

Mathematics – Kindergarten Curriculum Map

	Numbers, Number Sense, & Computation	Patterns, Functions, and Algebra	Measurement	Spatial Relationships, Geometry, and Logic
Standards	1.K.3 1.K.4 1.K.5	2.K.1 2.K.3	3.K.1 3.K.4 3.K.6	4.K.1 4.K.2 4.K.3 4.K.4 4.K.9
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Recognize, read and write numbers from 0-10. 2. Identify ordinal positions 1st to 3rd. 3. Match the number of objects in a set to the correct numeral 0-10. 4. Recognize relationships of more than, less than, and equal to. 5. Count to 20 by demonstrating one-to-one correspondence using objects 6. Use concrete objects to model simple addition and subtraction. 	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Identify attributes used to sort objects. 2. Identify and create sets of objects with unequal amounts, describing them as greater than or less than. 	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <ol style="list-style-type: none"> 1. Compare, order, and describe objects by size. 2. Identify and sort pennies, nickels, and dimes. 3. Recite in order the days of the week. 	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Identify two-dimensional shapes (circles, triangles, rectangles including squares) regardless of orientation. 2. Demonstrate an understanding of relative position words, including before/after, far/near, and over/under, to place objects. 3. Identify two-dimensional figures (windows are shaped like rectangles) as they appear in the environment. 4. Identify three-dimensional figures in the environment. 5. Sort and classify objects by color and shape. 6. Put events in a logical sequence.

Standards	Data Analysis 5.K.1			
<p>Concepts</p>	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Collect, organize, and record data using objects and pictures. 2. Represent data in a variety of ways in response to questions posed by teachers. 			

**Mathematics – Grade One
Curriculum Map**

	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra	Measurement
Standards	1.1.1 1.1.2 1.1.3 1.1.4	1.1.5 1.1.6 1.1.8	2.1.1 2.1.2 2.1.3	3.1.1 3.1.2 3.1.4 3.1.6
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Identify, model, read, and write place value positions of 1's and 10's. 2. Identify the value of a given digit in the 1's and 10's place. 3. Identify and model a whole. 4. Identify and model $\frac{1}{2}$ as two equal parts of a whole or a set of objects. 5. Read, write, compare, and order numbers from 0-100. 6. Identify ordinal positions first to tenth. 7. Read and write number words to ten. 8. Create, compare, and describe sets of objects and numbers from 0-100 as greater than, less than or equal to ($>$, $<$, $=$). 9. Use number patterns and models to count by 2's, 5's and 10's to 100. 	<ol style="list-style-type: none"> 10. Identify and model basic addition facts (sums to 10) and the corresponding subtraction facts. 11. Estimate the number of objects in a set to 10 and verify by counting. 12. Demonstrate the joining and separating of sets with 20 or fewer objects. 13. Model the meaning of addition and subtraction in a variety of ways including the comparison of sets using objects, pictorial representations, and symbols. 14. Use mathematical vocabulary and symbols to describe addition, subtraction and equality. 	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Recognize, describe, label, extend, and create simple repeating patterns using symbols, objects, and manipulatives. 2. Recognize that unknowns in an addition or subtraction equation represent a missing value that will make the statement true. 3. Create, compare, and describe sets of objects as greater than, less than, or equal to. 	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <ol style="list-style-type: none"> 1. Compare, order, describe, and represent objects by length and weight. 2. Compare and measure length and weight using non-standard measurement. 3. Determine the value of any set of pennies, nickels, and dimes. 4. Recite in order the months of the year. 5. Use a calendar to identify days, weeks, months, and a year. 6. Read time to the nearest hour.

	Spatial Relationships, Geometry, and Logic	Data Analysis		
Standards	4.1.1 4.1.2 4.1.3 4.1.4 4.1.9	5.1.1		
Concepts	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Name, sort, and sketch two-dimensional shapes (circles, triangles, rectangles including squares) regardless of orientation. 2. Demonstrate an understanding of position words, including down/up, left/right, top/bottom, and between/middle, by describing the relative location of objects. 3. Identify and copy two-dimensional designs that contain a line of symmetry. 4. Identify and name three-dimensional figures in the environment. 5. Sort and classify objects by size or thickness. 6. Identify what comes next in a step-by-step story or event sequence. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Collect, organize, and record data in response to questions posed by teacher and/or students. 2. Use tally marks to represent data. 		

