G Geometry

- **7.G.A Draw, construct, and describe geometrical figures and describe the relationships between them.**
    - o **7.G.A.1 Solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.**
        - Scale drawings: word problems (7-J.9)
        - Scale drawings: scale factor word problems (7-J.10)
        - Perimeter and area: changes in scale (7-AA.15)
    - o **7.G.A.2 Draw (freehand, with ruler and protractor, and with technology) two-dimensional geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.**
        - Triangle inequality (7-W.4)
        - Graph triangles and quadrilaterals (7-W.8)
    - o **7.G.A.3 Describe the shape of the two-dimensional face of the figure that results from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.**
        - Cross sections of three-dimensional figures (7-Z.4)
- **7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.**
    - o **7.G.B.4 Circles and measurement:**
        - **7.G.B.4.a Know that a circle is a two-dimensional shape created by connecting all of the points equidistant from a fixed point called the center of the circle.**
        - **7.G.B.4.b Understand and describe the relationships among the radius, diameter, circumference and circumference of a circle.**
        - **7.G.B.4.c Understand and describe the relationship among the radius, diameter, and area of a circle.**
        - **7.G.B.4.d Know the formulas for the area and circumference of a circle and use them to solve problems.**
            - Area of circles (7-AA.5)
            - Circles: word problems (7-AA.7)
        - **7.G.B.4.e Give an informal derivation of the relationship between the circumference and area of a circle.**
    - o **7.G.B.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write simple equations and use them to solve for an unknown angle in a figure.**
        - Identify complementary, supplementary, vertical, and adjacent angles (7-W.16)
        - Find measures of complementary, supplementary, vertical, and adjacent angles (7-W.17)
    - o **7.G.B.6 Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.**
        - Area of rectangles and parallelograms (7-AA.2)