

**Rankin County School District  
2006 Curriculum Map - Math**

**Pisgah Zone - Technology and Calculator Use**

<b>Pisgah Zone - Technology and Calculator Use</b>				
<b>Technology</b>	<b>K - 2</b>	<b>3 - 4</b>	<b>5 - 6</b>	<b>7 - 8</b>
	Basic computer use (mouse, clicking, turn on/off)	Begin typing tutor	Continue typing tutor	Improve typing speed (type all keys without looking; 35 wpm)
	Basic word processing (open document, type letters/numbers, print, save)	Begin publishing (use word processor to type a report and letter)	Fundamental publishing (use word processor to make simple book or collection of writings, newsletters)	Intermediate publishing (book newspaper, magazine, website, science lab reports)
	Use CD-ROM (insert CD, open program, quit, eject)	Begin digital art/drawing (create more complex drawings)	Fundamental digital art/ drawing (use paint program to create original art, use many tools/colors/ techniques)	Intermediate digital art/drawing (use of paint program, digital photo editing, scanning)
	Basic drawing (choose tool, move mouse, click and drag)	Begin use of internet to find specific web pages and information	Guided Internet practice (search for information, go to given address, online projects/discussions)	Guided and independent Internet practice (searching, online projects/discussions)
			Begin spreadsheet use	Improved spreadsheet use
			Layout design on given topics on posters (words, artwork, layout)	Layout design (display board, brochure, presentation)
			Begin Powerpoint use for creating presentations (with digital pictures and web clip art)	Intermediate use of Powerpoint to design presentation on content knowledge
			Begin use of digital peripherals (digital camera, digital video, scanning)	Intermediate use of digital peripherals (lab probes, digital camera, digital video, scanning, image editing – crop, size, enhance)
			Begin use of digital video (camera shot options, set direction/ design, basic script writing, simple recording)	

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<b>Calculator Use</b>	<b>K - 2</b>	<b>3 - 4</b>	<b>5 - 6</b>	<b>7 - 8</b>
	<b>4-function calculator: In LEARNING CENTERS:</b>	<b>4-function calculator:</b>	<b>4-function calculator:</b>	<b>Fraction Calculator:</b>
	Show relationship between number symbols and counting (skip count)	Show greater than/less than, before/after	Explore integers by skip counting numbers less than zero	Explore large numbers (millions, billions)
	Play matching games to display numbers on calculator as described by teacher	Extend patterns with predicting and calculator recursive feature	Develop multiplication algorithms (extensive use of skip counting)	Solve geometry formulas using real world values (i.e. 'ugly numbers')
	Problem solve using number families	Estimate reasonableness of answers	Play 'broken key' games	Explore probability and statistics concepts
		Perform operations with large numbers that correspond to real world situations	Identify number patterns (extend and analyze)	Explore algebraic reasoning concepts
		Explore multiplication through skip counting applications	Problem solve – number sense, magic squares, 'arrange the digits', etc.	Convert measurements and solve measurement formulas
			Calculators should <b>enhance</b> understanding of concepts and procedures and <b>should not substitute for a student's understanding</b> of quantitative concepts or proficiency in basic computations.	Problem solve – extend patterns, estimate answers, determine reasonableness of answers
			<b>Instruction should focus on student ability to know when and how to use a calculator. Effective use of calculators includes estimating and checking reasonableness of answers.</b>	Determine fraction algorithms
				<b>Graphing Calculator (selected Pre-Algebra topics)</b>
			Explore slope, measurement, geometry, graphing	

