

UNIT/ORGANIZING PRINCIPLE: Smart Start – Review of Previously Learned Material – Numbers and Operations	Pacing: 1st Nine Weeks Days 1 – 5
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Big Idea: MA.7.A.1.1 - Distinguish between situations that are proportional or not proportional, and use proportions to solve problems.
MA.7.A.3.1 - Use and justify the rules for adding, subtracting, multiplying, dividing, and finding the absolute value of integers.

Essential Question: Can the student utilize real numbers; fractions, decimals, percents, and integers to solve real-life situations that include the four basic operations?

Concepts/Content	Learning Targets/Skills	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<i>(Overarching concept being covered; ex: “Operations with Rational Numbers”</i>	<i>(Include benchmark content)</i> <i><u>Cognitive Complexity/Depth of Knowledge Rating:</u></i>	Proportion Division	<ul style="list-style-type: none"> • Students will use a four-step plan to solve a problem • Students will write and graph integers and evaluate expressions with absolute value. • Students will add integers. • Students will subtract integers. • Students will multiply and divide integers. 	<p><u>Digital:</u></p> <p>www.glencoe.com, Personal Tutor, Self-Check Quiz, Visual Vocabulary Cards, Virtual Manipulatives</p> <p><u>Materials:</u></p> <p>Textbook, paper, pencil, calculator</p> <p><u>Print Resources:</u></p> <p>Pretest p. 1, Skills Practice, Reteach, Homework Practice</p>

UNIT/ORGANIZING PRINCIPLE: Rational Numbers and Percent		Pacing: 1st Nine Weeks Days 6 – 19	
<p>Big Idea: MA.8.A.6.4 - Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers, and irrational numbers) using multi-step and real world problems.</p> <p>MA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>		<p>Essential Question: How are fractions, decimals, and percents related?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Rational Numbers (high) • Adding and Subtracting Rational Numbers (high) • Multiply Rational Numbers (high) • Divide Rational Numbers (high) 	<p>Rational number</p> <p>Terminating decimal</p> <p>Repeating decimal Like Fractions</p> <p>Unlike Fractions</p> <p>Dimensional Analysis</p> <p>Multiplicative Inverse</p> <p>Reciprocals</p> <p>Percent of Change</p> <p>Percent Proportion</p>	<ul style="list-style-type: none"> • Students will express rational numbers as decimals and decimals as fractions • Students will add and subtract rational numbers. • Students will multiply rational numbers. • Students will divide rational numbers. 	<p><u>Digital:</u></p> <p>Lesson Animation, Personal Tutor, Self-Check Quiz, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u></p> <p>index cards, musical instruments, grid paper, 10-by-10 grid, blue colored pencils, sets of numbered cards, different colored chalk or whiteboard markers, red and blue markers, clear sheet protectors, catalogs, box, highlighters</p> <p><u>Print Resources:</u></p> <p>Leveled Worksheets p. 12 – 63 Chapter Quiz 1 - 3 p. 65 - 67 <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics: Unit A</i></p>

UNIT/ORGANIZING PRINCIPLE: Expressions and Functions		Pacing: 1st Nine Weeks Days 20 – 35	
<p>Big Idea: MA.8.A.1.1 - Create and interpret tables, graphs, and models to represent, analyze, and solve problems related to linear equations, including analysis of domain, range, and the difference between discrete and continuous data.</p> <p>MA.8.A.1.5 - Translate among verbal, tabular, graphical, and algebraic representations of linear functions.</p> <p>MA.8.A.1.6 - Compare the graphs of linear and non-linear functions for real-world situations.</p> <p>MA.8.A.6.4 - Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers, and irrational numbers) using multi-step and real world problems.</p> <p>LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>		<p>Essential Question: How can words, tables, graphs, and equations be used to show the relationship between two quantities?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Making a Table (moderate, high) • Variables and expressions (high) • Ordered Pairs and Relations (high) 	<p>Variable Algebra Algebraic Expression Defining a Variable Coordinate Plane Origin y-axis x-axis Quadrants Ordered Pair x-coordinate y-coordinate Relation Domain Range</p>	<ul style="list-style-type: none"> • Students will solve problems by making a table. • Students will translate verbal phrases into algebraic expressions. • Students will evaluate algebraic expressions. • Students will graph ordered pairs on the coordinate plane and use the coordinate plane to represent relations. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> blue and yellow highlighters, counters, grid paper, dots cut from construction paper</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 61, Chapter Quiz 1 - 3 p. 62 - 65, <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics</i>: Unit B</p>

