

MEASUREMENT & GEOMETRY STANDARDS

3 rd Grade (16 – 25%)	4 th Grade (12 – 18%)	5 th Grade (15 – 23%)
<p>1.1 Choose the appropriate tools and units (metric and U.S.) and estimate and measure the length, liquid volume, and weight/mass of given objects. (1)</p> <p>1.2 Estimate or determine the area and volume of solid figures by covering them with squares or by counting the number of cubes that would fill them. (3)</p> <p>1.3 Find the perimeter of a polygon with integer sides. (3)</p> <p>1.4 Carry out simple unit conversions within a system of measurement (e.g., centimeters and meters, hours and minutes). (1)</p> <p>2.1 Identify, describe, and classify polygons (including pentagons, hexagons, and octagons). (2)</p> <p>2.2 Identify attributes of triangles (e.g., two equal sides for the isosceles triangle, three equal sides for the equilateral triangle, right angle for the right triangle). (2)</p> <p>2.3 Identify attributes of quadrilaterals (e.g., parallel sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square). (2)</p> <p>2.4 Identify right angles in geometric figures or in appropriate objects and determine whether other angles are greater or less than a right angle. (2/3)</p> <p>2.5 Identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, and cylinder). (2/3)</p> <p>2.6 Identify common solid objects that are the components needed to make a more complex solid object. (2/3)</p>	<p>1.1 Measure the area of rectangular shapes by using appropriate units, such as square centimeter (cm²), square meter (m²), square kilometer (km²), square inch (in²), square yard (yd²), or square mile (mi²). (1/2)</p> <p>1.2 Recognize that rectangles that have the same area can have different perimeters. (1/2)</p> <p>1.3 Understand that rectangles that have the same perimeter can have different areas. (1/2)</p> <p>1.4 Understand and use formulas to solve problems involving perimeters and areas of rectangles and squares. Use those formulas to find the areas of more complex figures by dividing the figures into basic shapes. (1/2)</p> <p>2.1 Draw the points corresponding to linear relationships on graph paper (e.g., draw 10 points on the graph of the equation $y = 3x$ and connect them by using a straight line). (2)</p> <p>2.2 Understand that the length of a horizontal line segment equals the difference of the x-coordinates. (2)</p> <p>2.3 Understand that the length of a vertical line segment equals the difference of the y-coordinates. (2)</p> <p>3.1 Identify lines that are parallel and perpendicular. (1)</p> <p>3.2 Identify the radius and diameter of a circle. (1)</p> <p>3.3 Identify congruent figures. (1/3)</p> <p>3.4 Identify figures that have bilateral and rotational symmetry. (1/3)</p> <p>3.5 Know the definitions of a right angle, an acute angle, and an obtuse angle. Understand that 90°, 180°, 270°, and 360° are associated, respectively, with $1/4$, $1/2$, $3/4$, and full turns. (1/3)</p> <p>3.6 Visualize, describe, and make models of geometric solids (e.g., prisms, pyramids) in terms of the number and shape of faces, edges, and vertices; interpret two-dimensional representations of three-dimensional objects; and draw patterns (of faces) for a solid that, when cut and folded, will make a model of the solid. (1/3)</p> <p>3.7 Know the definitions of different triangles (e.g., equilateral, isosceles, scalene) and identify their attributes. (1/3)</p> <p>3.8 Know the definition of different quadrilaterals (e.g., rhombus, square, rectangle, parallelogram, trapezoid). (1/3)</p>	<p>1.1 Derive and use the formula for the area of a triangle and of a parallelogram by comparing it with the formula for the area of a rectangle (i.e., two of the same triangles make a parallelogram with twice the area; a parallelogram is compared with a rectangle of the same area by cutting and pasting a right triangle on the parallelogram). (2½)</p> <p>1.2 Construct a cube and rectangular box from two-dimensional patterns and use these patterns to compute the surface area for these objects. (1/2)</p> <p>1.3 Understand the concept of volume and use the appropriate units in common measuring systems (i.e., cubic centimeter [cm³], cubic meter [m³], cubic inch [in³], cubic yard [yd³]) to compute the volume of rectangular solids. (3)</p> <p>1.4 Differentiate between, and use appropriate units of measures for, two- and three-dimensional objects (i.e., find the perimeter, area, volume). (1)</p> <p>2.1 Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools (e.g., straightedge, ruler, compass, protractor, drawing software). (3)</p> <p>2.2 Know that the sum of the angles of any triangle is 180° and the sum of the angles of any quadrilateral is 360° and use this information to solve problems. (4)</p> <p>2.3 Visualize and draw two-dimensional views of three-dimensional objects made from rectangular solids. (1)</p>