**Mathematics – Grade Two
Curriculum Map**

Standards	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra
Standards	<p>1.2.1 (I) 1.2.2 (E) 1.2.3 (I)</p>	<p>1.2.4 (W) 1.2.5 (I) 1.2.6 (I) 1.2.7 (I)</p>	<p>1.2.8 (I)</p>	<p>2.2.1 (I) 2.2.2 (I) 2.2.3 (I)</p>
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Identify, use, and model place value positions of 1's, 10's and 100's. 2. Identify the value of a given digit in the 1's, 10's and 100's place. 3. Identify equal parts of a whole. 4. Identify and model the unit fractions $\frac{1}{2}$ and $\frac{1}{4}$ as equal parts of a whole or sets of objects. 5. Read, write, compare, and order numbers from 0 - 999. 6. Identify ordinal positions first to twentieth. 7. Read and write number words to 20. 8. Create, compare, and describe sets of objects and numbers from 0 - 999 as greater than, less than, or equal to ($>$, $<$, $=$). 	<ol style="list-style-type: none"> 1. Use number patterns to skip count. 2. Identify and model basic addition facts (sums to 18) and the corresponding subtraction facts. 3. Immediately recall basic addition facts (sums to 18) and the corresponding subtraction facts. 4. Estimate the number of objects in a set to 20 and verify by counting. 5. Add and subtract one- and two-digit numbers without regrouping. 6. Generate and solve one-step addition and subtraction problems based on practical situations. 7. Model addition and subtraction in a variety of ways using pictorial representations and symbols to illustrate subtraction of sets, comparison of sets, and missing addends. 	<p>8. Reinforce the use of mathematical vocabulary and symbols to describe addition, subtraction, and equality.</p>	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Recognize, describe, extend, and create repeating and increasing patterns using symbols, objects, and manipulatives. 2. Use patterns and their extensions to solve problems. 3. Model, explain, and identify missing operations and missing numbers in open number sentences involving number facts in addition and subtraction. 4. Complete number sentences with the appropriate words and symbols ($+$, $-$, $=$). 5. Represent mathematical situations using numbers, symbols, and words.

	Measurement	Spatial Relationships, Geometry, and Logic	Data Analysis	
Standards	3.2.1 (I) 3.2.2 (I) 3.2.4 (E) 3.2.6 (E)	4.2.1 (E) 4.2.2 (I) 4.2.3 (I) 4.2.4 (I) 4.2.9 (I)	5.2.1 (I) 5.2.5 (I)	
Concepts	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <ol style="list-style-type: none"> 1. Compare, order, and describe objects by various measurable attributes for length, weight, and temperature. 2. Compare objects to standard whole units to find objects that are greater than, less than, and/or equal to a given unit. 3. Determine the value of any given set of coins. 4. Use decimals to show money amounts. 5. Recognize equivalent combinations of coins. 6. Read time to the nearest half hour and quarter hour. 7. Use elapsed time in one hour increments, beginning on the hour, to determine start, end, and elapsed time. 8. Recognize that there are 12 months in 1 year, 7 days in 1 week, and 24 hours in 1 day. 	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Describe, sketch, and compare two-dimensional shapes regardless of orientation. 2. Identify congruent and similar shapes (circles, triangles, and rectangles including squares). 3. Identify figures with symmetry as they appear in the environment. 4. Identify, name, sort, and describe two- and three-dimensional geometric figures and objects including circle/sphere and square/cube. 5. Sort and classify objects by two or more attributes. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Collect, record, and classify data in response to questions posed by teacher and/or students. 2. Use tables, pictographs, and bar graphs to represent data. 3. Use informal concepts of probability (certain and impossible) to make predictions about future events. 	

