Pacing Guide 2010-2011
Subject:<u>Mathematics</u>
Grade Level <u>7th grade</u>

Grading Period: <u>First Quarter</u>

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
August 5-20 2 Weeks	NS1.1 Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10) with approximate numbers using scientific notation. NS1.2 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers NS2.5 Understand the meaning of the absolute value of a number; interpret the absolute value as the distance of the number from zero on a number line; and determine the absolute value of real numbers. AF1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A).	Chapter 1 1-1 to 1-9 **"Principles of Algebra"**	Know it Notebook (if needed) Chapter 1 Intervention Workbook Chapter 1 Resource File Flip Chips/Counter	Assessment Resources Chapter 1 Quizzes and tests Test Generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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	AF1.2 Use the correct order of operations to evaluate algebraic expressions such as $3(2x + 5)^2$. AF1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used. AF1.4 Use algebraic terminology (e.g., variable, equation, term, coefficient, inequality, expression, constant) correctly. AF4.1 Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context from which they arose, and verify the reasonableness of the results.				

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
August 23 – September 13 3 Weeks	NS1.1 Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10) with approximate numbers using scientific notation. (1) NS1.2 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers. (4) NS1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.(1) NS1.5 Know that every rational number is either a terminating or repeating decimal and be able to convert terminating decimals into reduced fractions.(1) NS2.2 Add and subtract fractions by using factoring to find common denominators.(1) AF1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used.(5)	Chapter 2 2-1 to 2-8 **Rational Numbers**	Know it Notebook (if needed) Chapter 2 Intervention Workbook Chapter 2 Resource File	Assessment Resources Chapter 2 Quizzes and tests Test generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
_____ September 14 October 1 3 Weeks _____	AF2.2 Multiply and divide monomials; extend the process of taking powers and extracting roots to monomials when the latter results in a monomial with an integer exponent.(1) AF1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A).(1) AF1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used.(5) AF4.0 Students solve simple linear equations and inequalities over the rational numbers: (10) AF4.1 Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context from which they arose, and verify the reasonableness of the results. (5)	_____ Chapter 3 3-1 to 3-8 **Multi-Step Equations and Inequalities**	_____ Know it Notebook (if needed) Chapter 3 Intervention Workbook Chapter 3 Resource File	_____ Assessment Resources Chapter 3 Test Generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
3 Days _____ Embedded in the curriculum	**REMEDIATION ACTIVITIES (BENCHMARK-1ST QUARTER)** —————————————— MR1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns. MR1.3 Determine when and how to break a problem into simpler parts.				District Benchmark Test October 4-8 _____

Grading Period: <u>Second Quarter</u>

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
Oct 12-25 2 Weeks	NS1.1 Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10) with approximate numbers using scientific notation.(1) NS1.4 Differentiate between rational and irrational numbers.(1) NS2.1 Understand negative whole-number exponents. Multiply and divide expressions involving exponents with a common base.. (1) NS2.3 Multiply, divide, and simplify rational numbers by using exponent rules. (3) NS2.4 Use the inverse relationship between raising to a power and extracting the root of a perfect square integer; for an integer that is not square, determine without a calculator the two integers between which its square root lies and explain why.(1) AF1.2 Use the correct order of operations to evaluate algebraic expressions such as $3(2x + 5)^2$. (1) AF1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used. (5) AF2.1 Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication by the multiplicative inverse. Simplify and evaluate expressions that include exponents.(1)	Chapter 4 4-1 to 4-9 **Exponents & Roots**	Know it Notebook (if needed) Chapter 4 Intervention Workbook Chapter 4 Resource File	Assessment Resources Chapter 4 Test generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
	AF2.2 Multiply and divide monomials; extend the process of taking powers and extracting roots to monomials when the latter results in a monomial with an integer exponent.(1) MG3.3 Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement..(4)				
_____ Oct 26-Nov 16 3 Weeks	_____ AF4.2 Solve multi step problems involving rate, average speed, distance, and time or a direct variation. (5) MG1.1 Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters). (2/3**) MG1.2 Construct and read drawings and models made to scale.(1/3**)	_____ Chapter 5 5-1 to 5-7 **Ratios, Proportions & Similarity**	_____ Know it Notebook Chapter 5 Intervention Workbook Chapter 5 Resource File	_____ Assessment Resources Chapter 5 Test generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
_____ November 18-December 10 3 Weeks _____ 3 Days	MG1.3 Use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems; check the units of the solutions; and use dimensional analysis to check the reasonableness of the answer.(3) _____ NS1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.(1) NS1.6 Calculate the percentage of increases and decreases of a quantity.(1) NS1.7 Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest.(5) _____ **REMEDIATION ACTIVITIES-(BENCHMARK TEST)**	_____ Chapter 6 6-1 to 6-7 **Percents** _____	_____ Know it Notebook Chapter 6 Intervention Workbook Chapter 6 Resource File _____	_____ Assessment Resources Chapter 6 Test generator _____	_____ District Benchmark Test December 13-17

