# Pacing Guide 2010-2011
## Subject: Mathematics
## Grade Level  6<sup>th</sup>

Grading Period: First Quarter

| Approximate Time for Teaching Standards | Standard | Core Instructional Materials | Strategic Supplementary Materials | Assessment | |
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| | | | | Mat'ls | District |
| 3 weeks Aug 5-26 Ch 1 Algebraic Reasoning | AF 1.1* Write and solve one-step linear equations in one variable (6)<br><br>AF 1.4    Solve problems manually by using the correct order of operations or by using a scientific calculator. (1)<br><br>AF 1.3    Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process. (1)<br><br>AF 1.2 Write and evaluate algebraic expression for a given situation, using up to three variables (1)<br><br>AF 2.0 Students analyze and use tables, graphs and rules to solve problems involving rates and proportions. (7) | Chapter 1 Holt Mathematics<br><br>Course 1- Numbers to Algebra | Know it Notebook chapter 1 (If needed for struggling students) Chapter  resource file  1<br><br>Intervention workbook<br><br>Standards based workbook | Assessment Resources Chapter 1 Quizzes and tests<br><br>Test Generator | |
| _____<br><br>3 weeks Aug 27-Sept 17 Ch 2 Intergers | AF 1.1* Write and solve one-step linear equations in one variable (6)<br><br>AF 1.4    Solve problems manually by using the correct order of operations or by using a scientific calculator. (1) | _____<br><br>Chapter 2 | _____<br><br>Know it Notebook chapter 2 (struggling students) Chapter resources file 2<br><br>Intervention workbook Flipchips to teach integers and inverses of integers | _____<br><br>Assessment Resources Chapter 2 Quizzes and tests | |

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| | AF 1.2 Write and evaluate algebraic expression for a given situation, using up to three variables (1) | | Standards Based Workbook | Test Generator | |
| | NS 1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line. (1/2) | | | | |
| | NS 2.3 Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations, that use positive and negative integers and combinations of these operations. (6) | | | | |
| _____ 2 weeks Sept 20-Oct 1 Ch 3 Number Theory and Fractions | NS 1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line. (3) NS 2.4* Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction). (3) | _____ Chapter 3 3-1 to 3-6 | _____ Know it Notebook chapter 3 (struggling learners) Chapter resources file 3 Intervention workbook Standards Based Workbook | _____ Assessment Resources Chapter 3 Quizzes and tests Test Generator | _____ |
| _____ 3 days Oct 4-6 | _____ **BENCHMARK ENRICHMENT AND REMEDIATION OF BENCHMARKS** | _____ | _____ | _____ | _____ District Benchmark test October 4-8 |

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| | | | | Mat'ls | District |
| _____ Embedded in the curriculum Chapter 1-2-3 | *MR1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.<br><br>*MR2.1 Use estimation to verify the reasonableness of calculated result<br><br>*MR2.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.<br><br>*MR2.5 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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| 4 weeks<br><br>Oct 7- Nov 4<br>Ch 4<br>Operations with Rational Numbers | AF 1.1* Write and solve one-step linear equations in one variable (6)<br><br>AF 2.1 Convert one unit of measurement to another (1)<br><br>NS 2.4* Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction). (3)<br><br>NS 2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation. (1/2)<br><br>NS 2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations. (1/2) | Chapter 4<br><br>4-1 to 4-10 | Know it Notebook Chapter 4<br><br>Chapter 4 Resource File<br><br>Intervention workbook<br><br>Standards Based Workbook | Assessment Resources Chapter 4 Quizzes and tests<br><br>Test Generator | |

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| | | | | Mat'ls | District |
| _____<br><br>3 weeks<br>Nov 5-30<br>Ch 5<br>Proportional Relationships | NS 2.3 Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations that use positive and negative integers and combinations of these operations. (6)<br><br>_____<br>NS 1.0 Compare and order positive and negative fractions, decimals, and mixed numbers. Students solve problems involving fractions, ratios , porportions and percentages (15)<br><br>NS 1.1* Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line (3)<br><br>NS 1.2  Interpret and use ratios in different contexts to show the relative sizes of two quantities, using appropriate notations (1)<br><br>AF 2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches). (1)<br><br>AF 2.2 Demonstrate an understanding that rate is a measure of one quantity per unit value of another quantity (6)<br><br>AF 2.3  Solve problems involving rates, average speed, distance, and time (1) | _____<br><br>Chapter 5 | _____<br><br>Know it Notebook (struggling students)<br><br>Chapter 5 Resource File<br><br>Intervention workbook<br><br>Standards Based Workbook | _____<br><br>Assessments Resources Chapter 5 Quizzes and tests<br><br>Test Generator | |