Mathematics – Grade Three Curriculum Map

	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra	Measurement
Standards	1.3.1 1.3.2 1.3.3 1.3.4 (I/L)	1.3.5 1.3.6 1.3.7 1.3.8	2.3.1 2.3.2 2.3.3	3.3.1 3.3.2 3.3.4 3.3.6
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Identify, use, and model place value positions of 1's, 10's, 100's and 1000's. 2. Identify the value of a given digit in the 1's, 10's, 100's and 1000's place. 3. Identify and model the unit fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{6}$, and $\frac{1}{8}$ as equal parts of a whole or sets of objects. 4. Read and write unit fractions with numbers and words. 5. Read, write, compare, and order numbers from 0 – 9,999. 6. Read and write number words to 100. 7. Model and explain multiplication and division as skip counting patterns. 8. Model and explain multiplication and division as repeated addition or subtraction. 	<ol style="list-style-type: none"> 9. Immediately recall and use addition and subtraction facts. 10. Immediately recall multiplication facts (products to 81). 11. Estimate the number of objects in a set using various techniques. 12. Add and subtract two- and three-digit numbers with and without regrouping. 13. Add and subtract decimals using money as a model. 14. Generate and solve two-step addition and subtraction problems and one-step multiplication problems based on practical situations. 15. Model addition, subtraction, multiplication, and division in a variety of ways. 16. Use mathematical vocabulary and symbols to describe multiplication and division. 	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Recognize, describe, and create patterns using objects and numbers found in tables, number charts, and charts. 2. Record results of patterns created using manipulatives, pictures, and numeric representations and describe how they are extended. 3. Model, explain, and solve open number sentences involving addition, subtraction, and multiplication facts. 4. Use variables and open sentences to express relationships 5. Complete number sentences with the appropriate words and symbols (+, -, >, <, =). 	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <ol style="list-style-type: none"> 1. Compare, order, and describe objects by various measurable attributes for area and volume/capacity. 2. Select and use appropriate units of measure. 3. Measure to a required degree of accuracy (to the nearest $\frac{1}{2}$ unit). 4. Determine possible combinations of coins and bills to equal given amounts. 5. Read, write, and use money notation. 6. Recognize equivalent relationships between and among bills and coins. 7. Tell time to the nearest minute, using analog and digital clocks. 8. Use elapsed time in half-hour increments, beginning on the hour or half-hour, to determine start, end, and elapsed time. 9. Recognize that there are 60 minutes in 1 hour.

	Spatial Relationships, Geometry, and Logic	Data Analysis		
Standards	4.3.1 4.3.2 4.3.3 4.3.4 4.3.6 4.3.9	5.3.1 5.3.5		
Concepts	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> Describe, sketch, compare, and contrast plane geometric figures Demonstrate and describe the transformational motions of geometric figures (translation/slide, reflection/flip, and rotation/turn). Create two-dimensional designs that contain a line of symmetry. Compare, contrast, sketch, model, and build two- and three-dimensional geometric figures and objects. Identify, draw, and describe horizontal, vertical, and oblique lines. Use the quantifiers all, some, and none to describe the characteristics of a set. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> Pose questions that can be used to guide data collection, organization, and representation. Use graphical representations, including number lines, frequency tables, and pictographs to represent data. Use informal concepts of probability (certain, likely, unlikely, impossible) to make predictions about future events. 		

Mathematics – Grade Four Curriculum Map

	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra	Measurement
Standards	1.4.1 1.4.2 1.4.3 1.4.4 (I/L)	1.4.5 1.4.6 1.4.7 1.4.8	2.4.1 2.4.2 2.4.3	3.4.1 3.4.2 3.4.4 3.4.6
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Identify and use place value positions of whole numbers to one million. 2. Identify fractions and compare fractions with like denominators using models, drawings, and numbers. 3. Read, write, compare, and order whole numbers. 4. Read and write number words. 5. Count by multiples of a given number. 6. Explain relationships between skip counting, repeated addition, and multiples. 7. Immediately recall and use multiplication and corresponding division facts (products to 144). 	<ol style="list-style-type: none"> 8. Estimate to determine the reasonableness of an answer in mathematical and practical situations. 9. Add and subtract multi-digit numbers. 10. Multiply and divide multi-digit numbers by a one-digit whole number with regrouping, including monetary amounts as decimals. 11. Generate and solve addition, subtraction, multiplication, and division problems using whole numbers in practical situations. 	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Identify, describe, and represent patterns and relationships in the number system, including arithmetic and geometric sequences. 2. Model, explain, and solve open number sentences involving addition, subtraction, multiplication, and division. 3. Select the solution to an equation from a given set of numbers. 4. Complete number sentences with the appropriate words and symbols (+, -, ×, ÷, >, <, =). 	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <ol style="list-style-type: none"> 1. Estimate and convert units of measure for length, area, and weight within the same measurement system (customary and metric). 2. Estimate temperature in practical situations. 3. Measure length, area, temperature, and weight to a required degree of accuracy in customary and metric systems. 4. Define and determine the perimeter of polygons and the area of rectangles, including squares. 5. Determine totals for monetary amounts in practical situations. 6. Use money notation to add and subtract given monetary amounts. 7. Use A.M. and P.M. appropriately in describing time. 8. Use elapsed time in quarter-hour increments, beginning on the quarter-hour, to determine start, end, and elapsed time. 9. Recognize the number of weeks in a year, days in a year, and days in a month.