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
Embedded in the curriculum	MR 1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.				

Grading Period: <u>Third Quarter</u>

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	**District**
January 6-19 2 Weeks	AF1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A).(1) AF1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph (2/3**) AF3.1 Graph functions of the form $y = nx^2$ and $y = nx^3$ and use in solving problems. (2/3**) AF3.2 Plot the values from the volumes of three-dimensional shapes for various values of the edge lengths (e.g., cubes with varying edge lengths or a triangle prism with a fixed height and an equilateral triangle base of varying lengths). (1/3**)	Chapter 7 7-1 to 7-9 **Graphs and Functions**	Know it Notebook Chapter 7 Intervention Workbook Chapter 7 Resource File	Assessment Resources Chapter 7 quizzes and test	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
_____ January 20 – February 2 2 Weeks	AF3.3 Graph linear functions, noting that the vertical change (change in *y*- value) per unit of horizontal change (change in *x*- value) is always the same and know that the ratio ("rise over run") is called the slope of a graph.(2) _____ AF3.3 Graph linear functions, noting that the vertical change (change in *y*- value) per unit of horizontal change (change in *x*- value) is always the same and know that the ratio ("rise over run") is called the slope of a graph.(2) MG3.1 Identify and construct basic elements of geometric figures (e.g., altitudes, mid-points, diagonals, angle bisectors, and perpendicular bisectors; central angles, radii, diameters, and chords of circles) by using a compass and straightedge.(1/3**) MG3.2 Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their image under translations and reflections.(1/3**) MG3.3 Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct	_____ Chapter 8 8-1 to 8-8 **Foundation of Geometry**	_____ Know it Notebook Chapter 8 Intervention Workbook Chapter 8 Resource File	_____ Assessment Resources Chapter 8 quizzes and test	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
	measurement. (4) 3.4 Demonstrate an understanding of conditions that indicate two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures.(2) 3.6 Identify elements of three-dimensional geometric objects (e.g., diagonals of rectangular solids) and describe how two or more objects are related in space (e.g., skew lines, the possible ways three planes might intersect).(1) _____				
_____ February 3 – Feb 16	MG2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders. (1/3**) MG2.2 Estimate and compute the area of more complex or irregular two-and three-dimensional figures by breaking the figures down into more basic geometric objects. (1/3**)	_____ Chapter 9 9-1 to 9-6 **Two-Dimensional Geometry**	_____ Know it Notebook Chapter 9 Intervention Workbook Chapter 9 Resource File	_____ Assessment Resources Chapter 9 quizzes and test	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
	MG3.1 Identify and construct basic elements of geometric figures (e.g., altitudes, mid-points, diagonals, angle bisectors, and perpendicular bisectors; central angles, radii, diameters, and chords of circles) by using a compass and straightedge.(1/3**) 3.2 Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their image under translations and reflections. (1/3**)				_____ District Benchmark Test March 7-11 _____
_____ Embedded in the curriculum	_____ MR1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns. MR1.3 Determine when and how to break a problem into simpler parts.				