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| | | | | Mat'ls | District |
| 2 weeks<br>Dec 1-14<br>Ch 6<br>Percents | AF 1.1* Write and solve one-step linear equations in one variable<br><br>NS 2.4* Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction).<br><br>NS 2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation<br><br>NS 1.0 Compare and order positive and negative fractions, decimals, and mixed numbers. Students solve problems involving fractions, ratios , porportions and percentages<br><br>NS 1.3 Use porportions to solve problems. Use cross multiplication method for solving such problems, understanding it as the multiplication of both sides of an equation by a multicative inverse | Chapter 6<br><br>6.1 to 6-7 | Know it Notebook (struggling students)<br><br>Chapter 6 Resource File<br><br>Intervention workbook<br><br>Standards Based Workbooks | Assessments Resources Chapter 6 quizzes and tests<br><br>Test generator | |
| Dec 15-17 | **ENRICHMENT AND REMEDIATION OF BENCHMARKS** | | | | District Benchmark Assessment Dec 13-17 |

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| | NS 1.4 Calculate given percentages of quanities and solve problems involving discounts at sales, interest earned and tips. | | | | |

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| _____ Embedded in the curriculum in Chapter 4-5-6 | _____ *1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns. . *2.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning. *2.6 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy. . *3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems. | | | | |

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

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| | | | | Mat'ls | District |
| 3 weeks<br>Jan 6-27<br>Ch 7<br>Collecting, Displaying, and Analyzing Data | SDAP1.3  Understand how the inclusion or exclusion of outliers affects measures of central tendency. (1/3**)<br><br>SDAP 1.1 Compute the range, mean, median, and mode of data  sets. (1/3**)<br><br>SDAP 1.2 Understand how additional data added to data sets may affect these computations of measures of central tendency. (1/3**)<br><br>SDAP 1.4  Know why a specific measure of central tendency (mean, median, mode) provides the most useful information in a given (N/A)<br><br>SDAP 2.3*  Analyze data displays and explain why the way in which the question was asked might have influenced the results obtained and why the way in which the results | Chapter 7 | Know it Notebook Chapter 7 (struggling students) Chapter 7 Resource File<br><br>Intervention workbook<br><br>Standards Based Intervention | Assessment Resources Chapter 7 Quizzes and tests<br><br>Test generator | |

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| | were displayed might have influenced the conclusions reached (N/A)<br><br>SDAP 2.4*  Identify data that represent sampling errors and explain why the sample (and the display) might be biased.\(N/A)<br><br>SDAP 2.1 Compare different samples of a population with the data from the entire population and identify a situation in which it makes sense to use a sample. (N/A)<br><br>SDAP 2.2 Identify different ways of selecting asample andwhich method makes a sample more representative for a population (3)<br><br>SDAP 2.5 identify claims based on statistical data and in simple cases, evaluate the validity of the claims. (1/3 | | | | |

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| | | | | Mat'ls | District |
| 2 weeks Jan 28-Feb 11 Ch 8 Probability | SDAP 3.2  Use data to estimate the probability of future events (e.g., batting averages or number of accidents per mile driven (N/A)<br><br>SDAP 3.1 Represent all possible outcomes for compound events in an organized way (e.g., tables, grids, tree diagrams) and express the theoretical probability of each outcome. (3)<br><br>SDAP 3.3  Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between o and 100 and verify that the probabilities computed are reasonable. (3)<br><br>SDAP 3.5 Understand the difference between independent and independent events (1/3**)<br><br>_____ | Chapter 8<br><br>8-1 to 8-7<br><br><br><br><br><br>_____ | Know it Notebook Chapter 8 (struggling students) Chapter 8 Resource File<br><br>Intervention Standard Workbook<br><br><br><br><br><br>_____ | Assessment Resources Chapter 8 quizzes and tests<br><br>Test generator<br><br><br><br><br><br>_____ | |
| 3 weeks Feb 14-Mar 8 Ch 9 Geometric Figures | MG 2.1 Identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms.(1)<br><br>MG 2.2 Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle | Chapter 9<br><br>9-1 to 9-9 | Know it Notebook Chapter 9 (struggling students) Chapter 9 Resource File Intervention standard workbook | Assessment Resources Chapter 9 quizzes and tests<br><br>Test generator | |