UNIT/ORGANIZING PRINCIPLE: Linear Functions and Systems of Equations	Pacing: 1st / 2nd Nine Weeks Days 36 – 51
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BIG IDEA: MA.8.A.1.1 - Create and interpret tables, graphs, and models to represent, analyze, and solve problems related to linear equations, including analysis of domain, range, and the difference between discrete and continuous data.

MA.8.A.1.2 - Interpret the slope and the x- and y-intercepts when graphing a linear equation for a real-world problem.

MA.8.A.1.3 - Use tables, graphs, and models to represent, analyze, and solve real-world problems related to systems of linear equations.

MA.8.A.1.4 - Identify the solution to a system of linear [equations](#) using graphs.

LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).

Essential Question: What do the slope and x- or y-intercepts indicate about a linear equation?

Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Constant Rate of Change (moderate) • Rate of Change (moderate) • Slope (moderate) • Proportional and Non-proportional Relationships (high) • Direct Variation (moderate) 	<p>Linear Relationship</p> <p>Constant Rate of Change</p> <p>Slope</p> <p>Rise</p> <p>Run</p> <p>Direct Variation</p> <p>Constant of Variation</p> <p>Slope-Intercept Form</p> <p>Standard Form</p> <p>System of Equations</p>	<ul style="list-style-type: none"> • Students will identify proportional and non-proportional linear relationships by finding a constant rate of change • Students will find rates of change. • Students will find the slope of the line. • Students will compare and contrast proportional and non-proportional linear relationships. • Students will use direct variation to solve problems. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Grid paper, colored pencils, graphing calculator, highlighters, index cards, centimeter cubes, motion detectors for graphing calculators, meter sticks or measuring tapes, masking tape, play money red and yellow paper, straightedges</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 56, Chapter Quiz 1 – 3 p. 57 – 59 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources, IMPACT Mathematics: Unit C</i></p>

UNIT/ORGANIZING PRINCIPLE: Equations and Inequalities		Pacing: 2 nd Nine Weeks Days 52 – 68	
<p>Big Idea: MA.8.A.4.2 - Solve and graph one- and two-step inequalities in one variable. LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>		<p>Essential Question: Why are equations and inequalities important in mathematics?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Work Backward (Moderate) • Write Equations (moderate) • Solve Addition and Subtraction Equations (moderate) • Solve One-Step Multiplication and Division Equations (moderate) 	<p>Compound Inequality</p> <p>Inequality</p> <p>Intersection</p> <p>Inverse Operations</p> <p>Two-Step Equation</p> <p>Two-Step Inequality</p>	<ul style="list-style-type: none"> • Students will solve problems by working backward. • Students will write algebraic equations from verbal sentences and problem situations. • Students will solve equations using the Subtraction and Addition Properties of Equality. • Students will solve equations using the Multiplication and Division Properties of Equality. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Algebra tiles, equations mats, two-color counters, index cards, grid paper, paper squares</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 69, Chapter Quiz 1 – 3 p. 70 - 73 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics: Unit D</i></p>