**Rankin County School District  
2006 Curriculum Map - Math**

<b>Pisgah Zone - Number and Operations</b>									
	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Pre-Algebra</b>
<b>Counting and Ordering</b>	Count forward to 20 and backward from 10.	Count forward and backward 0 to 100.	Identify, model and write numbers to 1,000 in word form, standard form, and expanded form.	Read, model, write numbers up to five-digits in word, standard form.	Read and write seven-digit whole numbers, decimal numbers through hundredths, and fractions.	Read and write nine-digit whole numbers, decimal numbers through thousandths, and fractions.	Read, write, and round decimal numbers to the nearest ten-thousandths.		
	Count and model a set of objects 0 to 20.	Compare two-digit numbers using the terms "more," "less," "greater than," "less than," "equal to," and "almost." Explain reasoning.	Compare three-digit numbers using the terms "before," "after," and "between."	Order and compare five-digit whole numbers, decimal numbers through tenths, and benchmark fractions (1/2, 1/3, 1/4, 1/8, 1/10, 3/4, 1/5).	Order and compare seven-digit whole numbers, decimal numbers through hundredths, and fractions with denominators of twelve or less.	Compare and order nine-digit whole numbers, decimals to the nearest thousandth, like and unlike fractions, and mixed numerals using appropriate symbols. Explain rationale.	Compare and order rational numbers using =, <, and >.		
		Sequence two-digit numbers using the terms "before," "after," and "in between" using two-digit numbers.	Compare and order three-digit numbers utilizing <, >, and =. Explain the reasoning.	Compare and order five-digit numbers using <, >, and =. Explain reasoning.					
<b>Place Value Standard and Expanded Forms</b>	Recognize and write numbers 0 to 20.	Associate names and numerals that accompany two-digit numbers. Write numbers in expanded form.	Identify the value of a given digit in a three-digit number.	Identify the value of a given digit in a five-digit number.	Identify the value of a given digit in a seven-digit number.	Identify the value of a given digit in a nine-digit number.	Write numbers in scientific notation.	Convert between standard form and scientific notation.	Convert between standard form and scientific notation in real-world situations. Multiply and divide numbers written in scientific notation.
		Identify place value of a given digit in a two- and three-digit number.	Identify place value of a given digit in a four-digit number.	Write numbers up to five-digits in expanded form.	Write seven-digit numbers in word, standard and expanded form.	Read and write numbers in word form, standard form and expanded notation (addition and multiplication) through hundred millions.	Use patterns to develop and illustrate the concept of exponents.		Use the rules of exponents to multiply or divide like bases.
							Write and compare whole numbers in exponential form.		Use a diagram and set notation to describe and classify real numbers and their subsets.

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	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Pre-Algebra</b>
<b>Word Problems</b>		Model, draw and discuss representations of story problems. Write number sentences to accompany them using addition and subtraction.	Solve one- and two- setp addition and/or subtraction problems by drawing, discussing, modeling, and writing explanations.	Apply problem solving techniques to solve one- or two-step problems involving addition, subtraction, multiplication or division.	Apply problem-solving techniques to solve one- and two-step problems involving the basic operations.	Solve multi-step word problems to include money using the four basic operations with computation and/or estimation.	Estimate, solve, and compare solutions to one- and two-step problems involving addition, subtraction, multiplication, and division of fractions and mixed numbers in real-life situations.	Solve real-life problems involving addition, subtraction, multiplication, and division of rational numbers (whole numbers, fractions, decimals, and mixed numbers).	Solve real-life problems involving addition, subtraction, multiplication, and division of rational numbers (i.e., integers, decimals, fractions, and mixed-numbers).
		Explore problems that involve a missing addend, subtrahend, or minuend.				Incorporate appropriate technology and manipulatives to explore basic operations of whole numbers, fractions, mixed numbers, and decimals.	Estimate and solve one- and two-step problems involving addition, subtraction, multiplication, and division of decimals in real-life situations.	Solve real-life problems involving sales tax, discount, and simple interest.	Write, solve, and apply real-life problems using percents with and without calculators.
<b>Estimation and Rounding</b>	Estimate quantities fewer than or equal to 20.	Estimate quantities fewer than or equal to 100.	Round two-digit whole numbers to the nearest ten.	Round numbers to the nearest thousand. Explain reasoning.	Estimate sums, differences, products, and quotients using a variety of techniques. Determine whether estimated answers are reasonable.	Use estimation to determine the reasonableness of results in a variety of situations.	Use estimation to determine the reasonableness of results in a variety of situations.	Use estimation to determine the reasonableness of results in a variety of situations.	Use estimation to determine the reasonableness of results in a variety of situations.
			Round three-digit whole numbers to the nearest hundred.	Use mental math strategies to solve problems.	Estimate and use mental computation to solve real life problems where exact answers are not required.	Estimate and use mental computation to solve real-life problems where exact answers are not required.	Estimate and use mental computation to solve real life problems where exact answers are not required.	Estimate and use mental computation to solve real life problems where exact answers are not required.	Estimate and use mental computation to solve real life problems where exact answers are not required.
			Estimate quantities less than 1000. Check to determine reasonableness of results.		Round whole numbers to one hundred thousand and round decimal numbers through hundredths. Explain reasoning.		Round decimal quotients to the nearest whole number, tenths, and hundredths.		

