

**RIDGECROFT SCHOOL
GRADE 5 MATHEMATICS**

PACING GUIDE

2005-2006	
1st Six Weeks: August 17-September 26 Lessons 1.1-2.6	4th Six Weeks: January 3-February 15 Lessons 6.1-8.3
2nd Six Weeks: September 27-November 3 Lessons 2.7-3.8	5th Six Weeks: February 16-April 4 Lessons 8.4-9.11
3rd Six Weeks: November 6-December 19 Lessons 3.9-5.13	6th Six Weeks: April 5-May 30 Lessons 10.1-12.10

RESOURCE: *Everyday Math* (SRA McGraw-Hill)

AUGUST / SEPTEMBER	PACE	NC SCOS Grade 5
UNIT 1 NUMBER THEORY Lessons 1.1-1.10 <ul style="list-style-type: none"> • Prime factorization, prime and composite numbers • Exponential notation • Divisibility testing • Square numbers and square roots • Multiplication • Even and odd numbers • Factors 	20	1.01a,c,d (numbers to 999,999), 1.03
UNIT 2 ESTIMATION AND COMPUTATION Lessons 2.1-2.6 <ul style="list-style-type: none"> • Open sentences • Sums, differences of multidigit whole numbers and decimals • Mode, median, mean, maximum, minimum of set 	11	1.02, 4.02
OCTOBER		
UNIT 2 ESTIMATION AND COMPUTATION Lessons 2.7-2.11 <ul style="list-style-type: none"> • Rounding numbers • Products of multidigit whole numbers and decimals • Place value 	10	1.01a,b,d, 1.03
UNIT 3 GEOMETRY EXPLORATIONS AND THE AMERICAN TOUR Lessons 3.1-3.8 <ul style="list-style-type: none"> • Types of angles and their measures • Types of triangles • Place value 	10	1.01b, 2.02, 3.01, 3.04
NOVEMBER		
UNIT 3 GEOMETRY EXPLORATIONS AND THE AMERICAN TOUR Lessons 3.9-3.11 <ul style="list-style-type: none"> • Angles measures • Properties of polygons. • Tessellations 	5	2.02, 3.01, 3.03, Extend 3.04
UNIT 4 DIVISION Lessons 4.1-4.7 <ul style="list-style-type: none"> • Place value • Quotient and remainder of whole numbers divided by a 1-digit or 2-digit whole number. • Write and solve number sentences with variables for division number stories • Determine the value of a variable; use this value to complete a number sentence 	10	1.01c,d, 1.03, 5.01, 5.02
UNIT 5 FRACTIONS, DECIMALS, AND PERCENTS	5	1.01a,c,d

Lessons 5.1-5.3		
<ul style="list-style-type: none"> • Convert between fractions and mixed numbers • Add fractions with like denominators • Compare and order fractions 		
DECEMBER		
UNIT 5 FRACTIONS, DECIMALS, AND PERCENTS Lessons 5.4-5.13	12	1.01a,c,d, 1.03, 4.01, 4.02
<ul style="list-style-type: none"> • Find equivalent fractions • Convert between fractions and percents • Draw and interpret a circle graph for a set of data 		
JANUARY		
UNIT 6 USING DATA: ADDITION AND SUBTRACTION OF FRACTIONS Lessons 6.1-6.11	12	1.01, 4.01, 4.02
<ul style="list-style-type: none"> • Data landmarks • Construct and interpret stem-and-leaf plots • Sample size and effect on results • Convert among fractions, decimals, and percents • Add and subtract fractions with common and unlike denominators 		
UNIT 7 EXPONENTS AND NEGATIVE NUMBERS Lessons 7.1-7.5	8	1.01, 5.01, 5.02
<ul style="list-style-type: none"> • Scientific notation; Powers of 10 • Exponential notation • Order of operations • Number sentences 		
FEBRUARY		
UNIT 7 EXPONENTS AND NEGATIVE NUMBERS Lessons 7.6-7.11	6	1.01,1.03
<ul style="list-style-type: none"> • Compare and order positive and negative numbers • Add and subtract positive and negative numbers 		
UNIT 8 FRACTIONS AND RATIOS Lessons 8.1-8.9	12	1.01, 1.02, 1.03
<ul style="list-style-type: none"> • Compare and order fractions • Find common denominators • Multiply fractions • Subtract mixed numbers with like denominators 		
MARCH		
UNIT 8 FRACTIONS AND RATIOS Lessons 8.10-8.13	6	1.01, 1.02, 1.03
<ul style="list-style-type: none"> • Convert between fractions and mixed or whole numbers • Find percent of a number 		
UNIT 9 COORDINATES, AREA, VOLUME, AND CAPACITY Lessons 9.1-9.11	16	3.01, 3.02, 3.04
<ul style="list-style-type: none"> • Plot ordered pairs on a one-quadrant coordinate grid • Identify the base and height of triangles and parallelograms • Use a formula to find the area of triangles, parallelograms, and rectangles • Understand the concept of volume of prisms and use a formula to find volume 		
APRIL		
UNIT 10 ALGEBRA CONCEPTS AND SKILLS Lessons 10.1-10.10	11	5.01, 5.02, 5.03
<ul style="list-style-type: none"> • Solve 1- and 2-step pan-balance problems • Write algebraic expressions to describe situations • Represent rate problems as formulas, graphs, and tables • Use formulas to find circumference and area of a circle • Distinguish between circumference and area of circle problems • Interpret line plots and graphs 		
UNIT 11 VOLUME Lessons 11.1-11.2	3	3.01

