Grade	9				

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Curriculum Map

Subject:

Algebra I

Time	NY Standards	Concepts (Unit/Theme)	Student Objectives The student will (TSW)	Essential Questions	Assessments	Vocabulary	Resources
15 days	A-SSE.1 N-Q.1 A-SSE.2 A-CED.2 A-CED.1 A-REI.1 A-SSE.3	Unit 1: The Blocks of Algebra	 Solve problems dealing with rates and patterns Understand variables and expressions Use the commutative, associative and distributive properties See structure in equivalent expressions Use exponents as repeated multiplication Translate English to Algebra 	How can you represent quantities, patterns, and relationships? How can properties be used to compute more efficiently? How are properties related to Algebra? Why is a universally accepted set of rules for evaluating a mathematical expression essential?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Algebraic expression, coefficient, equivalent expressions, evaluate, integers, like terms, order of operations, real number, simplify, term variable, associative, commutative, distributive, rates	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy

Reflection:		

Grade	9	

Subject: Algebra I

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Curriculum Map

Time	NY	Concepts (Unit/Thorne)	Student Objectives	Essential Questions	Assessments	Vocabulary	Resources
Time 22 days	A-CED.1 A-REI.3 A-REI.1 A-CED.3 A-CED.4 A-SSE.1(b)	Concepts (Unit/Theme) Unit 2: Linear Expressions, Equations, and Inequalities	Student Objectives The student will (TSW) Solve one step equations in one variable Solve two step equations in one variable Solve multi-step equations in one variable Solve equations with variable on both sides Identify equations that are identities or have no solution	Essential Questions Can equations that appear to be different be equivalent? How can you solve equations? What kinds of relationships can proportions represent?	Assessments Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Vocabulary Equation, Inequality, equivalent equations, formula, inverse operations, literal equation, expression, linear, justify, compound inequalities, interval notation, at least, at most, sum, difference, product, quotient, less than, subtracted from, twice, square, constant	Emathinstructio Test wizard Google classroom Castle learning Youtube
			 Rewrite and use literal equations and formulas Solve linear word problems Justify steps in solving an equation Solve Inequalities Use interval notation Model with inequalities Solve Consecutive Integer problems Solve compound inequalities 				Mathaids Kahn academy

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Subject:____Algebra I____

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Curriculum Map

Time	NY Standards	Concepts (Unit/Theme)	Student Objectives The student will (TSW)	Essential Questions	Assessments	Vocabulary	Resources
16 days	F-IF.1 F-IF.2 F-IF.7(a) F-IF.4 F-IF.5 F-IF.6 N-Q.1	Unit 3: Functions	 Find domain and range and use function notation Write equations that represent functions Determine whether a relation is a function Understand Function notation Find the average rate of change Graph equations that represent functions Use the graphing calculator to graph functions and identify tables 	How can you represent and describe functions? Can functions describe realworld situations?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Average rate of change, slope, relation, function, vertical line test, graph, table, domain, range, function notation, table	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy
25 days	F-IF.7(a) A-CED.2 N-Q.1 F-IF.6 F-LE.1(a) F-LE.2 N-Q.2 F-IF.5 F-BF.1(a) F-LE.1(b)	Unit 4: Linear Functions and Arithmetic Sequences	 Represent mathematical relationships using graphs Identify and represent patterns that describe linear functions Identify and represent patterns that describe nonlinear functions Identify and extend patterns in sequences Represent arithmetic sequences using function 	What does the slope of a line indicate about the line? What information does the equation of a line give you?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Continuous graph, dependent variable, discrete graph, domain, function, independent variable, linear function, nonlinear function, range, recursive formula, relation, sequence, slope, y-intercept, absolute value, step functions, inequalities, solutions, solution set, arithmetic sequence, explicit formula, vertical, horizontal, proportional, non-	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy

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Grade <u>9</u>						
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Subject:

Algebra I

Curriculum Map

Time	NY Standards	Concepts (Unit/Theme)	Student Objectives The student will (TSW)	Essential Questions	Assessments	Vocabulary	Resources
13 days	F-LE.5 ASSE.1(a) A-CED.3 F-IF.7(b) F-IF.4 A-REI.10 A-REI.12 F-IF.3 F-BF.1(a) A-CED.2 A-REI.6 A-REI.10 A-REI.5 A-CED.3 A-REI.11 A-REI.12	Unit 5: Systems of Equations and Inequalities	The student will (TSW) notation Graph absolute value and step functions Identify proportional and non-proportional relationships Convert units Write equations in slope intercept form Model with linear functions Graph vertical and Horizontal lines Graph linear inequalities Find a solution to a system Solve by graphing Solve by substitution Solve by elimination Solve systems of inequalities		Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	proportional, ordered pair, Solution, origin Solution, solution set, solving graphically, solving algebraically, elimination, substitution, inequalities, inconsistent system	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids
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Curriculum Map

