

**RIDGECROFT SCHOOL
GRADE 8 MATHEMATICS**

PACING GUIDE

TOPICS/CONCEPTS	TIME	CURRICULUM OBJECTIVES	RESOURCE(S) Passport to Mathematics (McDougal Littell)
FIRST GRADING PERIOD	30 Days	1.02 throughout	
EXPLORING PATTERNS <ul style="list-style-type: none"> • Operations • Powers and roots • Tables and graphs 	10	3.01, 5.01	TEXTBOOK: Chapter 1
INVESTIGATION IN ALGEBRA <ul style="list-style-type: none"> • Simplifying terms • Solving equations • Inequalities 	15	5.01, 5.03	TEXTBOOK: Chapter 2
MODELING INTEGERS <ul style="list-style-type: none"> • Absolute value • Operations with integers • Coordinate plane 	5	1.01	TEXTBOOK: Chapter 3
SECOND GRADING PERIOD	30 Days		
MODELING INTEGERS <ul style="list-style-type: none"> • Absolute value • Operations with integers • Coordinate plane 	5	1.01	TEXTBOOK: Chapter 3
EXPLORING THE LANGUAGE OF ALGEBRA <ul style="list-style-type: none"> • Solving equations • Formulas and variables 	15	3.01, 5.04 MAJOR CONCEPT: <ul style="list-style-type: none"> • Equations and inequalities 	TEXTBOOK: Chapter 4
EXPLORING DATA AND GRAPHS <ul style="list-style-type: none"> • Pictographs • Bar graphs and histograms • Line graphs and plots • Scatter plots, Stem and Leaf, Box and Whisker 	10	4.01, 4.02, 4.03 MAINTAIN: <ul style="list-style-type: none"> • Stem and Leaf • Box and Whisker • Scatter plots 	TEXTBOOK: Chapter 5, 13
THIRD GRADING PERIOD	30 Days		
EXPLORING DATA AND GRAPHS <ul style="list-style-type: none"> • Pictographs • Bar graphs and histograms • Line graphs and plots • Scatter plots, Stem and Leaf, Box and Whisker 	5	4.01, 4.02, 4.03 MAINTAIN: <ul style="list-style-type: none"> • Stem and Leaf • Box and Whisker • Scatter plots 	TEXTBOOK: Chapter 5, 13
EXPLORING NUMBER THEORY <ul style="list-style-type: none"> • Divisibility tests • Factors, primes, multiples • Fractions and decimals • Powers and exponents • Scientific notation 	5		TEXTBOOK: Chapter 6
RATIONAL NUMBERS AND PERCENTS <ul style="list-style-type: none"> • Operations with like and unlike fractions • Percents, decimals, and fractions 	15		TEXTBOOK: Chapter 7
REVIEW AND ASSESSMENT	5		
FOURTH GRADING PERIOD	30 Days		

