribed angles, and inscribed polygons.