	Spatial Relationships, Geometry, and Logic	Data Analysis		
Standards	4.4.1 4.4.2 4.4.3 4.4.4 4.4.6 4.4.9	5.4.1 5.4.5		
Concepts	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Identify, draw, and classify angles, including straight, right, obtuse, and acute. 2. Identify shapes that are congruent, similar, and/or symmetrical using a variety of methods including transformational motions. 3. Identify coordinates for a given point in the first quadrant. 4. Locate points of given coordinates on a grid in the first quadrant. 5. Identify, describe, and classify two- and three-dimensional figures by relevant properties including the number of vertices, edges, and faces using models. 6. Identify, draw, label, and describe points, line segments, rays, and angles. 7. Use the connectors and, or, and not to describe the members of a set. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Pose questions that can be used to guide the collection of categorical and numerical data. 2. Organize and represent data using a variety of graphical representations including frequency tables and line plots. 3. Model and compute range. 4. Model the measures of central tendency for mode and median. 5. Interpret data and make predictions using frequency tables and line plots. 6. Conduct simple probability experiments using concrete materials. 7. Represent the results of simple probability experiments as fractions to make predictions about future events. 		

Mathematics – Grade Five Curriculum Map

Standards	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra	Measurement
<p>Concepts</p>	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Identify and use place value positions of whole numbers and decimals to hundredths. 2. Add and subtract fractions with like denominators using models, drawings, and numbers. 3. Compare fractions with unlike denominators using models and drawings, and by finding common denominators. 4. Identify, model, and compare improper fractions and mixed numbers. 5. Read, write, compare, and order integers in mathematical and practical situations. 6. Use multiples of 10 to expand knowledge of basic multiplication and division facts. 7. Estimate to determine the reasonableness of an answer in mathematical and practical situations involving decimals. 	<ol style="list-style-type: none"> 8. Add and subtract decimals. 9. Multiply and divide decimals by whole numbers in problems representing practical situations 10. Use order of operations to evaluate expressions with whole numbers. 11. Generate and solve addition, subtraction, multiplication, and division problems using whole numbers and decimals in practical situations. 	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Identify, describe, and represent patterns and relationships in the number system, including triangular numbers and perfect squares. 2. Find possible solutions to an inequality involving a variable using whole numbers as a replacement set. 3. Solve equations with whole numbers using a variety of methods, including inverse operations, mental math, and guess and check. 4. Complete number sentences with the appropriate words and symbols including \geq, \leq and \neq. 	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <ol style="list-style-type: none"> 1. Estimate and convert units of measure for weight and volume/capacity within the same measurement system (customary and metric). 2. Measure volume and weight to a required degree of accuracy in the customary and metric systems. 3. Describe the difference between perimeter and area, including the difference in units of measure. 4. Determine equivalent periods of time, including relationships between and among seconds, minutes, hours, days, months, and years.