<ul style="list-style-type: none"> Use formulas to find the area of polygons and circles Know the properties of geometric solids 		
MAY/JUNE		
UNIT 11 VOLUME Lessons 11.3-11.8 <ul style="list-style-type: none"> Use formulas to find the volume of prisms and cylinders Find the surface area of prisms and cylinders Understand the relationship between the volume of pyramids and prisms, and the volume of cones and cylinders Understand the concept of capacity and how to calculate it 	10	2.01
UNIT 12 PROBABILITY, RATIOS, AND RATES Lessons 12.1-12.10 <ul style="list-style-type: none"> Find the greatest common factor and least common multiple of two numbers Solve ratio and rate number stores Identify factors of numbers and find prime factorizations Use tree diagrams Compute the probability of outcomes when choices are equally likely Use the Multiplication Counting Principle to find the total number of possible outcomes of a sequence of choices 	13	1.01, 1.02, 1.03, 5.03
TOTAL	180	

8/1/06

NC STANDARD COURSE OF STUDY

Everyday Math is an integrated math curriculum that will be used in grades K-6 at Ridgecroft School. It is not entirely aligned by grade with the NC SCOS. However, over the 6-year time period, all NC SCOS objectives will be included in instruction. Listed below are objectives from a 3-year grade span.

GRADE 4	GRADE 5	GRADE 6
MAJOR CONCEPTS/SKILLS: <ul style="list-style-type: none"> Number sense 0.01-99,999 Multiplication and division of multi-digit numbers Perimeter and area Transformations Line graphs Median, mode, and range Variables in number sentences Proportional reasoning Students will solve relevant and authentic problems using appropriate technology and apply these concepts as well as those developed in earlier years. CONCEPTS/SKILLS TO MAINTAIN <ul style="list-style-type: none"> Whole number computation Non-negative rational numbers Length, time, capacity, and mass Symmetry and congruence Coordinate grids Circle graphs Permutations and combinations 	MAJOR CONCEPTS / SKILLS: <ul style="list-style-type: none"> Number sense 0.001-999,999 Addition and subtraction of non-negative rational numbers Properties of plane figures Bar graphs and stem-and-leaf plots Rates of change Simple equations and inequalities Students will solve relevant and authentic problems using appropriate technology and apply these concepts as well as those developed in earlier years. CONCEPTS/SKILLS TO MAINTAIN <ul style="list-style-type: none"> Whole number computation Transformations Perimeter and area Coordinate grids Line graphs Median, mode, and range 	MAJOR CONCEPTS/SKILLS: <ul style="list-style-type: none"> Negative rational numbers Percent Transformations in the coordinate plane Probability Equations and inequalities Multiplication and division of non-negative rational numbers Students will solve relevant and authentic problems using appropriate technology and apply these concepts as well as those developed in earlier years. CONCEPTS/SKILLS TO MAINTAIN <ul style="list-style-type: none"> Addition and subtraction of non-negative rational numbers Numbers properties Perimeter and area Median, mode, and range Bar graphs and leaf plots
GOAL 1: The learner will read, write, model, and compute with non-negative rational numbers. 1.01 Develop number sense for rational numbers 0.01 through 99,999.	GOAL 1: The learner will understand and compute with non-negative rational numbers. 1.01 Develop number sense for rational numbers 0.001 through	GOAL 1: The learner will understand and compute with rational numbers. 1.01 Develop number sense for negative rational numbers. (a) Connect the model, number word, and

