Course/Subject: McDougal Littell Algebra **CURRICULUM MAP** Grade: 8

	CURRICULUM *End Product of Learning, "What" You Teach*			***INSTRUCTION*** *Means to the End Product, "How" You Teach*	***ASSESSMENT*** *Validation to Revise Curriculum & Instruction*
TIME FRAME [By Date/Week/ Month]	**STANDARD OR BENCHMARK**	**CONTENT: What we want students to "KNOW".**	**SKILL: What we want students to "DO".**	**Varied Teaching/Learning Strategies Resources/Comments**	**Varied Classroom Assessment Strategies**
September	Chapter 1 Connections to Algebra (Pp3-39) **CCSS** 8.EE.1 8.EE.2 8.F.4 6.B.4 Select and use appropriate arithmetic operations in practical situations including calculating wages after taxes, developing a budget and balancing a checkbook. 7.A.4.a Apply units and scales to describe and compare numerical data and physical objects. 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density and monetary values. 10.A.4.a Represent and organize data by creating lists, charts, tables, frequency distributions,	Students will: - write and evaluate an expression. - check solutions to equations and inequality. - use verbal and algebraic models to represent real life situations. - organize data and represent functions.	Students will: - use variable expressions in real life situations. - use exponents in real life problem solving. - use organized data and graphs in real life situations.	(pp.3-39) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Quizzes Test Homework Checks Participation Projects Informal Observations Discussion

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	graphs, scatterplots and box-plots. 6.A.4 Identify and apply the associative, commutative, distributive and identity properties of real numbers, including special numbers such as pi and square roots. 6.d.4 Solve Problems involving recipes or mixtures, financial calculations and geometric similarity using ratios, proportions and percents. 8.A.4.b Represent mathematical patterns and describe their properties using variables and mathematical symbols. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.C.4.a Analyze and report the effects of changing coefficients, exponents and other parameters on functions and their graphs. 6.B.4 Select and use appropriate arithmetic operations in practical situations including calculating wages after taxes, developing a budget and balancing a checkbook. 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area,				

	volume, angle, time, temperature, mass, speed, distance, density and monetary values. 8.b.4a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 10.A.4.a Represent and organize data by creating lists, charts, tables, frequency distributions, graphs, scatterplots and box-plots. 8.D.4 Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, calculators and computers. 8.C.4.b Apply algebraic properties and procedures with matrices, vectors, functions and sequences using data found in business, industry and consumer situations.				
	Chapter 2 Properties of Real Numbers (pp. 63-127) **CCSS** 8.NS.1 8.NS.2 6.A.4 Identify and apply the associative, commutative,	Students will: - add, subtract, and multiply real numbers. - determine the likelihood of an event using probabilities and odds.	Students will be able to: - graph and compare real numbers. - use absolute values of numbers in real life application. - organize data in a matrix. - add and subtract matrices.	(pp. 63-127) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Quizzes Test Homework Checks Participation Projects Informal Observations Discussions

	distributive and identity properties of real numbers, including special numbers such as pi and square roots. 6.b.4 Select and use appropriate arithmetic operations in practical situations including calculating wages after taxes, developing a budget and balancing a checkbook. 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density and monetary values. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships. 8.C.4.b Apply algebraic properties and procedures with matrices, vectors, functions and sequences using data found in business, industry and consumer situations.		- use the distributive property. - simplify expressions by combining like terms. - find the probability of an event. - find the odds of an event.		

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	Chapter 3 Solving Linear Equations (pp.132-197) **CCSS** 8.EE.5 8.EE.7 * 8.EE.7a * 8.EE.7b 6.B.4 Select and use appropriate arithmetic operations in practical situations including calculating wages after taxes, developing a budget and balancing a checkbook. 6.A.4 Identify and apply the associative, commutative, distributive and identity properties of real numbers, including special numbers such as pi and square roots. 7.A.4.a Apply units and scales to describe and compare numerical data and physical objects. 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density, and monetary values. 7.C.4.a Make indirect measurements, including heights and distances, using proportions (e.g., finding the heights of a tower by its shadow).	Students will: - learn techniques for solving linear equations. - learn ways to apply ratios, rates, percents, and problem solving strategies.	Students will: - solve linear equations using addition and subtraction. - use linear equations to solve real life problems. - use two or more transformations to solve an equation. - use multi-step equations to solve real life problems. - find exact and approximate solutions that contain decimals. - solve a formula for literal equations for one of its variables. - rewrite an equation in functional form. - use rates and rations and solve. - use percents and solve real life problems.	(Pg. 132-197) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Quizzes Test Homework Checks Participation Projects Informal Observation Discussion