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**Pisgah Zone - Number and Operations**

<b>Pisgah Zone - Number and Operations</b>									
	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Pre-Algebra</b>
<b>Basic Operations</b>	Compute addition and subtraction of numbers through 10 with manipulatives.	Develop strategies (such as doubles, plus/minus 1 and fast tens) to find the sums and differences of basic facts 0 to 18 with and without manipulatives.	Add and subtract basic facts 0 to 18.	Construct fact families for the basic operations.					
		Demonstrate various concepts of addition and subtraction with and without manipulatives. Write equations to accompany them.	Solve one- and two-step addition and/or subtraction problems by drawing, discussing, modeling, and writing explanations.						
			Solve problems to find missing addends, minuends and subtrahends.	Choose appropriate operational signs to complete number sentences.					
			Multiply facts 0 to 5.	Compute multiplication facts 1 to 9.	Model and identify factors and multiples of whole numbers.	Use divisibility rules of 2, 3, 5, 6, and 10 to identify factors and multiples of whole numbers to 500.	Determine the Greatest Common Factor (GCF) and Least Common Multiple (LCM) of a given set of numbers.	Find greatest common factor (GCF) and least common multiple (LCM).	
		Given a group of objects, determine the best method of skip counting (2's, 5's, and 10's).	Skip count by 2's, 3's, 5's, and 10's to a given total. Explain the counting pattern.	Add (up to three addends) and subtract five-digit numbers with and without regrouping.	Add and subtract up to seven-digit whole numbers with and without regrouping.	Identify ratios; write ratios as fractions; identify equivalent ratios	Write ratios as fractions, rates, percent; identify equivalent ratios	Write ratios as fractions, rates, percent; identify equivalent ratios	
		Find the sums of 3 single digit addends (for example: $3 + 6 + 2 = 11$ ).	Add and subtract two- and three-digit whole numbers with and without regrouping.	Multiply up to three-digit factors by one-digit factors.	Multiply whole numbers by one- and two- digit factors.	Multiply up to four-digit factors by two-digit factors to include whole, decimal numbers.	Write ratios as proportions; solve proportional reasoning problems	Write ratios as proportions; solve proportional reasoning problems	
		Find the sums and differences of two digit whole numbers without regrouping (for example: $21 + 34 = 55$ or $58 - 32 = 26$ ).	Model multiplication problems by drawing, writing explanations and using repeated addition.	Divide three-digit numbers by one-digit divisors with and without remainders.	Divide four-digit dividends by one- and two-digit divisors, with and without remainders.	Divide by two-digit whole-number divisors w/ , w/o remainders.			
			Model division with the concept of "fair shares" of sets.		Write ratios as proportions; solve proportional reasoning problems	Write ratios as proportions; solve proportional reasoning problems			

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	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Pre-Algebra</b>
<b>Fractions and Decimals and Percents (Rational Numbers)</b>	Demonstrate an understanding of fractional concepts including the vocabulary (fraction, whole, all, part, some, and none).	Compare a whole to fractional parts by dividing a whole into fractional parts (1/2, 1/4, 1/3) using drawings and manipulatives.	Identify, discuss, and draw representations of fractions (halves, thirds, fourths, fifths, sixths, etc).	Recognize, draw, model and order fractions with fourths, fifths, sixths, eighths.	Identify, draw, and model equivalent fractions with denominators that are factors of twelve.	Model, identify, and write equivalent fractions including improper fractions and mixed numerals.			Add, subtract, multiply, and divide rational numbers (i.e., integers, decimals, fractions, and mixed numbers) with and without calculators.
		Understand and represent fractional parts of a group or set with models, drawings and numerical reps.	Identify, discuss, and draw representations of fractions (halves, thirds, fourths, fifths, sixths, etc).	Recognize, draw, and model equivalent fractions.	Represent, draw, and explain the relationship between fractions and decimals using real-life objects.	Model and show relationships among common fractions, decimals, and percents (10%, 20%, 25%, and 50%).	Add, subtract, multiply, and divide fractions and mixed numbers. Express in simplest form.	Convert among decimals, fractions, mixed numbers, and percents.	Classify, compare, and order rational numbers (i.e., integers, decimals, fractions, and mixed numbers).
				Add and subtract fractions with like denominators.	Add and subtract decimals through hundredths to include money amounts.	Add, subtract, and multiply decimal numbers up to three decimal places and divide decimal numbers by two-digit whole number divisors.	Convert among fractions, decimals, and percents.	Solve problems using decimals, fractions, and/or percents.	Find commission, rates of commission, discount, sale price, sales tax, and simple interest, and apply to real-world situations.
				Model, identify, and explain decimals to hundredths.		Add, subtract, multiply, and divide like/unlike fractions and mixed numerals.	Use models to illustrate percent.	Determine percent of increase and decrease.	Solve proportions, including unit rate, scale, and measurement.
				Add and subtract numbers with decimals to hundredths.	Add and subtract fractions with like and unlike denominators.	Model and distinguish between prime and composite numbers, factors & common factors including GCF, multiples & common multiples (LCM).	Divide whole or decimal dividends by whole or decimal divisors in problem solving situations and explain the meaning of both the quotient and the remainder in terms of the problem.	Use proportions and equations to solve problems with rate, base and part.	Apply proportional reasoning to real-world problems.
						Develop the terminology relating to percent and compute percentages of 10, 20, 25, and 50 percent.			Evaluate and estimate powers, square roots, and cube roots with and without calculators.
						Determine unit rate and unit price.	Calculate unit rates.	Calculate and apply unit rates to real-life situations.	Solve real-life problems involving sales tax, discount, and simple interest.
					Convert mixed numbers and improper fractions.	Convert mixed numbers and improper fractions.			