	Spatial Relationships, Geometry, and Logic	Data Analysis		
Standards	4.5.1 4.5.2 4.5.3 4.5.4 4.5.6 4.5.9	5.5.1 5.5.2 5.5.3 5.5.4 5.5.5 5.5.6		
Concepts	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Identify, classify, compare, and draw triangles and quadrilaterals based on their properties. 2. Identify and draw circles and parts of circles, describing the relationships between the various parts. 3. Represent concepts of congruency, similarity, and/or symmetry using a variety of methods including dilation (enlargement/reduction) and transformational motions. 4. Graph coordinates representing geometric shapes in the first quadrant. 5. Predict and describe the effects of combining, dividing, and changing shapes into other shapes. 6. Identify, draw, label, and describe planes, parallel lines, intersecting lines, and perpendicular lines. 7. Describe characteristics of right, acute, obtuse, scalene, equilateral, and isosceles triangles. 8. Represent relationships using Venn diagrams. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Pose questions that can be used to guide the collection of categorical and numerical data. 2. Organize and represent data using a variety of graphical representations including stem and leaf plots and histograms. 3. Compute range. 4. Model and compute the measures of central tendency for mean, median, and mode. 5. Interpret data and make predictions using stem-and-leaf plots and histograms. 6. Represent and solve problems involving combinations using a variety of methods. 7. Conduct simple probability experiments using concrete materials. 8. Represent the results of simple probability experiments as decimals to make predictions about future events. 9. Select an appropriate type of graph to accurately represent the data and justify the selection 		

Mathematics – Grade Sixth Curriculum Map

	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra	Measurement
Standards	1.6.1 1.6.2 1.6.3 1.6.4 1.6.5 1.6.6	1.6.7 1.6.8	2.6.1 2.6.2 2.6.3	3.6.1 3.6.2 3.6.4 3.6.6
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Identify and use place value positions in the thousandths. 2. Add and subtract fractions with unlike denominators 3. Multiply and divide with fractions using models, drawings, and numbers. 4. Use models to translate among fractions, decimals, and percents 5. Read, write, compare, and order groups of fractions, groups of decimals, and groups of percents. 6. Identify equivalent expressions between and among fractions, decimals, and percents. 7. Estimate using fractions, decimals, and percents. 8. Use estimation strategies in mathematical and practical situations. 9. Calculate using fractions, decimals, and percents in mathematical situations. 	<ol style="list-style-type: none"> 10. Use order of operations to evaluate expressions with integers. 11. Use the concepts of number theory, including prime and composite numbers, factors, multiples, and the rules of divisibility to solve problems. 12. Use and create tables and charts to extend a pattern in order to describe a rule for input/output tables and to find missing terms in a sequence. 	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Use and create tables and charts to extend a pattern in order to describe a rule for input/output tables and to find missing terms in a sequence. 2. Evaluate formulas and algebraic expressions using whole number values. 3. Solve and graphically represent equations and simple inequalities in one variable. 4. Write simple expressions and equations using variables to represent mathematical situations. 5. When given a rule relating two variables, create a table and represent the ordered pairs on a coordinate plane. 	<ol style="list-style-type: none"> 1. Estimate and compare corresponding unit of measure for temperature, length, and weight/mass between customary and metric systems. 2. Given two measurements of the same object, select the one that is more precise. 3. Explain how the size of the unit of measure used effects precision. 4. Select, model, and apply formulas to find the perimeter, circumference, and area of plane figures. 5. Compare and use unit cost in practical situations 6. Write and apply ratios in mathematical and practical problems involving measurement and monetary conversions. 7. Use equivalent periods of time to solve practical problems.

	Spatial Relationships, Geometry, and Logic	Spatial Relationships, Geometry, and Logic	Data Analysis	Data Analysis
Standards	4.6.1 4.6.2 4.6.3 4.6.4 4.6.5 4.6.6	4.6.7 4.6.8 4.6.9	5.6.1 5.6.2 5.6.3 5.6.4 5.6.5	5.6.6
Concepts	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Measure angles using a protractor. 2. Identify, classify, compare and draw regular and irregular quadrilaterals. 3. Identify, draw, and use central angles to represent fractions of a circle. 4. Using a coordinate plane, identify and locate points. 5. Graph coordinates representing geometric shapes in all four quadrants on a coordinate plane. 6. Make a model of a three-dimensional prism from a two-dimensional drawing. 7. Make a two-dimensional drawing of a three dimensional prism. 8. Model slope (pitch, angle of inclination) using concrete objects and practical situations. 	<ol style="list-style-type: none"> 9. Draw, identify, and find measures of complementary and supplementary angles using arithmetic and geometric methods. 10. Determine the measure of missing angles of triangles based on Triangle Sum Theorem. 11. Construct circles, angles, and triangles based on given measurements using a variety of methods and tools including compass, straight edge, paper folding, and technology. 12. Identify counterexamples to disprove a conditional statement. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Pose questions that guide the collection of data. 2. Organize and represent data using a variety of graphical representations including circle graphs and scatter plots. 3. Select and apply the measures of central tendency to describe data. 4. Analyze the effect a change of graph type has on the interpretation of a set of data. 5. Interpret data and make predictions using circle graphs and scatter plots. 6. Find the number of outcomes for a specific event by constructing sample spaces and tree diagrams. 7. Find experimental probability using concrete materials. 8. Represent the results of simple probability experiments as fractions, decimals, percents, and ratios to make predictions about future events 	<ol style="list-style-type: none"> 9. Analyze various representations of a set of data to draw conclusions and make predictions. 10. Describe the limitations of various graphical representations.