<p>(a) Connect model, number word, and number using a variety of representations.</p> <p>(b) Build understanding of place value (hundredths through ten thousands).</p> <p>(c) Compare and order rational numbers.</p> <p>(d) Make estimates of rational numbers in appropriate situations.</p> <p>1.02 Develop FLUENCY with multiplication and division:</p> <p>(a) Two-digit by two-digit multiplication (larger numbers with calculator).</p> <p>(b) Up to three-digit by two-digit division (larger numbers with calculator).</p> <p>(d) Estimation of products and quotients in appropriate situations.</p> <p>(e) Relationships between operations.</p> <p>1.03 Solve problems using models, diagrams, and reasoning about fractions and relationships among fractions involving halves, fourths, eighths, thirds, sixths, twelfths, fifths, tenths, hundredths, and mixed numbers.</p> <p>1.04 Develop FLUENCY with addition and subtraction of non-negative rational numbers with like denominators, including decimal fractions through hundredths.</p> <p>(a) Develop and analyze strategies for adding and subtracting numbers</p> <p>(b) Estimate sums and differences.</p> <p>(c) Judge the reasonableness of solutions.</p> <p>1.05 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.</p>	<p>999,999.</p> <p>(a) Connect model, number word, and number using a variety of representations.</p> <p>(b) Build understanding of place value (thousandths through hundred thousands).</p> <p>(c) Compare and order rational numbers.</p> <p>(d) Make estimates of rational numbers in appropriate situations.</p> <p>1.02 Develop FLUENCY in adding and subtracting non-negative rational numbers (halves, fourths, eighths; thirds, sixths, twelfths; fifths, tenths, hundredths, thousandths; mixed numbers).</p> <p>(a) Develop and analyze strategies for adding and subtracting numbers.</p> <p>(b) Estimate sums and differences.</p> <p>(c) Judge the reasonableness of solutions.</p> <p>1.03 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.</p>	<p>number using a variety of representations, including the number line.</p> <p>(b) Compare and order.</p> <p>(c) Make estimates in appropriate situations.</p> <p>1.02 Develop the meaning for percents.</p> <p>(a) Connect the model, number word and number using a variety of representations.</p> <p>(b) Make estimates in appropriate situations.</p> <p>1.03 Compare and order rational numbers.</p> <p>1.04 Develop FLUENCY in addition, subtraction, multiplication, and division of non-negative rational numbers.</p> <p>(a) Analyze computational strategies.</p> <p>(b) Describe the effect of operations on size.</p> <p>(c) Estimate the results of computations.</p> <p>(d) Judge the reasonableness of solutions.</p> <p>1.05 Develop FLUENCY in the use of factors, multiples, exponential notation, and prime factorization.</p> <p>1.06 Use exponential, scientific, and calculator notation to write very large and very small numbers.</p> <p>1.07 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.</p>
<p>GOAL 2: The learner will understand and use perimeter and area</p> <p>2.01 Develop strategies to determine the area of rectangles and the perimeter of plane figures.</p> <p>2.02 Solve problems involving perimeter of plane figures and areas of rectangles.</p>	<p>GOAL 2: The learner will recognize and use standard units of metric and customary measurement.</p> <p>2.01 Estimate the measure of an object in one system given the measure of that object in another system.</p> <p>2.02 Identify, estimate, and measure the angles of plane figures using appropriate tools.</p>	<p>GOAL 2: The learner will select and use appropriate tools to measure two- and three-dimensional figures.</p> <p>2.01 Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures, using appropriate tools.</p> <p>2.02 Solve problems involving perimeter/circumference and area of plane figures.</p>
<p>GOAL 3: The learner will recognize and use geometric properties and relationships.</p> <p>3.01 Use the coordinate systems to describe the location and relative</p>	<p>GOAL 3: The learner will understand and use properties and relationships of plane figures.</p> <p>3.01 Identify, define, describe, and accurately represent triangles,</p>	<p>GOAL 3: The learner will understand and use properties and relationships of geometric figures in the coordinate plane.</p> <p>3.01 Identify and describe the</p>