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	8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations, and inequalities and use appropriate technology. 8.D.4 Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, calculators and computers.				
	Chapter 4 Graphing Linear Equations (pp.203-269) **CCSS** 8.EE.5 8.EE.6 8.F.3 8.F.4 8.F.5 8.SP.1 8.SP.2 8.SP.3 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density, and monetary values. 7.B.4 Estimate and measure the	Students will: - graph a linear equation. - learn two ways to graph linear equations quickly. - learn how to tell whether an equation or a graph represent a function.	Students will: - draw a scatter plot and make predictions about real life situations. - graph a linear equation. - graph a horizontal and vertical line. - find the intercept of the graph of a linear equation. - use intercepts to make a quick graph. - find the slope of a line using two points. - interpret slope as a rate of change in real life situations. - graph a line equation in slope-intercept form. - solve linear equations graphically. - use graphs to solve real life problems.	(Pg. 203-269) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Quizzes Test Homework Checks Participation Projects Informal Observation Discussion

	magnitude and directions of physical quantities (e.g. velocity, force, slope) using rulers, protractors, and other scientific instruments including timers, calculators and computers. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations, and inequalities and use appropriate technology. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships. 8.C.4.a Analyze and report the effects of changing coefficients, exponents and other parameters on functions and their graphs. 8.D.4 Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, calculators and computers. 10.A.4.a Represent and organize data by creating lists, charts, tables, frequency distributions, graphs, scatterplots and box-plots. 10.A.4.c Predict from data using interpolation, extrapolation and trend lines, with and without the use of technology.				
	Chapter 5				

	Writing Linear Equations (pp. 273-329) **CCSS** 8.EE.5 8.EE.6 8.F.2 8.F.3 8.F.4 8.F.5 8.SP.1 8.SP.2 8.SP.3 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships. 8.C.4.b Apply algebraic properties and procedures with matrices, vectors, functions and sequences using data found in business, industry and consumer situations. 8.C.4.a Analyze and report the effects of changing coefficients, exponents and other parameters on functions and their graphs. 10.A.4.a Represent and organize data by creating ists, charts, tables, frequency distributions,	Students will: - learn three forms of linear equations. - write a linear equation given a point and a slope, or given two points. - write an equation of a line perpendicular to one another. - fit a line to data and use linear interpolation or linear extrapolation.	Students will: - use slope-intercept form to write the equation of a line. - use slope and any point on a line to write an equation of a line. - write and equation of a line given two points. - find a linear equation that approximates a set of data points. - determine whether there is a positive or negative correlation to a set of real life data. - use point-slope form to write an equation of a line. - write a linear equation in standard form.	(Pg. 273-329) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Quizzes Test Homework Checks Participation Projects Informal Observation Discussion

	graphs, scatterplots and box-plots. 10.A.4.c Predict from data using interpolation, extrapolation and trend lines, with and without the use of technology.				
	Chapter 6 Solving and Graphing Linear Inequalities (pp.334-391) **CCSS** 8.EE.1 8.EE.2 8.SP.4 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships. 8.C.4.b Apply algebraic properties and procedures with matrices, vectors, functions and sequences data found in business, industry and consumer situations. 8.D.4 Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, calculators and	Students will: - solve and graph inequalities. - solve and graph absolute equations and inequalities. - use the measure of central tendencies and statistical plots.	Students will: - graph linear inequalities with one variable. - solve one-step linear inequalities. - solve multi-step linear inequalities. - write, solve, and graph compound inequalities. - solve absolute values equations and inequalities. - graph a linear inequality with two variables. - solve real life problems using a linear inequality with two variables. - use stem-and-leaf plots. - Use box and whisker plots to organize real life data.	(Pg. 334-391) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Test Quizzes Homework Projects Participation Informal Observation Discussion

