

**CURRICULUM MAP
GEOMETRY**

FIRST QUARTER AUGUST/SEPTEMBER/OCTOBER	SECOND QUARTER NOVEMBER/DECEMBER/JANUARY
<p>Number, Number Sense and Operations Standard 1. Connect physical, verbal and symbolic representations of irrational numbers; e.g. construct square root of 2 as a hypotenuse or on a number line. 2. Explain the meaning the meaning of the nth root. 4. Approximate the nth root of a given number greater than zero between consecutive integers when n is an integer; e.g. the 4th root of 50 is between 2 and 3 No Benchmark 3. Use factorial notation and computations to represent and solve problem situations involving arrangements.</p> <p>Measurement Standard No Benchmarks 1. Explain how a small error in measurement may lead to a large error in calculated results 2. Calculate relative error. 3. Explain the difference between absolute error and relative error in measurement. 4. Give examples of how the same absolute error can be problematic in one situation but not in another; e.g. compare “accurate to the nearest foot” when measuring the height of a person versus when measuring the height of a mountain.</p> <p>Geometry and Spatial Sense Standard A. Formally define geometric figures. 2. Recognize and explain the necessity for certain terms to remain undefined, such as point line and plane. 3. Make, test and establish the validity of conjectures about geometric properties and relationships using counterexample, inductive and deductive reasoning, and paragraph and two column proof, including: C. prove theorems involving properties of lines, angles, triangles, and quadrilaterals</p> <p>Patterns, Functions, and Algebra Standard 1. Define a function formally and with $f(x)$ notation 9. Recognize and explain that the slopes of parallel lines are equal and the slopes of perpendicular lines are negative reciprocals.</p> <p style="text-align: center;">CHAPTER 1,2,3</p>	<p>Geometry and Spatial Sense Standard 4. Construct right triangles, equilateral, triangles, parallelograms, trapezoids, rectangles, rhombuses, squares, and kites, using compass and straightedge or dynamic geometry software. 5. Construct congruent or similar figures using tools, such as compass, straightedge, and protractor or dynamic geometry software. 3. Make, test and establish the validity of conjectures about geometric properties and relationships using counterexample, inductive and deductive reasoning, and paragraph and two column proof, including: C. prove theorems involving properties of lines, angles, triangles, and quadrilaterals D. test a conjecture using basic constructions made with a compass and straightedge or technology.</p> <p>Patterns, Functions, and Algebra Standard 3. Solve simple linear and nonlinear equations and inequalities having square roots as coefficients and solutions. 1. Solve equations and inequalities having rational expressions as coefficients and solutions. 1. Solve systems of linear inequalities. 11. Solve real world problems that can be modeled, using systems of linear equations and inequalities.</p> <p style="text-align: center;">CHAPTER 4,5,6</p>

Power Standards are in italics

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THIRD QUARTER JANUARY/FEBRUARY/MARCH	FOURTH QUARTER APRIL/MAY
<p>Geometry and Spatial Sense Standard</p> <p>6. Identify the reflection and rotation symmetries of two and three dimensional figures.</p> <p>7. Perform reflections and rotations using compass and straightedge constructions and dynamic geometry software</p> <p>8. Derive coordinate rules for translations, reflections, and rotations of geometric figures in the coordinate plane.</p> <p>9. Show and describe the results of combinations of translations, reflections and rotations,(compositions.); e.g. perform compositions and specify the result of a composition as the outcome of a single motion, when applicable.</p> <p>B. prove theorems involving triangles similarity and congruence</p> <p>3. Make, test and establish the validity of conjectures about geometric properties and relationships using counterexample, inductive and deductive reasoning, and paragraph and two column proof, including:</p> <p>A. prove the Pythagorean theorem</p> <p>B. prove theorems involving triangles similarity and congruence.</p> <p>Patterns, Functions, and Algebra Standard</p> <p>1. Describe and compare characteristics of the following families of functions; square root, cubic, absolute value, and basic trigonometric functions; e.g. general shape, possible number of roots domain and range.</p> <p>2. Use algebraic representations and functions to describe and generalize geometric properties and relationships.</p> <p>10. Solve real world problems that can be modeled using linear, quadratic, exponential, or square root functions.</p> <p>12. Describe the relationship between the slope of a line through the origin and the tangent function of the angle created by the line and the positive x-axis.</p> <p style="text-align: center;">CHAPTER 7,8,9</p>	<p>Geometry and Spatial Sense Standard</p> <p>3. Make, test and establish the validity of conjectures about geometric properties and relationships using counterexample, inductive and deductive reasoning, and paragraph and two column proof, including</p> <p>10. Solve problems involving chords, radii, and arcs within the same circle.</p> <p>Measurement Standard</p> <p>5. Determine the measures of central and inscribes angles and their associated major and minor arcs.</p> <p>Patterns, Functions, and Algebra Standard</p> <p>1. Solve equations and formulas for a specific variable; e.g express the base of a triangle in terms of the area and height.</p> <p>8. Graph the quadratic relationship that defines circles.</p> <p>Data Analysis and Probability Standard</p> <p>2. Represent and analyze bivariate date using appropriate graphical displays [scatter plots, parallel box-and-whisker plots, histograms with more than one set of data. Tables, charts. Spreadsheets] with and without technology.</p> <p>3. Display bivariate date where at least one variable is categorical.</p> <p>4. Identify outliers on a data display; e..g, use the interquartile range to identify outliers on a box-and-whisker plot.</p> <p>1. Describe measures of center and the range verbally, graphically and algebraically.</p> <p>6. Interpret the relationship between two variables using multiple graphical displays and statistical measures; e.g scatter plots, parallel box-and -whisker plots, and measure of center and spread.</p> <p>5. Provide examples and explain how a statistic may or may not be an attribute of the entire population; e.g intentional or unintentional bias my be present.</p> <p>7. Model problems dealing with uncertainly with area models [geometric probability]</p> <p>8. Differentiate and explain the relationships between the probability of an event and the odds of an event and compute one given the other,.</p> <p style="text-align: center;">CHAPTER 10,11,12</p>

4/27/07

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