<p>position of points and draw figures in the first quadrant.</p> <p>3.02 Describe the relative position of lines using concepts of parallelism and perpendicularity.</p> <p>3.03 Identify, predict, and describe the results of transformations of plane figures.</p> <p>(a) Reflections (b) Translations (c) Rotations.</p>	<p>quadrilaterals, and other polygons.</p> <p>3.02 Make and test conjectures about polygons involving:</p> <p>(a) Sum of the measures of interior angles. (b) Lengths of sides and diagonals. (c) Parallelism and perpendicularity of sides and diagonals.</p> <p>3.03 Classify plane figures according to types of symmetry (line, rotational).</p> <p>3.04 Solve problems involving the properties of triangles, quadrilaterals, and other polygons.</p> <p>(a) Sum of the measures of interior angles. (b) Lengths of sides and diagonals. (c) Parallelism and perpendicularity of sides and diagonals.</p>	<p>intersection of figures in a plane.</p> <p>3.02 Identify the radius, diameter, chord, center, and circumference of a circle; determine the relationships among them.</p> <p>3.03 Transform figures in the coordinate plane and describe the transformation.</p> <p>3.04 Solve problems involving geometric figures in the coordinate plane.</p>
<p>GOAL 4: The learner will understand and use graphs, probability, and data analysis.</p> <p>4.01 Collect, organize, analyze, and display data (including line graphs and bar graphs) to solve problems.</p> <p>4.02 Describe the distribution of data using median, range, and mode.</p> <p>4.03 Solve problems by comparing two sets of related data.</p> <p>4.04 Design experiments and list all possible outcomes and probabilities for an event.</p>	<p>GOAL 4: The learner will understand and use graphs and data analysis.</p> <p>4.01 Collect, organize, analyze, and display data (including bar graphs and stem-and-leaf plots) to solve problems.</p> <p>4.02 Compare and contrast different representations of the same data; discuss the effectiveness of each representation.</p> <p>4.03 Solve problems with data from a single set or multiple sets of data using median, range, and mode.</p>	<p>GOAL 4: The learner will understand and determine probabilities.</p> <p>4.01 Develop FLUENCY with counting strategies to determine the sample space for an event. Include lists, tree diagrams, frequency distribution tables, permutations, combinations, and the Fundamental Counting Principle.</p> <p>4.02 Use a sample space to determine the probability of an event.</p> <p>4.03 Conduct experiments involving simple and compound events.</p> <p>4.04 Determine and compare experimental and theoretical probabilities for simple and compound events.</p> <p>4.05 Determine and compare experimental and theoretical probabilities for independent and dependent events.</p> <p>4.06 Design and conduct experiments or surveys to solve problems; report and analyze results.</p>
<p>GOAL 5: The learner will demonstrate an understanding of mathematical relationships.</p> <p>5.01 Identify, describe, and generalize relationships in which:</p> <p>(a) Quantities change proportionally (b) Change in one quantity relates to change in a second quantity.</p> <p>5.02 Translate among symbolic, numeric, verbal, and pictorial representations of number relationships.</p> <p>5.03 Verify mathematical relationships using;</p> <p>(a) Models, words, and numbers. (b) Order of operations and the identity, commutative, associative, and distributive properties.</p>	<p>GOAL 5: The learner will demonstrate an understanding of patterns, relationships, and elementary algebraic representation.</p> <p>5.01 Describe, extend and generalize numeric and geometric patterns using tables, graphs, words, and symbols.</p> <p>5.02 Use algebraic expressions, patterns, and one-step equations and inequalities to solve problems.</p> <p>5.03 Identify, describe, and analyze situations with constant or varying rates of change.</p>	<p>GOAL 5: The learner will demonstrate an understanding of simple algebraic expressions.</p> <p>5.01 Simplify algebraic expressions and verify the results using the basic properties of rational numbers.</p> <p>(a) Identity (b) Commutative (c) Associative (d) Distributive (e) Order of operations</p> <p>5.02 Use and evaluate algebraic expressions</p> <p>5.03 Solve simple (one- and two-step) equations or inequalities.</p> <p>5.04 Use graphs, tables, and symbols to model and solve problems involving rates of change and ratios.</p>