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| _____<br><br>3 Days<br>Mar 9-11<br><br>_____<br>Embedded in the curriculum in chapters 7-8-9 | MG 2.3 Draw quadrilaterals and triangles from given information about them (e.g., a quadrilateral having equal sides but no right angles, a right isosceles triangle).(1)<br>_____<br><br>**REMEDIATION AND ENRICHMENT OF BENCHMARK DATA**<br><br>_____<br><br>MR1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.<br><br>MR2.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.<br><br>. | | | | _____<br>District Benchmark Test March 7-11 |

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

| Approximate Time for Teaching Standards | Standard | Core Instructional Materials | Strategic Supplementary Materials | Assessment | |
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| | | | | **Mat'ls** | **District** |
| 4 weeks<br>Mar 21- Apr 1<br>And<br>Apr 18-29<br>Ch 10<br>Measurement and Geometry | MG 1.1* Understand the concept of a constant such as π; know the formulas for the circumference and area of a circle. (3)<br><br>MG 1.3  Know and use the formulas for the volume of triangular prisms and cylinders (area of base × height; compare these formulas and explain the similarity between them and the formula for the volume of a rectangular solid. (1/2)<br>AF 1.1* Write and solve one-step linear equations in one variable (6)<br><br>MG 1.2 Know the common estimates of pi and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements  (1/2*)<br><br>AF 1.2 Write and solve an algebraic expressions with up to threee variables (1/2*)<br><br>AF 3.1 use variables in expressions describing geometric quanities. | Chapter 10<br>10-1 to 10-10 | Know it Notebook Chapter 10<br><br>Chapter 10 Resource file<br><br>Intervention Workbook | Assessment Resources Chapter 10 quizzes and tests<br><br>Test generator | |

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| | | | | **Mat'ls** | **District** |
| 1 week<br>Apr 4-8<br><br>_____<br><br>2 weeks<br>May 2-13<br>Ch 11<br>MultiStep<br>Equations and<br>Inegualities<br>_____<br><br>May 16-26 | AF 3.2 Express in symbolic form simple relationships arising from geometry<br><br>**REVIEW FOR CST FROM PROPR DATA COLLECTED**<br><br>State Testing block<br>4.1 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.<br><br>3.1 Graph functions of the form $y = nx^2$ and $y = nx^3$ and use in solving problems.<br><br>3.2 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).<br><br>1.1 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).<br><br>1.2 Use the correct order of operations to evaluate algebraic expressions such | _____<br><br>Chapter11<br>11.1 to 11.7 | Know it Notebook Chapter 11<br><br>Chapter 11 Resource file<br><br>Intervention Workbook | Assessment Resources Chapter 11 quizzes and tests<br><br>Test Generator | Quarter 4 Benchmarks May 23-26 |

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| | as $3(2x + 5)^2$.<br><br>1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used. | | | | |

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| Embedded in the curriculum Chapter 10 -11 | *MR1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.<br><br>*MR1.2 Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.<br><br>*MR1.3 Determine when and how to break a problem into simpler parts.<br><br>*MR3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems. | | | | |
| _____<br>Embedded throughout the year in the curriculum | _____<br><br>MR2.1 Use estimation to verify the reasonableness of calculated results. | | | | |

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| | MR2.2 Apply strategies and results from simpler problems to more complex problems.<br><br>MR2.3 Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.<br><br>MR2.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.<br><br>MR2.5 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.<br><br>MR2.6 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.<br><br>MR2.7 Make precise calculations and check the validity of the results from the context of the problem. | | | | |

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| | MR3.1 Evaluate the reasonableness of the solution in the context of the original situation.<br><br>MR3.3 Develop generalizations of the results obtained and the strategies used and apply them in new problem situations. | | | | |