Course/Subject: McDougal Littell Algebra

CURRICULUM MAP

Grade: 8

		<u>CURRICULUM</u>		<u>INSTRUCTION</u>	ASSESSMENT Validation to Revise
	End Pi	roduct of Learning, "What" You	ı Teach	Means to the End Product, "How" You Teach	Curriculum & Instruction
TIME FRAME [By STAN] Date/Week/ BEN(Month]	DARD OR CHMARK	CONTENT: What we want students to "KNOW".	SKILL: What we want students to "DO".	Varied Teaching/Learning Strategies Resources/Comments	Varied Classroom Assessment Strategies
SeptemberChapter 1Connections(Pp3-39)CCSS8.EE.18.EE.28.F.46.B.4Select and us appropriate a operations in situations inc calculating w taxes, develo and balancing7.A.4.aApply units a scales to desc compare num and physical7.A.4.bApply formu wide variety and practical measurement involving per volume, angl temperature, distance, den monetary val10.A.4.aRepresent an organize data lists, charts, 1	e rithmetic practical huding vages after ping a budget g a checkbook. a checkbook. und cribe and herical data objects. las in a of theoretical real-world t applications rimeter, area, e, time, mass, speed, sity and ues. d by creating ables,	 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	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 identify 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,					

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volume temper distanc moneta 8.b.4a Repres concep materia tables, inequal approp 10.A.4 Repres by crea tables, distribu scatterp 8.D.4 Formul linear a equatic inequal and inv inequal tables, compu 8.C.4.b Apply and pro	e, angle, time, rature, mass, speed, ce, density and ary values. sent algebraic pts with physical als, words, diagrams, graphs, equations and ulities and use priate technology. 4.a sent and organize data ating lists, charts, frequency utions, graphs, plots and box-plots. ulate and solve and quadratic ons and linear ulities using graphs, calculators and iters. b algebraic properties ocedures with matrices, s, functions and nees using data found in ress, industry and mer situations.				
Chapte	er 2	Students will:	Students will be able to:	(pp. 63-127)	Quizzes
Propert	ties of Real Numbers	- add, subtract, and multiply real numbers.	- graph and compare real numbers.	Algebra Textbook	Test
(pp. 63	3-127)	- determine the likelihood	- use absolute values of	Challenge Activities	Homework Checks
CCSS		of an event using probabilities and odds.	numbers in real life application.	Brain Pop	Participation
8.NS.1 8.NS.2	2		- organize data in a	Khan Academy	Projects
			matrix.	Independent Work	Informal Observations
6.A.4 Identif	fy and apply the		 add and subtract matrices. 	Cooperative Group Work	Discussions
associa	ative, commutative,			Study Guide Investigation	

distributive and identity properties of real numbers, including special numbers such as pi and square roots. - use the distributive property. 6.b.4 - simplify expressions by combining like terms. 6.b.4 - find the probability of an event. arithmetic operations in practical situations including calculating wages after taxes, developing a budget and balancing a checkbook. - find the odds of an event. 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 concenter with provincial -	
Concepts with prystall materials, works, 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.	

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Chapter 3	Students will:	Students will:	(Pg. 132-197)		Quizzes
Solving Linear Equations	- learn techniques for	- solve linear equations	Algebra Textbook		Test
(pp.132-197)	solving linear equations.	subtraction.	Challenge Activities		Homework Checks
CCSS	ratios, rates, percents, and problem solving	- use linear equations to solve real life problems	Brain Pop		Participation
8.EE.5 8.EE.7	strategies.	- use two or more	Khan Academy		Projects
* 8.EE.7a * 8.EE.7b		transformations to solve an equation.	Independent Work		Informal Observation
		- use multi-step equations	Cooperative Group Work		Discussion
 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). 		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.	Study Guide Investigation		

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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.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	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. 	(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

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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.					

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	Writing Linear Eduations	Students will:	Students will:	(Pg. 273-329)	Quizzes
	(pp. 273-329)	- learn three forms of linear equations.	- use slope-intercept form to write the equation of a	Algebra Textbook	Test
	CCSS	- write a linear equation	line.	Challenge Activities	Homework Checks
	0 EE 5	given a point and a slope, or	- use slope and any point	Design Des	Denticipation
	8.EE.6	given two points.	equation of a line.	Brain Pop	Participation
	8.F.2	- write an equation of a line perpendicular to one another.	- write and equation of a	Khan Academy	Projects
	8.F.3 8.F.4	- fit a line to data and use linear	line given two points.	Independent Work	Informal Observation
	8.F.5	interpolation or linear extrapolation	- find a linear equation that approximates a set of	Cooperative Group Work	Discussion
	8.SP.1 8 SP 2		data points.	Study Guide Investigation	
	8.SP.3		- determine whether		
			negative correlation to a		
	8.B.4.a		set of real life data.		
	Represent algebraic concepts with physical materials,		- use point-slope form to write an equation of a		
	words, diagrams, tables, graphs, equations and		line.		
	inequalities and use appropriate technology.		- write a linear equation in standard form.		
	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				
	the effects of changing				
	other parameters on				
	functions and their graphs.				
	10.A.4.a Represent and organize data				
	by creating ists, charts, tables, frequency distributions,				

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	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	Students will:	Students will:	(Pg. 334-391)	
	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 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