	computers.				
	Chapter 7 Systems of Linear Equations and Inequalities (pp. 398-445) **CCSS** 8.EE.8 * 8.EE.8a * 8.EE.8b * 8.EE.8c 6.D.4 Solve problems involving recipes or mixtures, financial calculations and geometric similarity using ratios, proportions and percents. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships. 8.C.4.b Apply algebraic properties and procedures with matrices, vectors, functions and sequences using data found in business, industry and consumer situations. 8.D.4 Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, calculators and computers.	Students will: - learn three methods for solving a system of Linear Equations. - determine the number of solutions of a linear system. - graph and solve a system of linear inequalities.	Students will: - solve a system of linear equations by graphing. - solve a system of linear equations using substitution. - solve a system of linear equations using a linear combinations. - solve a system of linear equations with real life problem. - identify linear systems with one solution, no solution, and infinite solution. - solve a system of linear inequalities with graphing.	Pg. 398-445 Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Test Quizzes Homework Checks Projects Participation Informal Observation Discussion

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	Chapter 8 Exponents and Exponential Functions (pp. 450-499) **CCSS** 8.EE.3 8.EE.4 6.A.4 Identify and apply the associative, commutative, distributive and identity properties of real numbers, including special numbers such as pi and square roots. 7.A.4.a Apply units and scales to describe and compare numerical data and physical objects. 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density and monetary values. 7.C.4.c Convert within and between measurement systems and monetary systems using technology where appropriate. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.C.4.a Analyze and report the effects of changing coefficients, exponents and other	Students will: - multiply and divide expressions with exponents. - use scientific notations in problem solving. - use exponential growth and decay models to solve real life problems.	Students will: - use exponential properties to multiply exponential expressions. - evaluate powers that have zero and negative exponents. - use the division property of exponent to evaluate powers and simplify expressions. - use scientific notations in real life situations. - Write and use models for exponential growth	(pp. 450-499) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Test Quizzes Homework Checks Projects Participation Informal Observation Discussion

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	parameters on functions and their graphs. 10.C.4.a Solve problems of chance using the principles of probability including conditional settings. 10.C.4.c Propose and interpret discrete probability distributions, with and without the use of technology. 10.A.4.a Represent and organize data by creating lists, charts, tables, frequency distributions, graphs, scatterplots and box-plots. 10.B.4 Design and execute surveys or experiments, gather data to answer relevant questions, and communicate results and conclusions to an audience using traditional methods and contemporary technology.				
	Chapter 9 Quadratic Functions and Equations (pp. 504-569) **CCSS** 6.A.4 Identify and apply the associative, commutative, distributive and identity properties of real numbers, including special numbers such as pi and square roots. 6.C.4 Determine whether exact values or approximations are appropriate (e.g., bid a job, determine gas mileage for a trip).	Students will: - evaluate and approximate square roots. - simplify radicals. - solve a quadratic equations. - sketch the graph of a quadratic function and a quadratic inequality.	Students will: - evaluate and approximate square roots. - solve quadratic equations by finding square roots. - use properties of radicals to simplify radicals. - sketch the graph of a quadratic function. - solve a quadratic equation graphically and algebraically. - use the discriminant to find the number of solutions of a quadratic	(pp. 504-569) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Test Quizzes Homework Checks Projects Participation Informal Observation Discussion