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<b>Money</b>	Sort and name coins (penny, nickel, dime, quarter) by physical characteristics.	Identify the value of coins (penny, nickel, dime, quarter).	Identify and apply patterns to count pennies, nickels, dimes, quarters, and half dollars.	Estimate and add amounts of money less than \$1000 represented with decimal notation.					
		Find equal money amounts with different coin combinations up to \$.25.	Determine and compare the value of money up to \$5.00. Select and use the appropriate symbols for dollars and cents.	Estimate and subtract amounts of money from \$100.00 or less.					
		Introduce the value of mixed coins up to \$1.00.	Find equal money amounts with different coin combinations to \$1.00.						
		Determine the value of like coins up to \$1.00.	Make change from \$1.00.	Count change from \$5.00 or less.	Count change from \$10.00.				
<b>Order of Operations</b>							Solve problems using order of operations with whole numbers, including parentheses and exponents.	Use the order of operations to simplify and/or evaluate numerical expressions (including exponents, integers, and grouping symbols).	Simplify and evaluate expressions using order of operations and justify solutions.

Rankin County School District  
2006 Curriculum Map - Math

Pisgah Zone - Algebraic Reasoning									
	K	1	2	3	4	5	6	7	Pre-Algebra
Patterns	Sort a set of objects by attributes including color, size, and shape.	Represent and explain visual, physical and auditory patterns using various methods and manipulatives	Extend repeating patterns. Explain how patterns are continued.	Recognize, describe, and identify a pattern unit within a given pattern in order to extend patterns to a given position.	Recognize, describe, extend a given pattern to an identified ordinal position.	Determine a given pattern and extend to an identified ordinal position.	Use patterns and sequences to investigate and draw conclusions in real-life situations.	Recognize, describe, and state the rule of generalized numerical and geometric patterns using tables, graphs, words and symbols.	Use a diagram and set notation to describe and classify real numbers and their subsets.
	Recognize & identify patterns	Identify, describe, extend, create, and record growing and repeating patterns using a variety of materials and procedures.	Extend growing patterns. Explain how patterns are continued (including 2's, 3's, etc.).	Demonstrate and explain numerical patterns.	Analyze given number pattern & generate a similar one	Analyze more complex number patterns & generate similar ones; explain the rule for the pattern (written format)	Use patterns to develop and illustrate the concept of exponents.		
	Reproduce & describe visual, auditory, and physical patterns	Using a pattern rule, translate patterns from one pattern representation to another.	Identify and describe qualitative changes (such as temperature changes: getting hotter).						
	Model, extend, describe using a wide variety of materials and activities.	Extend a pattern to a given ordinal position.	Identify and describe quantitative changes (such as the						
		Formulate & explain patterns of addition and							
	Intrepret and describe number patterns using a								
Function Tables					Construct and complete input/output tables with whole numbers using basic operations.	Construct with a given rule and complete input/output function tables using basic operations with decimals, fractions, and whole numbers.	Complete a function table based on a given rule (and vice versa) using whole numbers, decimals, and fractions.	Complete a function table based on a given rule and vice versa.	Using function tables. Graph simple linear equations and common non-linear equations (i.e. $y=x$ ).
Algebraic expressions & equations				Determine the value of variables to solve number sentences.	Determine the value of variables in a whole number sentence (i.e., equations and inequalities).	Determine the value of variables in addition, subtraction, multiplication, and division in equations and word problems.	Solve one-step equations involving addition and subtraction with rational numbers and solutions.	Write and solve one-step equations that represent real-world problems using the properties of equality.	Translate real-life situations into algebraic expressions, equations, or inequalities, and vice versa.
								Translate between simple algebraic expressions & verbal phrases	Simplify and evaluate numerical and algebraic expressions and justify solutions.
								Formulate an original real-world situation from a given equation.	Solve and check one and two-step equations and inequalities in one-variable.
									Graph solutions to inequalities on a number line.