UNIT/ORGANIZING PRINCIPLE: Operations on Real Numbers	Pacing: 2nd Nine Weeks Days 69 – 85
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<p>Big Idea: MA.8.A.6.1 - Use exponents and scientific notation to write large and small numbers and vice versa and to solve problems.</p> <p>MA.8.A.6.2 - Make reasonable approximations of square roots and mathematical expressions that include square roots, and use them to estimate solutions to problems and to compare mathematical expressions involving real numbers and radical expressions.</p> <p>MA.8.A.6.3 - Simplify real number expressions using the laws of exponents.</p> <p>MA.8.A.6.4 - Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers, and irrational numbers) using multi-step and real world problems.</p> <p>LA.8.1.6.5 - The student will relate new vocabulary to familiar words</p>	<p>Essential Question: How do you add, subtract, multiply, and divide very large and very small numbers?</p>
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Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Powers and exponents (low) • Multiply and Divide Monomials (moderate, high) • Powers of Monomials (moderate) • Problem-Solving (low) 	<p>Base</p> <p>Real Numbers</p> <p>Power</p> <p>Exponent</p> <p>Scientific Notation</p> <p>Square Root</p> <p>Monomial</p>	<ul style="list-style-type: none"> • Students will use powers and exponents to write large and small numbers. • Students will simplify real number expressions by multiplying and dividing monomials. • Students will use laws of exponents to find powers of monomials. • Students will solve problems by acting it out. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Grid paper, metric rulers, colored pencils, poster board, play money, two-color counters, spinners, number cubes, index cards, real or play coins, construction paper, dot paper, scissors, calculators, colored markers</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 64, Chapter Quiz 1 – 3 p. 66 – 67 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources, IMPACT Mathematics: Unit E</i></p>

UNIT/ORGANIZING PRINCIPLE: Angles and Lines		Pacing: 2 nd / 3 rd Nine Weeks Days 86 – 96	
<p>Big Idea: MA.8.G.2.2 - Classify and determine the measure of angles, including angles created when parallel lines are cut by transversals.</p> <p>MA.8.G.2.3 - Demonstrate that the sum of the angles in a triangle is 180-degrees and apply this fact to find unknown measure of angles and the sum of angles in polygons.</p> <p>LA.8.3.1.2 - The student will prewrite by making a plan for writing that addresses purpose, audience, main idea, logical sequence, and time frame for completion.</p>		<p>Essential Question: Why is the study of angles and lines important to understanding our environment?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Angle Measure (low) • Classify Angles (low) • Complementary and Supplementary Angles (low) • Using Logical Reasoning (low) 	<p>Interior Angle</p> <p>Parallel Lines</p> <p>Polygon</p> <p>Supplementary Angles</p> <p>Transversal</p>	<ul style="list-style-type: none"> • Students will measure and draw angles. • Students will classify angles and identify vertical and adjacent angles. • Students will identify complementary and supplementary angles and find the missing angle measures. • Students will solve problems by using logical reasoning. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Protractors, masking tape, colored pencils, road maps, straightedge, dot paper, rulers, grid paper, cut-out polygons, scissors</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 52, Chapter Quiz 1 – 3 p. 54 – 55 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics: Unit F</i></p>

UNIT/ORGANIZING PRINCIPLE: Similar Triangles and The Pythagorean Theorem		Pacing: 3rd Nine Weeks Days 97 – 112	
<p>Big Idea: MA.8.G.2.1 - Use similar triangles to solve problems that include height and distances. MA.8.G.2.2 - Classify and determine the measure of angles, including angles created when parallel lines are cut by transversals. MA.8.G.2.4 - Validate and apply Pythagorean Theorem to find distances in real world situations or between points in the coordinate plane. LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>		<p>Essential Question: How do we use the right triangle relationships in the real-world?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Draw a Diagram (high) • Similar Polygons (high) • Similar Triangles (low, high) • Indirect Measurement (high) • The Tangent Ratio (high) 	<p>Hypotenuse</p> <p>Legs</p> <p>Indirect Measurement</p> <p>Pythagorean Theorem</p> <p>Similar Polygons</p> <p>Corresponding Parts</p> <p>Scale Factor</p> <p>Trigonometry</p> <p>Trigonometric Ratio</p> <p>Tangent Ratio</p>	<ul style="list-style-type: none"> • Students will solve problems by drawing a diagram. • Students will identify similar polygons and find missing measures of similar polygons. • Students will investigate parallel lines and similar triangles. • Students will solve problems involving similar triangles. • Students will use the tangent ratio to find missing measures of right triangles. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Tracing paper, rulers, scissors, protractors, centimeter grid paper, coordinate grids, meter sticks, yard sticks or tape measures, calculators, masking tape, sticky notes, colored pencils, highlighters, index cards, 1-inch paper squares, dried spaghetti, empty boxes, transparency sheets, permanent markers, tracing paper</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 54, Chapter Quiz 1 – 3 p. 56 - 57 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics</i>: Unit G</p>