	7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density and monetary values. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.C.4.a Analyze and report the effects of changing coefficients, exponents and other parameters on functions and their graphs. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships.		equation. - sketch the graph of a quadratic inequality.		
	Chapter 10 Polynomials and Factoring (pp. 576-639) **CCSS** 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density and monetary values. 8.B.4.a Represent algebraic concepts with physical materials,	Students will: - add, subtract, and multiply polynomials. - factor polynomials. - solve polynomial equations by factoring.	Students will be able to: - add, subtract, and multiply polynomials. - use special product patterns. - solve a polynomial equation in factored form. - factor a quadratic expression of the standard form. - solve a quadratic equation by factoring. - use special product patterns to factor quadratic polynomials.	(pp. 576-639) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Test Quizzes Homework Check Projects Participation Informal Observation Discussion

	words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships. 8.C.4.a Analyze and report the effects of changing coefficients, exponents and other parameters on functions and their graphs. 10.A.4.a Represent and organize data by creating lists, charts, tables, frequency distributions, graphs, scatter plots and box-plots.		- use the distributive property to factor a polynomial.		
	Chapter 11 Rational Equations and Functions (pp. 644-705) **CCSS** 8.NS.1 8.NS.2 8.EE.7 * 8.EE.7a * 8.EE.7b 6.B.4 Select and use appropriate arithmetic operations in practical situations including calculating wages after taxes, developing a budget and balancing a checkbook. 7.C.4.a Make indirect measurements, including heights and distances, using proportions (e.g., finding the height of a	Students will: - solve rational equations. - add, subtract, multiply, and divide rational expressions. - graph rational functions.	Students will: - solve and write proportions. - solve percent problems in real life situations. - simplify a rational expressions. - multiply and divide rational expressions. - add and subtract rational expressions. - divide a polynomial by a monomial or binomial factor. - solve rational equations.	(pp. 664-705) Algebra Textbook Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Test Quizzes Homework Check Projects Participation Informal Observation Discussion

	tower by its shadow). 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density and monetary values. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology. 8.D.4 Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, calculators and computers. 8.C.4.b Apply algebraic properties and procedures with matrices, vectors, functions and sequences using data found in business, industry and consumer situations. 10.C.4.a Solve problems of chance using the principles of probability including conditional settings. 10.C.4.c Propose and interpret discrete probability distributions, with and without the use of technology.				
	Chapter 12 Radical and connections to Geometry	Students will: - solve a radical equation and graph radical functions.	Students will: - evaluate and graph square root functions.	(pp. 710-773) Algebra Textbook	Test Quizzes Homework

	(pp.710-773) **CCSS** 8.G.6 8.G.7 8.G.8 6.D.4 Solve problems involving recipes or mixtures, financial calculations and geometric similarity using ratios, proportions and percents. 6.A.4 Identify and apply the associative, commutative, distributive and identity properties of real numbers, including special numbers such as pi and square roots. 7.A.4.a Apply units and scales to describe and compare numerical data and physical objects. 7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area, volume, angle, time, temperature, mass, speed, distance, density and monetary values. 8.B.4.b Use the basic functions of absolute value, square root, linear, quadratic and step to describe numerical relationships. 8.B.4.a Represent algebraic concepts with physical materials, words, diagrams, tables, graphs, equations and inequalities and use appropriate technology.	- apply the Pythagorean theorem.	- add, subtract, multiply and divide radical expressions. - solve a radical equation. - solve a quadratic equation by completing the square. - use Pythagorean theorem and it's converse. - find distance and midpoint between two points in a coordinate plane.	Challenge Activities Brain Pop Khan Academy Independent Work Cooperative Group Work Study Guide Investigation	Projects Participation Informal Observation Discussion

	8..D.4 Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear inequalities using graphs, tables, calculators and computers. 9.A.4.b Make perspective drawings, tessellations and scale drawings, with and without the use of technology. 9.B.4 Recognize and apply relationships within and among geometric figures. 9.C.4.a Construct and test logical arguments for geometric situations using technology where appropriate. 9.C.A.b Construct and communicate convincing arguments for geometric situations. 9.C.4.c Develop and communicate mathematical proofs (e.g., two column, paragraph, indirect) and counter examples for geometric statements. 9.D.4 Analyze and solve problems involving triangles (e.g., distances which cannot be measured directly) using trigonometric ratios.				

Notes: CCSS not addressed include 8.G.1 a-c, 8.G.2, 8.G.3, 8.G.4, 8.G.5, 8.G.9. However, they are taught in the seventh grade curriculum.