Rankin County School District  
2006 Curriculum Map - Math

Pisgah Zone - Algebraic Reasoning									
	K	1	2	3	4	5	6	7	Pre-Algebra
Polynomials									Classify and determine degree of a polynomial and arrange polynomials in ascending or descending order of a variable.
									Use manipulative models to add, subtract, and multiply monomials and polynomials.
									Use the rules of exponents to multiply and divide monomials and to multiply monomials by polynomials.
Properties		Demonstrate that addition and subtraction are inverse operations.	Analyze the inverse relationship of addition and subtraction in fact families.	Using appropriate manipulatives, model and identify the following properties: Zero property of multiplication; commutative property of addition and multiplication; associative property of addition and multiplication; identity properties of addition and multiplication.	Demonstrate and explain the properties of the basic operations using numbers and symbols: Zero property of multiplication; commutative property of addition and multiplication; associative property of addition and multiplication; identity properties of addition and multiplication.	Apply and explain the properties of basic operations using variables: Zero property of multiplication; commutative property of addition and multiplication; associative property of addition and multiplication; identity properties of addition and multiplication.	Identify and demonstrate the following: Zero property of multiplication; inverse operations of addition, subtraction, multiplication, and division; commutative and associative property of addition and multiplication; identity properties of addition and multiplication;	Identify and use the commutative, associative, distributive, and identity properties with and without variables. <sup>17</sup>	Identify and apply properties of real numbers with an emphasis on distributive property.
				Model, analyze, and identify the inverse operations of addition/subtraction and multiplication/division, including fact families.	Demonstrate and explain the inverse operations of addition/subtraction and multiplication/division.	Apply and explain inverse operations of addition/subtraction and multiplication/division.		Use the inverse relationship to develop the concept of roots and perfect squares.	Given a linear graph, identify its slope as positive, negative, undefined, or zero, and interpret slope as rate of change.
									Determine slope and y-intercept from a graph and/or equation in y-intercept form. Graph a line given its slope and y-intercept.
Integers							Model and write integers including opposites and apply to real-world situations.	Model and write integers including opposites and absolute value and apply to real-world situations.	Add, subtract, multiply, and divide rational numbers (i.e., integers, decimals, fractions, and mixed numbers) with and without calculators.
							Compare and order integers and apply integers to real life situations (for example: temperature).	Compare and order integers and apply integers to real life situations (for example: temperature).	Classify, compare, and order rational numbers (i.e., integers, decimals, fractions, and mixed numbers).
							Illustrate addition and subtraction of integers with and without the use manipulatives.	Illustrate addition and subtraction of integers with and without the use manipulatives. Relate the illustrations and/or manipulatives to the algorithm for adding and subtracting integers.	

**Rankin County School District  
2006 Curriculum Map - Math**

**Pisgah Zone - Geometry**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Polygons</b>	Trace, cut, and manipulate shapes.	Recognize and identify two-dimensional/plane figures such as the triangle, square, rectangle, circle, trapezoid, hexagon, and rhombus.	Recognize and identify regular polygons according to the number of sides (quadrilateral, rhombus, square, triangle, trapezoid, rectangle, pentagon, hexagon, octagon, and decagon).	Create and name polygons up to ten sides.	Identify, describe, classify, and compare two- and three- dimensional geometric shapes, figures, and models using specific terminology.		Construct polygons, circles, and semi-circles from written or oral descriptions.	
	Recognize open and closed figures.		Recognize that different shapes can be made from plane figures when they are cut up and rearranged (for example: a square can be cut into two triangles).			Classify and compare the properties of quadrilaterals	Classify and compare the properties of quadrilateral (including parallel sides, congruent sides, and angles).	Classify and compare the properties of polygons (including parallel sides, congruent sides, and angles).
	Recognize and identify two-dimensional/plane figures such as square, rectangle, triangle, and circle.		Compare and contrast the characteristics of shapes using various resources (for example: manipulatives and multimedia).					
<b>Similar and Congruent</b>	Understand and apply symmetrical concepts through real-world models and artwork.	Identify similar shapes and explore congruent shapes.	Identify symmetrical objects and their lines of symmetry (horizontal, vertical, diagonal, and point).	Identify and create congruent and similar figures.	Identify and create congruent and similar figures.	Identify, compare, and classify polygons to include congruent, similar, regular, and irregular shapes.	Identify and justify the congruence and/or the similarity of two-dimensional figures using measurement and proportional reasoning.	Determine if figures are congruent or similar.
<b>Transformations</b>		Identify symmetrical objects and their lines of symmetry (horizontal, vertical and diagonal).	Recognize transformations using the terms translations, rotations, and reflections (slides, turns, and flips respectively).	Classify, describe, and model the results of translations, reflections, and rotations (slides, flips, and turns) on figures.	Identify, model, and extend figure patterns using the terms translations, rotations, and reflections (slides, turns and flips).	Use transformations (rotations, reflections, and translations) of two-dimensional figures to tessellate on a plane.	Compare, classify, and construct transformations (reflections, translations, and rotations).	Perform transformations on two-dimensional figures using the coordinate plane.
<b>3-D</b>	Investigate and explore three-dimensional/solid figures such as cube, rectangular prism, cone, sphere, pyramid, and cylinder.	Identify and classify three-dimensional/solid figures (cube, rectangular prism, sphere, cone, pyramid, and cylinder) according to their characteristics.	Compare and contrast the relationships between plane and solid geometric shapes (for example: the cube has square faces).	Identify faces, vertices, and edges of solid geometric shapes	Explore the relationship between the numbers of faces, vertices, and edges of solid geometric shapes	Utilize appropriate terminology and manipulatives to classify two and three- dimensional geometric figures using the attributes of faces, vertices, and edges.	Construct three-dimensional figures using manipulative materials. Compare and contrast vertices, faces and edges of objects.	Identify three-dimensional figures and describe their faces, vertices and edges from a two-dimensional drawing.