Grading Period: <u>Fourth Quarter</u>

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
Feb 17-Mar 4 2 Weeks 3 Days	AF3.2 Plot the values from the volumes of three-dimensional shapes for various values of the edge lengths (e.g., cubes with varying edge lengths or a triangle prism with a fixed height and an equilateral triangle base of varying lengths).(1/3**) MG2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders.(1/3**) MG2.2 Estimate and compute the area of more complex or irregular two-and three-dimensional figures by breaking the figures down into more basic geometric objects.(1/3**) **REMEDIATION ACTIVITIES (BENCHMARK TEST)**	Chapter 10 10-1 to 10-7 **Three-Dimensional Geometry**	Know it Notebook Chapter 10 Intervention Workbook Chapter 10 Resource File Standard based workbook Review for mastery	Assessment Resources Chapter 10 quizzes and tests Test Generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
Mar 21-Apr 1 2 Weeks	MG2.3 Compute the length of the perimeter, the surface area of the faces, and the volume of a three-dimensional object built from rectangular solids. Understand that when the lengths of all dimensions are multiplied by a scale factor, the surface area is multiplied by the square of the scale factor and the volume is multiplied by the cube of the scale factor. (1/3**) MG2.4 Relate the changes in measurement with a change of scale to the units used (e.g., square inches, cubic feet) and to conversions between units (1 square foot = 144 square inches or [1 ft^2] = [144 in^2], 1 cubic inch is approximately 16.38 cubic centimeters or [1 in^3] = [16.38 cm^3]).(1/3**) MG3.5 Construct two-dimensional patterns for three-dimensional models, such as cylinders, prisms, and cones.(N/A) SDAP1.1 Know various forms of display for data sets, including a stem-and-leaf plot or box-and-whisker plot; use the forms to display a single set of data or to compare two sets of data.(1) SDAP1.2 Represent two numerical variables on a scatter plot and informally describe how the data points are distributed and any apparent relationship that exists between the two variables (e.g., between time spent on	_____ Chapter 11	_____ Know it Notebook Chapter 11 Intervention Workbook Chapter 11 Resource File	_____ Assessment Resources Chapter 11 quizzes and tests Test generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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_____ April 11 – 12 Testing	homework and grade level).(1) SDAP1.3 Understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set. (3) **State testing** _____				

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April 18- May 16 3 Weeks _____ Embedded in the curriculum	1.0 Students identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable: _____ 1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns. _____	Chapter 12 12-1 to 12-6	Know it Notebook Chapter 12 Intervention Workbook Chapter 12 Resource File _____	Assessment Resources Chapter 12 quizzes and tests Test generator _____	
_____ Embedded in the curriculum throughout the school year	1.0 Students make decisions about how to approach problems: 1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns. 1.2 Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed. 1.3 Determine when and how to break a problem into simpler					

May 23-25	**BENCHMARK TEST (4TH QUARTER)**				

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
	parts. 2.0 Students use strategies, skills, and concepts in finding solutions: 2.1 Use estimation to verify the reasonableness of calculated results. 2.2 Apply strategies and results from simpler problems to more complex problems. 2.3 Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques. 2.4 Make and test conjectures by using both inductive and deductive reasoning. 2.5 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning. 2.6 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.				

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	2.7 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy. 2.8 Make precise calculations and check the validity of the results from the context of the problem. 3.0 Students determine a solution is complete and move beyond a particular problem by generalizing to other situations: 3.1 Evaluate the reasonableness of the solution in the context of the original situation. 3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems. 3.3 Develop generalizations of the results obtained and the strategies used and apply them to new problem situations.				