RATIONAL NUMBERS AND PERCENTS <ul style="list-style-type: none"> • Operations with like and unlike fractions • Percents, decimals, and fractions 	5		TEXTBOOK: Chapter 7
PROPORTION, PERCENT, AND PROBABILITY <ul style="list-style-type: none"> • Rates and ratios • Solving proportions • Percent equations • Counting and Pascal 	15	2.01, 2.02 MAJOR: <ul style="list-style-type: none"> • Indirect measurement MAINTAIN: <ul style="list-style-type: none"> • Ratio, proportion, and percent 	TEXTBOOK: Chapter 8
REAL NUMBERS AND INEQUALITIES <ul style="list-style-type: none"> • Irrational numbers • Pythagorean Theorem • Graphing Inequalities • Solving inequalities 	10	1.01a,b,c, 3.02 MAJOR: <ul style="list-style-type: none"> • Real numbers • Pythagorean Theorem 	TEXTBOOK: Chapter 9
FIFTH GRADING PERIOD	30 Days		
REAL NUMBERS AND INEQUALITIES <ul style="list-style-type: none"> • Irrational numbers • Pythagorean Theorem • Graphing Inequalities • Solving inequalities 	5	1.01a,b,c, 3.02 MAJOR: <ul style="list-style-type: none"> • Real numbers • Pythagorean Theorem 	TEXTBOOK: Chapter 9
GEOMETRY CONCEPTS AND SPATIAL THINKING <ul style="list-style-type: none"> • Parallel lines • Symmetry • Triangles, quadrilaterals, polygons • Congruence 	15	3.02	TEXTBOOK: Chapter 10
CONGRUENCE, SIMILARITY AND TRANSFORMATIONS <ul style="list-style-type: none"> • Area, perimeter • Congruence • Transformations including dilations • Similarity • Trig ratios 	10	2.01, 2.02, 3.01, 3.03 MAJOR: <ul style="list-style-type: none"> • Indirect measurement 	TEXTBOOK: Chapter 11
SIXTH GRADING PERIOD	30 Days		
MEASUREMENTS IN GEOMETRY Circles <ul style="list-style-type: none"> • Polyhedrons and other solids • Surface Area and volume • Similar solids 	10	MAINTAIN: <ul style="list-style-type: none"> • Volume and surface area 	TEXTBOOK: Chapter 12
EXPLORING LINEAR EQUATIONS <ul style="list-style-type: none"> • Slopes and intercepts • Graphs • Distance and midpoint formula 	15	3.01, 5.01a,b,c,d, 5.02, 5.03, 5.04 MAJOR: <ul style="list-style-type: none"> • Linear functions • Slope • Equations and inequalities 	TEXTBOOK: Chapter 13 OTHER RESOURCES: <ul style="list-style-type: none"> • Moving Straight Ahead (CMP) • Looking at Lines (AIMS)
REVIEW AND ASSESSMENT	5		

8/1/06

NC STANDARD COURSE OF STUDY FOR GRADE 8 MATHEMATICS

MAJOR CONCEPTS/SKILLS <ul style="list-style-type: none"> • Real numbers • Linear functions • Pythagorean theorem, indirect measurement • Scatter plots • Slope • Equations and inequalities • Students will solve relevant and authentic problems using appropriate technology and apply these concepts as well as those developed in earlier year. 	CONCEPTS/SKILLS TO MAINTAIN <ul style="list-style-type: none"> • Ratio, proportion, and percent • Factors and multiples • Box plots and histograms • Volume and surface area
GOAL 1: THE LEARNER WILL UNDERSTAND AND COMPUTE WITH REAL NUMBERS.	
1.01 Develop number sense for the real numbers. (a) Define and use irrational numbers. (b) Compare and order. (c) Use estimates of irrational numbers in appropriate situations. 1.02 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators, or computers, and paper and pencil.	
GOAL 2: THE LEARNER WILL UNDERSTAND AND USE MEASUREMENT CONCEPTS.	
2.01 Determine the effect on perimeter, area or volume when one or more dimensions of two- and three-dimensional figures are changed. 2.02 Apply and use concepts of indirect measurement.	
GOAL 3: THE LEARNER WILL UNDERSTAND AND USE PROPERTIES AND RELATIONSHIPS IN GEOMETRY.	
3.01 Represent problem situations with geometric models. 3.02 Apply geometric properties and relationships, including the Pythagorean Theorem, to solve problems. 3.03 Identify, predict, and describe dilations in the coordinate plane.	
GOAL 4: THE LEARNER WILL UNDERSTAND AND USE GRAPHS AND DATA ANALYSIS.	
4.01 Collect, organize, analyze, and display data (including scatterplots) to solve problems. 4.02 Approximate a line of best fit for a given scatterplot; explain the meaning of the line as it relates to the problem and make predictions. 4.03 Identify misuses of statistical and numerical data.	
GOAL 5: THE LEARNER WILL UNDERSTAND AND USE LINEAR RELATIONS AND FUNCTIONS.	
5.01 Develop an understanding of function. (a) Translate among verbal, tabular, graphic, and algebraic representations of functions (b) Identify relations and functions as linear or nonlinear. (c) Find, identify and interpret the slope (rate of change) and intercepts of a linear relation. (d) Interpret and compare properties of linear functions from tables, graphs, or equations. 5.02 Write an equation of a linear relationship given: two points, the slope and one point on the line, or the slope and y-intercept. 5.03 Solve problems using linear equations and inequalities; justify symbolically and graphically. 5.04 Solve equations using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.	