<p>UNIT/ORGANIZING PRINCIPLE: Data Analysis</p>		<p>Pacing: 3rd Nine Weeks Days 113 – 125</p>	
<p>Big Idea: MA.8.S.3.1 - Select, organize and construct appropriate data displays, including box and whisker plots, scatter plots, and lines of best fit to convey information and make conjectures about possible relationships. MA.8.S.3.2 - Determine and describe how changes in data values impact measures of central tendency. LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>		<p>Essential Question: How can you summarize a set of data using only a few numbers and graphical displays?</p>	
<p>Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)</p>	<p>Key Terminology (bold print priority items)</p>	<p>Essential Content & Understanding</p>	<p>Glencoe Resources</p>
<ul style="list-style-type: none"> • Measures of Central Tendency (moderate) • Mean and Median (moderate) • Changes in Data (moderate) 	<p>Box-and-Whisker Plots</p> <p>Line of Best Fit</p> <p>Measures of Central Tendency</p> <p>Measures of Variation</p> <p>Scatter Plot</p> <p>Mean</p> <p>Median</p> <p>Mode</p>	<ul style="list-style-type: none"> • Students will find the mean, median, and mode of a set of data. • Students will use the mean and median to describe and compare data sets. • Students will determine and describe how changes in data values impact measures of central tendency. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Grid paper, newspapers or magazines, graphing calculators, index cards, string, number cubes, counters, cylindrical objects, uncooked spaghetti, protractors, rulers, measuring sticks or tape, compasses</p> <p><u>Print Resources:</u> Leveled Worksheets p. 13 – 62, Chapter Quiz 1 – 3 p. 64 – 65 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources, IMPACT Mathematics: Unit H</i></p>

UNIT/ORGANIZING PRINCIPLE: Units of Measure		Pacing: 3rd / 4th Nine Weeks Days 126 – 138	
<p>Big Idea: MA.8.A.4.1 - Solve literal equations for a specified variable.</p> <p>MA.8.A.6.4 - Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers, and irrational numbers) using multi-step and real world problems.</p> <p>MA.8.G.5.1 - Compare, contrast, and convert units of measure between different measurement systems (US customary or metric (SI)) and dimensions including temperature, area, volume, and derived units to solve problems.</p> <p>LA.8.1.6.5 - The student will relate new vocabulary to familiar words.</p>		<p>Essential Question: Why is it important to know how to convert between units of measure?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Literal Equations (low) • Convert Temperatures (low, high) • Determine Reasonable Answers (high) 	<p>Celsius</p> <p>Degree</p> <p>Derived unit</p> <p>Fahrenheit</p> <p>Literal equation</p>	<ul style="list-style-type: none"> • Students will solve literal equations for an indicated variable. • Students will convert temperatures between Fahrenheit and Celsius scale. • Students will solve problems by determining reasonable answers. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Poster board, highlighters, thermometers, glass of ice water, glass of cold water from the faucet, glass of hot water from the faucet, grid paper, meter sticks, straightedge, centimeter ruler, inch ruler, 12-inch scraps of paper, sticky notes, pieces of string, masking tape, index cards, long pieces of string, centimeter grid paper, blue and red colored pencils or markers, yard sticks, construction paper, scissors, tape</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 43, Chapter Quiz 1 – 3 p. 45 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics: Unit I</i></p>