**Rankin County School District  
2006 Curriculum Map - Math**

**Pisgah Zone - Geometry**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Lines and Angles</b>				Identify, compare, and contrast between parallel, intersecting, and perpendicular lines.	Identify and compare points, lines (including parallel, perpendicular, and intersecting), line segments, and rays.	Draw, label, describe, classify, and identify points, lines (parallel, intersecting and perpendicular), line segments, and rays. Use appropriate symbols.	Construct and classify parallel and perpendicular lines.	
				Identify, compare, and contrast right, acute and obtuse angles.	Identify, model, and compare right, acute, and obtuse angles.	Draw, label, and classify angles, quadrilaterals, and triangles based on their properties; Estimate the measure of angles and verify with a protractor.	Construct, classify and measure angles.	Define and determine complementary and supplementary angles.
<b>Graphing</b>	Demonstrate an understanding of positional words, (for example: in, above, below, over, under, beside, etc.).	Model, name, and follow directions using positional words: "over," "under," "beside," "in front of," "above," "below," "in," and "near to".	Locate and describe points in a coordinate system, such as maps.	Locate ordered pairs in the first quadrant coordinate plane.	Plot and locate ordered pairs in the first quadrant coordinate plane.	Create a simple design in the first quadrant of the coordinate plane, listing each ordered pair.	Plot and read points on a coordinate plane.	Graph ordered pairs, which when connected will create a given geometric shape on a coordinate plane.
				Identify points on a number line.	Locate numbers such as decimals and whole numbers on a number line.	Locate numbers such as fractions, decimals and whole numbers on a number line.	Locate numbers such as pi, fractions, decimals and whole numbers on a number line.	Identify x-axis, y-axis, origin, and quadrants of the coordinate plane.
<b>Pythagorean Theorem</b>								Use manipulatives to analyze the relationship between the lengths of the legs of a right triangle to the length of the hypotenuse to verify the Pythagorean theorem.
								Use the Pythagorean theorem to determine if a triangle is a right triangle.

Rankin County School District  
2006 Curriculum Map - Math

Pre-Algebra
Classify polygons by sides and angles and find the missing vertex angle measure.
Apply congruent and similar figures to real-world problems.
Use two-dimensional representations of three-dimensional objects to describe objects from various perspectives.

Rankin County School District  
2006 Curriculum Map - Math

<b>Pre-Algebra</b>
Locate and identify angles formed by parallel lines cut by a transversal (e.g., adjacent, vertical, complementary, supplementary, corresponding, alternate interior, and alternate exterior).
Find missing angle measurements for parallel lines cut by a transversal(s).
Use and apply the Pythagorean theorem to solve problems, with and without a calculator.

