

**Content Standard A5
Seventh Grade Level
Geometry**

Students understand mathematical facts, concepts, principles, and theories. They construct, draw, measure, transform, compare, visualize, classify, and analyze the relationships among geometric figures.

State Mathematics Performance Standards 6 th -8 th	KGBSD Performance Standards	State Grade Level Expectations (GLE's)
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<p>M5.3.1 Identify, classify, compare, and sketch regular and irregular polygons.</p> <p>M5.3.2 Model, identify, draw, and describe 3-dimensional figures including tetrahedrons, dodecahedrons, triangular prisms, and rectangular prisms.</p> <p>M5.3.3 Apply the properties of equality and proportionality to solve problems involving congruent or similar shapes.</p> <p>M5.3.4 Estimate and determine volume and surface areas of solid figures using manipulatives and formulas; estimate and find circumferences and areas of circles.</p> <p>M5.3.5 Draw and describe the results of transformations including translations (slides), rotations (turns), reflections (flips), and dilations (shrinking or enlarging).</p>	<p>1.1 Identify, compare, classify and sketch regular and irregular polygons</p> <p>2.1 Identify and describe triangular and rectangular prisms and pyramids</p> <p>3.1 Use proportions to make a scale drawing of a real or planned object</p> <p>4.1 Calculate areas and perimeters of plane figures and volume of rectangular prisms and surface area of rectangular prisms. Find the circumference of a circle</p> <p>5.1 Draw and describe the results of transformations including translations (slides), rotations (turns), reflections (flips), and dilations (shrinking or enlarging)</p>	<p><u>Geometry: Geometric Relationship</u> The student demonstrates an understanding of geometric relationships by</p> <p>[7] G-1 using the attributes and properties of polygons (diagonals, number of sides and angles) to identify and classify regular or irregular polygons (M5.3.1)</p> <p>[7] G-2 using the attributes and properties of prisms (vertices, length and alignment of edges, shape and number of bases, shape of faces) to identify and describe triangular or rectangular pyramids (M5.3.2)</p> <p><u>Geometry: Transformation of Shapes</u> The student demonstrates conceptual understanding of similarity, congruence, symmetry, or transformations of shapes by</p> <p>[7] G-3 using a scale factor to solve problems involving similar shapes (e.g., scale drawings, maps) (M5.3.3)</p> <p>[7] G-4 [drawing or describing the results of applying transformations such as translations, rotations, reflections, or dilations to figures L] (M5.3.5)</p> <p><u>Geometry: Perimeter, Area, and Volume</u> The student solves problems (including real-world situations) by</p> <p>[7] G-5 determining the volume of cubes and rectangular prisms (M5.3.4)</p>

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State Mathematics Performance Standards 6 th -8 th	KGBSD Performance Standards	State Grade Level Expectations (GLE's)
<p>M5.3.6 Use coordinate geometry to represent and interpret relationships defined by equations and formulas including distance and midpoint.</p> <p>M5.3.7 Draw, measure, and construct geometric figures including perpendicular bisectors, polygons with given dimensions and angles, circles with given dimensions, perpendicular and parallel lines.</p>	<p>6.1 Graph ordered pairs on a coordinate grid and identify points on a grid using an ordered pair</p> <p>7.1 Draw, measure, and construct geometric figures including perpendicular bisectors, polygons with given dimensions and angles, circles with given dimensions, perpendicular and parallel lines</p>	<p>[7] G-6 determining the surface area of rectangular prisms (M5.3.4)</p> <p>[7] G-7 determining the circumference of a circle (M5.3.4)</p> <p><u>Geometry: Position and Direction</u> The student demonstrates understanding of position and direction by</p> <p>[7] G-8 graphing or identifying values of variables on a coordinate grid (M5.3.6)</p> <p><u>Geometry: Construction</u> The student demonstrates a conceptual understanding of geometric drawings or constructions by</p> <p>[7] G-9 [drawing or measuring polygons with given dimensions and angles or circles with given dimensions L] (M5.3.7)</p>