UNIT/ORGANIZING PRINCIPLE: Measurement: Area and Volume		Pacing: 4th Nine Weeks Days 139 – 150	
<p>Big Idea: MA.912.G.2.5 - Explain the derivation and apply formulas for perimeter and area of polygons (triangles, quadrilaterals, pentagons, etc.).</p> <p>MA.912.G.6.5 - Solve real-world problem s using measures of circumference, arc length, and areas of circles and sectors.</p> <p>MA.912.G.7.2 - Describe the relationships between the faces, edges, and vertices of polyhedra.</p> <p>MA.912.G.7.5 - Explain and use formulas for lateral area, surface area, and volume of solids.</p> <p>LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>		<p>Essential Question: Why is it important to know the measurements of plane and solid figures?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> Perimeter and Area (moderate) Circumference and Area of Circles (high) Arcs and Angles (high) Make a Model (moderate) Area of Composite Figures (moderate) 	<p>Circumference Composite Figure Cross Section Total Surface Area Volume Circle Center Radius Chord Diameter Pi Arc Central Angle Minor Arc Major Arc Semi-Circle Inscribed Angle</p>	<ul style="list-style-type: none"> Students will use a spreadsheet to solve real-world problems involving area and perimeter. Students will find the circumference and area of circles. Students will find the measure of arcs and inscribed angles. Students will solve problems by making a model. Students will find the area of composite figures. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Grid paper, rulers, circular objects such as CD's, tape measures, straightedges, transparency sheets, overhead pens, scissors, protractor, tracing paper, calculators, compasses, pattern blocks, tape, boxes, cans, index cards, rice, poster board, masking tape, plastic geosolids, base-ten unit cubes, empty cylinder-shaped cardboard container with lid, party hat,</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 58, Chapter Quiz 1 – 3 p. 60 – 61, <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics: Unit J</i></p>

UNIT/ORGANIZING PRINCIPLE: Properties and Multi-Step Equations and Inequalities		Pacing: 4th Nine Weeks Days 151 – 160	
<p>Big Idea: MA.912.A.3.1 - Solve linear equations in one variable that include simplifying algebraic expressions.</p> <p>MA.912.A.3.2 - Identify and apply the distributive, associative, and commutative properties of real numbers and the properties of equality.</p> <p>MA.912.A.3.5 - Symbolically represent and solve multi-step and real-world applications that involve linear equations and inequalities.</p> <p>LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>		<p>Essential Question: What are some similarities and differences between algebraic expressions and equations?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> • Properties (moderate) • The Distributive Property (moderate) • Simplify Algebraic Expressions (moderate) • Solve a Simpler Problem (moderate) 	<p>Coefficient</p> <p>Equivalent Expressions</p> <p>Like Terms</p> <p>Property</p> <p>Simplest Form</p> <p>Term</p>	<ul style="list-style-type: none"> • Students will identify and use mathematical properties to simplify algebraic expressions. • Students will apply the Distributive Property to rewrite algebraic expressions. • Students will simplify algebraic expressions. • Students will solve a simpler problem. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Marbles, bowls, grid paper, two-color counters, math tiles, integer mats, algebra files, pennies, rulers, white boards, balance scales, equation mats,</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 49, Chapter Quiz 1 – 3 p. 51 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics: Unit K</i></p>

UNIT/ORGANIZING PRINCIPLE: Non-Linear Functions and Polynomials		Pacing: 4 th Nine Weeks – Days 161 - ? (time permitting)	
<p>Big Idea: MA.912.A.2.6 - Identify and graph common functions (including but not limited to linear, rational, quadratic, cubic, radical, absolute value).</p> <p>MA.912.A.3.2 - Identify and apply the distributive, associative, and commutative properties of real number s and the properties of equality.</p> <p>MA.912.A.4.2 - Add, subtract, and multiply polynomials.</p> <p>MA.912.A.4.3 - factor polynomial expressions.</p> <p>MA.912.A.7.1 - Graph quadratic equations with and without graphing technology.</p> <p>LA.8.1.6.5 - The student will relate new vocabulary to familiar words;</p>		<p>Essential Question: In previous chapters you have learned to graph linear functions. What do you think the graph of a linear function looks like and why would you need to use one?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
<ul style="list-style-type: none"> Graph Quadratic Functions (moderate) Graph Cubic Functions (moderate) 	<p>Binomial</p> <p>Polynomial</p> <p>Quadratic Function</p> <p>Monomial</p> <p>Trinomial</p>	<ul style="list-style-type: none"> Students will graph quadratic functions. Students will graph cubic functions. 	<p><u>Digital:</u> Personal Tutor, Self-Check Quiz, Lesson Animation, Interactive Classroom, eSolutions Manual, Visual Vocabulary Cards, Virtual Manipulatives, Graphic Novel</p> <p><u>Materials:</u> Grid paper, straightedge, different-sized cubes, index cards, algebra tiles, integer mats, poster board, highlighters, colored pencils or markers, paper bags</p> <p><u>Print Resources:</u> Leveled Worksheets p. 12 – 65, Chapter Quiz 1 – 3 p. 67 - 69 , <i>Quick Review Math Handbook Hands-on Activity Tools and Resources</i>, <i>IMPACT Mathematics: Unit L</i></p>