**Rankin County School District  
2006 Curriculum Map - Math**

**Pisgah Zone - Measurement**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Measure and Convert</b>	Measure the length, weight, and capacity of objects using nonstandard units.	Compare weight of objects using a balance scale with and without nonstandard units.	Measure a given object to the nearest one inch.	Using various types of instruments, estimate, read and measure: <ul style="list-style-type: none"> <li>length in centimeters, meters;</li> <li>length in inches, feet, yards;</li> <li>length to the nearest half-inch;</li> <li>weight in gm and kg;</li> <li>weight in ounces and pounds;</li> <li>capacity in liters;</li> <li>capacity in cups, pints, quarts, and gallons;</li> <li>time to nearest minute; and</li> <li>temperature in Celsius and Fahrenheit.</li> </ul>	Measure a given object to the nearest centimeter and fourth of an inch.	Measure length to nearest millimeter in the metric system and one-eighth inch in the English system.	Measure length to the nearest one-sixteenth inch and nearest millimeter. Create a monster and display in Monster Mash Bash.	Measure the dimensions of given items using standard (English and metric) measurements.
	Investigate volume (for example: holds more, less, or about the same) using different shaped containers and materials.	Use nonstandard units (paper clips, unifix cubes, etc.) and standard units (inches, centimeters) to measure length.	Estimate and measure length, weight, and capacity using standard units of measurement (inch, foot, yard, centimeter, meter, ounce, pound, gram, kilogram, cup, pint, quart, gallon and liter).		Select, use, and compare length, weight/mass, capacity, and volume across the appropriate standard (English and metric) system of measurement: <ul style="list-style-type: none"> <li>Centimeters and inches;</li> <li>Meters and yards;</li> <li>Kilograms and pounds; and</li> <li>Liters and quarts.</li> </ul>	Determine and compare appropriate units for measurement of weight/mass, capacity, temperature, length, distance and volume, in English and metric systems and time in real life situations.	Select and apply appropriate units for measuring length, mass, volume, and temperature in the standard (English and metric) systems.	
			Select appropriate tools to measure length, capacity, and weight.			Convert units within a given measurement system to include length, capacity, weight/mass, and volume.	Convert units within a measurement system and apply to real-life situations.	Convert, perform basic operations, and solve word problems using standard (English and metric) measurements.
	Model and discuss terms of comparison (for example: more/less, taller/shorter, heavier/lighter, and before/after).	Compare and estimate capacity of various containers in nonstandard units.	Categorize measurement units according to length, weight, and capacity, and justify (oral/written) the selection of a specific unit of measure for a given item.	Identify and compare differences in length, weight/mass, and capacity/volume within English and metric measurement systems. Choose appropriate unit of measurement.	Convert capacity, weight/mass, and length within the English and metric Systems of measurement involving real life situations.	Estimate measurements of various objects in English and metric systems.	Use estimation to solve problems in the standard (English and metric) systems.	
						Use appropriate tools to measure weight, capacity, temperature, and volume in the English and metric systems.		
<b>Temperature</b>	Determine the difference between the concepts of hot and cold.	Interpret concepts of hot and cold using a thermometer.	Collect and compare temperatures using a Fahrenheit thermometer.		Determine the scale of various thermometers in increments of 2, 5 and 10 degrees.			
	Recognize the thermometer as a tool for determining hot or cold temperatures.							

**Rankin County School District  
2006 Curriculum Map - Math**

**Pisgah Zone - Measurement**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Time</b>	Recognize the clock (analog and digital) as a measurement of time.	Tell time to hour and half-hour intervals using both digital and analog clocks.	Read and write time to the hour, half-hour, quarter-hour, and five-minute intervals using digital and analog clocks.	Compute elapsed time to the hour and half hour to solve problems.	Solve problems with elapsed time using hours, minutes, days, weeks, months, and years.			
	Create a clock and identify the minute and hour hands.		Use time (time line) to sequence events of the day. Identify terms for time (before, after, until, a.m., p.m.).					
	Recognize the calendar as a measurement of time (days, weeks, months).	Use a calendar to name the months of the year and to find a particular date.	Use the calendar to determine past and future days.	Use the calendar to determine specified dates.				
<b>Formulas</b>			Use manipulatives or grid regions to show perimeter and area of squares and rectangles.	Use grid regions to determine perimeter and area of regular geometric figures with and without manipulatives.	Use formulas to compute the perimeter and area of squares and rectangles.	Determine the perimeter and area of squares, rectangles, and triangles using formulas.	Calculate the perimeter and area of parallelograms and triangles.	Find the perimeter and area of polygons and circumference, area, radius, and diameter of circles.
					Define and label the parts of a circle: center, radius, diameter, and chord. Explain circumference of a circle.	Determine the radius, diameter, and circumference of a circle using manipulatives. Use pi (approximately 3.14) to determine the relationship of circumference to diameter.	Calculate the circumference and area of a circle with and without manipulatives.	
							Determine the perimeter and area of squares, rectangles, and triangles using formulas.	
						Solve two-step problems using measurement tools and calculations (Example: measure the length of the sides of a figure to determine the perimeter/area).	Predict, calculate and compare the volume of cubes and rectangular prisms.	Use geometric formulas for cylinders and prisms to solve a variety of mathematical and real-world problems involving volume and surface area.
						Solve two-step problems using measurement tools and calculations (Example: measure the length of the sides of a figure to determine the perimeter/area).		

Rankin County School District  
2006 Curriculum Map - Math

Pre-Algebra
Apply appropriate techniques and tools to determine measurements.
Convert, perform basic operations, and solve real-world application problems using standard measurements.

Rankin County School District  
2006 Curriculum Map - Math

Pre-Algebra
Determine the area, perimeter and/or circumference of polygons, circles and composite figures (figures made up of several different shapes).
Use given geometric formulas to solve a variety of mathematical and real world problems including volume and surface area of cylinders, prisms, spheres, cones, pyramids, and composite figures (figures made up of several different shapes).