Time	NY Standards	Concepts (Unit/Theme)	Student Objectives The student will (TSW)	Essential Questions	Assessments	Vocabulary	Resources
20 days	A-SSE.3(c) A-CED.2 F-IF.5 F-BF.1(a) F-LE.1(c) F-LE.2 F-IF.6 A-CED.1 F-LE.5 F-LE.3 N-Q.2 A-SSE.1(a) A-CED.1 F-IF.6 F-LE.1(a) F-IF.6 F-LE.1(a) F-BF.1(a) F-LE.1(b) A-CED.3 F-IF.3	Unit 6: Exponents, Exponents and More Exponents	 Simplify expressions involving exponents Rewrite zero and negative exponents Solve exponential growth problems Understand exponential functions Understand percent Solve problems with percent increase and decrease Understand the difference between linear and exponential Understand geometric sequences 	How can you represent numbers less than 1 using exponents? How can you simplify expressions involving exponents? What are the characteristics of exponential functions?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Exponents, zero exponent, simplify, expressions, negative exponents, exponential growth, exponential functions, percent, percent increase, percent decrease, linear vs. exponential, geometric sequence, common ratio, interest, compound interest, interest, exponential decay, sales tax, discount	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy
15 days	A-APR.1 A-SSE.1(a) A-SSE.1(b) A-SSE.2	Unit 7: Polynomials	 Understand polynomials Add and subtract polynomials Multiply polynomials Factor polynomials Factor conjugate pairs Factor Trinomials 	Can two algebraic expressions that appear to be different be equivalent? How are the properties of real numbers related to polynomials?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Polynomial, monomial, binomial, trinomial, factor, conjugate pairs, DOTS, distribute, product, sum, difference, subtracted from, coefficient, perfect square, Perfect square trinomial, degree of a monomial, degree of a polynomial, standard form	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy

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Curriculum Map

Time	NY Standards	Concepts (Unit/Theme)	Student Objectives The student will (TSW)	Essential Questions	Assessments	Vocabulary	Resources
20 days	A-CED.3 F-IF.4 F-IF.7(a) F-BF.3 A-SSE.3(b) F-IF.8(a) F-IF.9 A-APR.3 A-REI.4(b) A-CED.1	Unit 8: Quadratic Functions and their Algebra	 Understand Quadratic functions Identify characteristics of a parabola Shift a parabola Complete the square of a quadratic Stretch a parabola Find the zeros of a quadratic Use the zero product law Solve quadratic word problems 	What are the characteristics of quadratic functions? How can you solve a quadratic equation? How can you use functions to model real-world situations?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Maximum, minimum, quadratic, parabola, axis of symmetry, roots, zeros, x-intercepts, y-intercept, complete the square, vertical shift, horizontal shift, stretch, narrower, wider, opens upward, opens downward, vertex, turning point, area	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy
20 days	ASSE.1(b) A-REI.4(b) N-RN.3 A-REI.4(a) A-SSE.3(a) F-IF.1 F-IF.6 F-IF.7(b) F-BF.3	Unit 9: Roots and Irrational Numbers	 Understand square roots Identify and understand irrational numbers Shift square root functions Solve quadratics using inverse operations Find zeros by completing the square Solve quadratics using the quadratic formula Understand cube roots 	How are radical expressions represented? What are the characteristics of square root functions?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Perfect square, square root, irrational, rational, whole numbers, integers, counting numbers, real numbers, inverse operations, quadratic formula, cube roots	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy

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Algebra I

Curriculum Map

Time	NY Standards	Concepts (Unit/Theme)	Student Objectives The student will (TSW)	Essential Questions	Assessments	Vocabulary	Resources
20 days	N-Q.1 S-ID.1 S-ID.3 S-ID.2 N-Q.2 S-ID.5 S-ID.6(a) S-ID.6(c) S-ID.9 S-ID.8 S-ID.6(b)	Unit 10: Statistics	 Understand graphical displays of data Read quartiles and box plots Find measures of central tendency Understand variation within a data set Draw conclusions from twoway frequency tables Bivariate data analysis Find linear regression on a calculator Find other types of regression Quantify Predictability Understand residuals 	How can collecting and analyzing data help you make decisions or predictions? How can you make and interpret different representations of data?	Bell ringers Homework Quizzes Test Exit tickets Supplemental classwork	Measure of central tendency, outlier, lower quartile, dot plot, upper quartile, median, average, mean, range, interquartile range, linear regression, exponential regression, quadratic regression, bivariate, data, box plots, frequency tables, residuals, variation, correlation coefficient	Emathinstruction Test wizard Google classroom Castle learning Youtube Mathaids Kahn academy

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Time	NY	Concepts	Student Objectives	Curriculum Map Essential Questions	Assessments	Vocabulary	Resources		
1 11110	Standards	(Unit/Theme)	The student will (TSW)	Localitial Quotions	710000011101110	Vocabalary	Tresouros.		

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