UNIT/ORGANIZING PRINCIPLE: NGSSS Review		Pacing: 4th Nine Weeks - Days 161 - ? (time permitting)	
<p>Big Idea: NGSSS Review covers all Benchmarks Big Idea 1 – Analyze and represent linear functions and solve linear equations and systems of linear equations. Big Idea 2 – Analyze two-and three-dimensional figures by using distance and angle. Big Idea 3 – Analyze and summarize data sets. Supporting Ideas (Algebra, Geometry and Measurement, Numbers and Operations)</p>		<p>Essential Question: Are we ready for the FCAT?</p>	
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
			<p><u>Digital:</u></p> <p><u>Materials:</u> Textbook, calculator, paper, pencil</p> <p><u>Print Resources:</u> Textbook p. FL0 – FL25</p>

UNIT/ORGANIZING PRINCIPLE: Problem-Solving Projects			Pacing: 4 th Nine Weeks – Days 161 - ? (time permitting)
Learning Targets/Skills (Cognitive Complexity/Depth of Knowledge Rating)	Key Terminology (bold print priority items)	Essential Content & Understanding	Glencoe Resources
Project 1: Web Design 101 Project 2: Design That Bridge Project 3: Basketball All-Star Project 4: Green Thumb Project 5 : Music to My Ears		<ul style="list-style-type: none"> Students will research a country and design a Web page for that country. Students will create a detailed design of a new bridge for their city. Students will research the WNBA and assume a role as a sports statistician. Students will research plants and design a garden of their own. Students will research Pythagora's findings about music and then write their own piece of music. 	<u>Digital:</u> <u>Materials:</u> Project 1: Internet Project 2: Internet Project 3: Internet Project 4: Internet Project 5: Internet <u>Print Resources:</u>
Benchmarks			
<p>MA.8.A.1.1 - Create and interpret tables, graphs, and models to represent, analyze, and solve problems related to linear equations, including analysis of domain, range, and the difference between discrete and continuous data.</p> <p>MA.8.A.1.5 -Translate among verbal, tabular, graphical, and algebraic representations of linear functions.</p> <p>MA.8.G.2.1 - Use similar triangles to solve problems that include height and distances.</p> <p>MA.8.G.2.2 - Classify and determine the measure of angles, including angles created when parallel lines are cut by transversals.</p> <p>MA.8.G.2.4 - Validate and apply Pythagorean Theorem to find distances in real world situations or between points in the coordinate plane.</p> <p>MA.8.S.3.1 - Select, organize and construct appropriate data displays, including box and whisker plots, scatter plots, and lines of best fit to convey information and make conjectures about possible relationships.</p> <p>MA.8.S.3.2 - Determine and describe how changes in data values impact measures of central tendency.</p> <p>MA.8.G.5.1 - Compare, contrast, and convert units of measure between different measurement systems (US customary or metric (SI)) and dimensions including temperature, area, volume, and derived units to solve problems.</p> <p>MA.8.A.6.4 - Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers, and irrational numbers) using multi-step and real world problems.</p> <p>LA.8.2.2.3 - The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).</p>			