**Mathematics – Grade Seventh
Curriculum Map**

	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra	Measurement
Standards	1.7.1 1.7.2 1.7.3 1.7.4 (I/L)	1.7.5 1.7.6 1.7.7 1.7.8	2.7.1 2.7.2 2.7.3	3.7.1 3.7.2 3.7.4 3.7.6
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <p>Identify and use place value in mathematical and practical situations.</p> <p>Write, identify, and use powers of 10 from 10^3 through 10^6.</p> <p>Translate among fractions, decimals, and percents, including fractional percents.</p> <p>Compare and order a combination of rational numbers, including fractions, decimals, percents, and integers in mathematical and practical situations.</p> <p>Identify absolute values of integers.</p> <p>Generate a reasonable estimate for a computation using a variety of methods.</p> <p>Select and round to the appropriate significant digit.</p> <p>Calculate with integers and other rational numbers to solve mathematical and practical situations.</p> <p>Use order of operations to evaluate expressions and solve one-step equations (containing rational numbers).</p>	<p>Identify and apply the distributive, commutative, and associative properties of rational numbers to solve problems.</p>	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <p>Use and create tables, charts, and graphs to extend a pattern in order to describe a linear rule, including integer values.</p> <p>Evaluate formulas and algebraic expressions using integer values.</p> <p>Solve and graphically represent equations and simple inequalities in one variable with integer solutions.</p> <p>Simplify algebraic expressions by combining like terms.</p> <p>Generate and graph a set of ordered pairs to represent a linear equation.</p> <p>Identify linear equations and inequalities.</p> <p>Model and solve equations using concrete and visual representations.</p>	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <p>Estimate and compare corresponding units of measure for area and volume/capacity between customary and metric systems.</p> <p>Given a measurement, identify the greatest possible error.</p> <p>Select, model, and apply formulas to find the volume and surface area of solid figures.</p> <p>Calculate simple interest in monetary problems.</p> <p>Write and apply proportions to solve mathematical and practical problems involving measurement and monetary conversions</p> <p>Use elapsed time to solve practical problems.</p>

	Spatial Relationships, Geometry, and Logic	Spatial Relationships, Geometry, and Logic	Data Analysis	
Standards	4.7.1 4.7.2 4.7.3 4.7.4 4.7.6	4.7.8 4.7.9	5.7.1 5.7.2 5.7.3 5.7.4 5.7.5 5.7.6	
Concepts	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Identify, classify, compare, and draw regular and irregular polygons. 2. Find and verify the sum of the measures of interior angles of triangles and quadrilaterals. 2. Make scale drawings using ratios and proportions. 3. Demonstrate translation, reflection, and rotation using coordinate geometry and models. 4. Describe the location of the original figure and its transformation on a coordinate plane. 5. Make a model of a three-dimensional figure from a two-dimensional drawing. 6. Make a two-dimensional drawing of a three-dimensional figure. 7. Determine slope of a line, midpoint of a segment, and the horizontal and vertical distance between two points using coordinate geometry. 8. Describe the geometric relationships of parallel lines, perpendicular lines, triangles, quadrilaterals and bisectors. 9. Model the Pythagorean Theorem and solve for the hypotenuse. 	<ol style="list-style-type: none"> 10. Construct and identify congruent angles, parallel lines, and perpendicular lines. 11. Make and test conjectures to explain observed mathematical relationships and to develop logical arguments to justify conclusions. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Formulate questions that guide the collection of data. 2. Organize, display, and read data using the appropriate graphical representations (with and without technology). 3. Interpret graphical representations of data to describe patterns, trends, and data distribution. 4. Analyze the effect a change of scale will have on statistical charts and graphs 5. Find the number of permutations possible for an event in mathematical and practical situations. 6. Find the theoretical probability of an event using different counting methods including sample spaces and compare that probability with experimental results. 7. Represent the probability of an event as a number between 0 and 1. 8. Interpolate and extrapolate from data to make predictions for a given set of data. 	