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• 	computers.				
	Chapter 7	Students will:	Students will:	Pg. 398-445	Test
	Systems of Linear Equations and Inequalities	- learn three methods for	- solve a system of linear equations by graphing.	Algebra Textbook	Quizzes
	(pp. 398-445)	solving a system of Linear Equations.	- solve a system of linear	Challenge Activities	Homework Checks
	CCSS	- determine the number of	substitution.	Brain Pop	Projects
	8.EE.8 * 8 FF 8a	- graph and solve a system of	- solve a system of linear	Khan Academy	Participation
	* 8.EE.8b * 8 EE.8c	linear inequalities.	combinations.	Independent Work	Informal Observation
	6 D.4		- solve a system of linear equations with real	Cooperative Group Work	Discussion
	Solve problems involving recipes or mixtures, financial		life problem.	Study Guide Investigation	
	calculations and geometric similarity using ratios.		- identify linear systems with one solution, no		
	proportions and percents.		solution, and infinite solution.		
	8.B.4.a Represent algebraic concepts		- solve a system of		
	with physical materials, words, diagrams, tables,		linear inequalities with graphing.		
	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				
	graphs, tables, calculators and computers.				

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Chapter 8	Students will:	Students will:	(pp. 450-499)	Test
Exponents and Exponential Functions	- multiply and divide expressions with exponents.	- use exponential properties to multiply	Algebra Textbook	Quizzes
(pp. 450-499)	- use scientific notations in	exponential expressions.	Challenge Activities	Homework Checks
CCSS	problem solving.	- evaluate powers that have zero and negative	Brain Pop	Projects
8.EE.3 8.EE.4	- use exponential growth and decay models to solve real life	exponents.	Khan Academy	Participation
6.A.4	problems.	 use the division property of exponent 	Independent Work	Informal Observation
Identify and apply the associative, commutative,		to evaluate powers and simplify expressions.	Cooperative Group Work	Discussion
distributive and identity properties of real numbers,		- use scientific notations	Study Guide Investigation	
including special numbers such as pi and square roots.		in real life situations.		
7.A.4.a Apply units and scales to describe and compare numerical data and physical objects.		- Write and use models for exponential growth		
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				

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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		Students will:		
	Quadratic Functions and	Students will:	Students with	(pp. 504-569)	Test
	(pp. 504-569)	- evaluate and approximate	approximate square roots.	Algebra Textbook	Quizzes
	CCSS	square roots.	- solve quadratic	Challenge Activities	Homework Checks
		- simplify radicals.	square roots.	Brain Pop	Projects
	Identify and apply the	- solve a quadratic equations.	- use properties of	Khan Academy	Participation
	distributive, commutative,	- sketch the graph of a quadratic function and a	radicals to simplify radicals.	Independent Work	Informal Observation
	including special numbers	quadratic mequality.	- sketch the graph of a	Cooperative Group Work	Discussion
				Study Guide Investigation	
	Determine whether exact values or approximations are appropriate (e.g. bid a job		- solve a quadratic equation graphically and algebraically.		
	determine gas mileage for a trip).		- use the discriminant to find the number of solutions of a quadratic		

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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.		equation. - sketch the graph of a quadratic inequality.		
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.				
Chapter 10 Polynomials and Factoring	Students will: - add, subtract, and multiply	Students will be able to: - add, subtract, and multiply polygomials	(pp. 576-639)	Test Quizzes
(bp. 576-659) CCSS	- factor polynomials.	- use special product	Algebra Textbook Challenge Activities	Homework Check
7.A.4.b Apply formulas in a wide variety of theoretical and practical real-world measurement applications involving perimeter, area,	- solve polynomial equations by factoring.	 solve a polynomial equation in factored form. factor a quadratic expression of the standard 	Brain Pop Khan Academy Independent Work	Participation Informal Observation Discussion
volume, angle, time, temperature, mass, speed, distance, density and monetary values.		form. - solve a quadratic equation by factoring.	Cooperative Group Work Study Guide Investigation	
8.B.4.a Represent algebraic concepts with physical materials,		 use special product patterns to factor quadratic polynomials. 		

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words, diagrams, tables, graphs, equations and inequalities and use appropriate technology.		- use the distributive property to factor a polynomial.		
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.				
Chapter 11 Rational Equations and Functions (pp. 644-705) CCSS 8.NS.1 8.NS.2 8.EE.7 * 8.EE.7a * 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.	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
7.C.4.a Make indirect measurements, including heights and distances, using proportions (e.g., finding the height of a				

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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.				
			(710 772)	Test
Chapter 12 Radical and connections to	- solve a radical equation and	- evaluate and graph	(pp. /10-//3) Algebra Textbook	Quizzes
Geometry	Bruph rutheur fulletions.	square root functions.		TOHICWOIK

(pp.710-773) - apply the Pythagorean - add, subtract, multiply Projects Projects	
CCSSlabertern.and divide radical expersions.Brain PopParticipation Participation Informal ObS.G.6 S.G.7 S.G.7 S.G.8S.G.8- solve a radical equation equation calculations and percents solve a radical equation equation by completion in dependent. WorkDiscussionG.D.A Solve problems involving recipes or matures, financial calculations and percents solve a quadratic equation by completion in dependent. WorkDiscussionA.A.4 Identify and apply the associative, commutative, distributive and square roots find distance and megorotom sole percents find distance and megorotom sole percents.	ervation

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8D.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.