**Rankin County School District  
2006 Curriculum Map - Math**

<b>Pisgah Zone - Data Analysis &amp; Probability</b>									
	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Pre-Algebra</b>
<b>Collect/Organize/Interpret/ Graph Data</b>	Collect data and construct graphs using real objects	Gather data, construct and interpret bar graphs and pictographs with and without the use of real objects.	Tally, record, interpret, and predict outcomes based on given information.	Compare data and interpret quantities represented on charts, tables and different types of graphs (line, pictograph, bar, circle) and make predictions based on the information.	Draw, label, and interpret bar graphs, line graphs, pictographs, and circle graphs (using fractional parts 1/4, 1/3, 1/2).	Formulate questions to collect, organize, construct and interpret data using bar graphs, line graphs, line plots, pictographs, tables, and charts (using a variety of scale units). Incorporate appropriate technology and manipulatives.	Construct and interpret line graphs, bar graphs, and histograms. Display graph in Science Fair Project.	Interpret and construct circle graphs, bar graphs, and line graphs from real-world data. Display graph in Science Fair Project.	Collect data. Select and justify the most appropriate representations to organize, record and communicate data. Display graph in Science Fair Project.
	Interpret & analyze data in graphical form (for example: bar graphs and pictographs).	Interpret graphical data with scales of 1 and 2 units.	Interpret graphical data with scales of 2, 5, and 10 units.	Interpret graphical data with scales of 2, 5, 10, and 25.	Create and interpret graphical data with scales of 2, 5, 10, and 25 using data collected from students and other resources.	Create and interpret graphical data with scales of 2, 5, 10, and 25 using data generated by students. Display graph in Science Fair Project.	Interpret & construct frequency tables, bar graphs, double bar graphs, line graphs, double line graphs, histograms and stem & leaf plots & line plots.	Interpret & construct frequency tables, bar graphs, double bar graphs, line graphs, double line graphs, histograms and stem & leaf plots & line plots from real-world data.	Construct and interpret histograms, bar graphs, line graphs, frequency tables, circle graphs, stem-and-leaf plots, box-and-wisker plots, and scatter plots from given data.
	Apply mathematical language by telling when a certain number is too many, not enough, just right, more than, less than, or equal to for a given situation.	Create picture graphs using data collected from students and other resources.	Create line, bar, and picture graphs using data collected from students and other resources.	Create and analyze line, bar, and picture graphs using data collected from students and other resources.	Create and analyze line and bar graphs using data collected from students and other resources.	Illustrate and interpret circle graphs using percentages.	Interpret circle graphs and introduce construction of circle graphs.	Interpret and construct circle graphs using data generated by students.	Explain the role of fair and bias sampling and its effect on data.
			Interpret graphical data in terms of more, less, same, most and least.		Find and discuss the mean, mode, median, and range of a set of data (using one and two-digit numbers).	Analyze a set of data using one, two, and three digit numbers to find the mean, median, mode, and range.	Determine how changes in data affect mean, median, mode, and range.	Determine how additional values, including outliers, affect mean, median, mode, or range.	Use a given mean, mode, and/or median of a set of data to construct a data set and determine missing values from a data set.

**Rankin County School District  
2006 Curriculum Map - Math**

<b>Pisgah Zone - Data Analysis &amp; Probability</b>									
	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Pre-Algebra</b>
<b>Probability</b>	Explore, discuss, and demonstrate an understanding of the terms always, never, and maybe events.	Make prediction, collect data, and compare results	Predict the likelihood of events happening using the terms: likely, unlikely, certain, impossible, always, maybe, sometimes, and never.	Determine simple probabilities by using manipulatives such as spinners, number cubes, color tiles, and by tossing a coin.	Formulate and solve problems that involve data analysis and prediction.	Demonstrate finding the probability of simple and compound events and express as fractions (ratios).	Determine sample space of a given situation and use it to determine the probability of a simple or compound event.	Interpret data and make predictions from statistical graphs.	Predict patterns or generalize trends based on given data.
		Investigate concepts of probability through explorative activities using the terms always, maybe, sometimes, never, likely, unlikely, certain and impossible.		Analyze, predict, and model the number of different combinations of two or more objects.	Demonstrate finding the probability using various manipulatives. Express probability in terms of a ratio (a/b).		Solve problems involving combinations and permutations.	Determine probabilities of independent and dependent events and express as ratios, decimals, and percents.	Calculate basic probability of simple, compound, independent, and dependent events.
								Determine probability of simple and compound events through experimentation, simulation or calculation.	Apply the concepts of basic probability to real-world problems.
								Use various methods (such as organized lists, tree-diagrams and the Fundamental Counting Principle) to solve simple probability problems.	Construct and use a variety of methods (i.e. organized lists, tree-diagrams, Fundamental Counting Principle) to solve real-world problems.