**Mathematics – Grade Eighth
Curriculum Map**

	Numbers, Number Sense, & Computation	Numbers, Number Sense, & Computation Cont.	Patterns, Functions, and Algebra	Measurement
Standards	1.8.1 1.8.2 1.8.3 1.8.5 1.8.6	1.8.7 1.8.8	2.8.1 2.8.2 2.8.3 2.8.5 2.8.6	3.8.1 3.8.2 3.8.3 3.8.4 3.8.5
Concepts	<p>Students will accurately calculate and use estimation techniques and determine reasonableness of their answers:</p> <ol style="list-style-type: none"> 1. Represent numbers using scientific notation in mathematical and practical situations. 2. Translate among fractions, decimals, and percents, including percents greater than 100 and percents less than 1. 3. Explain and use the relationship among equivalent representations of rational numbers in mathematical and practical situations. 4. Compare and order real numbers, including powers of whole numbers in mathematical and practical situations. 5. Identify perfect squares to 225 and their corresponding square roots. 6. Use estimation strategies to determine the reasonableness of an answer in mathematical and practical situations. 	<ol style="list-style-type: none"> 7. Calculate with real numbers to solve mathematical and practical situations. 8. Use order of operations to solve equations in the real number system. 9. Identify and apply the identity property, inverse property, and the absolute value of real numbers to solve problems. 	<p>Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations:</p> <ol style="list-style-type: none"> 1. Find the missing term in a numerical sequence or a pictorial representation of a sequence. 2. Evaluate formulas and algebraic expressions using rational numbers (with and without technology). 3. Solve and graphically represent equations and inequalities in one variable, including absolute value. 4. Add and subtract binomials 5. Identify, model, describe, and evaluate functions (with and without technology). 6. Translate among verbal descriptions, graphic, tabular and algebraic representations of mathematical situations (with and without technology). 	<p>Students will use appropriate tools and techniques of measurement to determine measurements:</p> <ol style="list-style-type: none"> 1. Estimate and convert units of measure for mass and capacity within the same measurement system (customary and metric). 2. Demonstrate an understanding of precision, error, and tolerance when using appropriate measurement tools 3. Identify how changes in a dimension of a figure effect changes in its perimeter, area and volume. 4. Calculate percents in monetary problems. 5. Apply ratios and proportions to calculate rates and solve mathematical and practical problems using indirect measurement.

	Spatial Relationships, Geometry, and Logic	Data Analysis		
Standards	4.8.1 4.8.2 4.8.3 4.8.5 4.8.6 4.8.7 4.8.8 4.8.9	5.8.1 5.8.2 5.8.3 5.8.4 5.8.5 5.8.6		
Concepts	<p>Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics:</p> <ol style="list-style-type: none"> 1. Find and use the sum of the measures of interior angles of polygons. 2. Apply the properties of equality and proportionality to congruent or similar shapes. 3. Demonstrate dilation using coordinate geometry and models. 4. Describe the relationship between an original figure and its transformational or dilation. 5. Make a model of a three-dimensional figure from a two-dimensional drawing. 	<p>Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability:</p> <ol style="list-style-type: none"> 1. Formulate questions and design a study that guides the collection of data. 2. Organize, display, and read data including box and whisker plots (with and without technology). 3. Select and apply appropriate measures of data distribution, using interquartile range and central tendency. 4. Evaluate statistical arguments that are based on data analysis for accuracy and validity. 5. Find the number of combinations possible in mathematical and practical situations. 6. Distinguish between permutations and combinations 7. Differentiate between the probability of an event and the odds of an event. 8. Formulate reasonable inferences and predictions through interpolation and extrapolation of data to solve practical problems. 		