Quincy Catholic Academy – Quincy, MA

Curriculum Map

Subject: ALGEBRA I Grade: 8

Time Frame	Topic	Content	Resources	Standards	Assessments
SEPTEMBER	Foundations for Algebra Solving Equations	 Variables and Expressions Order of Operations Evaluating Expressions Real Numbers and the Number Line Properties of Real Numbers Adding and Subtracting Real Numbers Multiplying and Dividing Real Numbers The Distributive Property Introduction to Equations Patterns, Equations and Graphs Solving One-Step Equations Solving Two-Step Equations Solving Multi-Step Equations Solving Equations with Variables on Both Sides 	Student Text Online Text Chalk Board Smart Board White Board Khan Academy Pearson Teacher Resources Chrome Books Calculators Manipulatives	A.SSE.A.1a N.RN.A.3 A.CED.A.1 A.REI.D.10 A.REI.B.3	

		Literal Equations and	Student Text	A.CED.A.1	
OCTOBER	Solving Equations	Formulas	Online Text	A.REI.B.3	
OCTOBER		 Rations, Rates and 	Chalk Board	A.CED.A.4	
		Conversions	Smart Board	N-Q.A.3	
		 Solving Proportions 	White Board		
		Proportions and Similar	Khan Academy		
		Figures	Pearson Teacher		
		Percents	Resources		
		Change Expressed as a	Chrome Books		
	Solving Inequalities	percent	Calculators		
		 Inequalities and their graphs 	Manipulatives		
		Solving inequalities using			
		Addition and Subtraction			
		 Solving Inequalities using 			
		Multiplication and Division			
		 Solving Multi-step Inequalities 			
		Working with Sets			
		 Compound Inequalities 			
		 Absolute Value Equations 			
		and Inequalities			
		 Unions and Intersections of 			
		Sets			
		 Patterns Equations and 			
		Graphs			

NOVEMBER	An Introduction to Functions Linear Functions	 Unions and Intersections of Sets Patterns Equations and Graphs Using Graphs to Relate Two Quantities Patterns and Linear Functions Patterns and Nonlinear Functions Graphing a Function Rule Writing a Function Rule Formalizing Relations and 	Student Text Online Text Chalk Board Smart Board White Board Khan Academy Pearson Teacher Resources Chrome Books Calculators Manipulatives	A.REI.D.10 A.REI.D.11F -IF.B. N-Q.A.2 F-IF.A.1 F-IF.A.3 F.LE.A.1b F.BF.B.3	
		Functions			
DECEMBER	Linear Functions	 Slope-Intercept Form Point-Slope Form Standard Form Inverse of a Linear Function Parallel and Perpendicular Lines Scatter Plots and Trend Lines Graphing Absolute Value Functions Characteristics of Absolute Value Graphs 	Student Text Online Text Chalk Board Smart Board White Board Khan Academy Pearson Teacher Resources Chrome Books Calculators Manipulatives	F.IF.C.7a F.LE.A.2 A.CED.A.2 F.BF.B.4a G.GPE.B.5 S-ID.B.6c S-ID.B.6b F.BF.B.3 F.IF.C.7b	

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	Contains of Familians	Solving Systems by Graphing Solving Systems Hair	Student Text	A.REI.C.6	
JANUARY	Systems of Equations	Solving Systems Using	Online Text	A.REI.D.11	
	and Inequalities	Tables and Graphs	Chalk Board	A.REI.C.5	
		Solving Systems Using	Smart Board	A.REI.D.12	
		Substitution	White Board	N.RN.A.1	
		 Solving Systems Using 	Khan Academy		
		Elimination	Pearson Teacher		
		 Application of Linear Systems 	Resources		
		 Linear Inequalities 	Chrome Books		
		 Systems of Linear 	Calculators		
	Exponents and	Inequalities	Manipulatives		
	Exponential Functions	 Zero and Negative Exponents 			
		 Multiplying Powers with the 			
		Same Base			
		 More Multiplication Properties 			
		of Exponents			
		 Divisions Properties of 			
		Exponents			

FEBRUARY Exponential Exponenti	 Exponential Fund Exponential Grown Decay Geometric Sequential Adding and Subt 	Online Text Chalk Board White Board White Board White Board White Board Khan Academy Pearson Teache Resources Chrome Books Calculators Manipulatives bx + c bx + c Il Cases	N.RN.A.2 F-IF.C.8b F-BF.A.2 A.APR.A.1 A.SSE.A.1a	
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MARCH	Quadratic Functions and Equations Radical Expressions and Equations	 Quadratic Graphs and Their Properties Quadratic Functions Solving Quadratic Equations Finding Roots Factoring to Solve Quadratic Equations Writing Quadratic Equations Completing the Square The Quadratic Formula and the Discriminant Linear, Quadratic and Exponential Models Analyzing Residual Plots Systems of Linear and Quadratic Equations The Pythagorean Theorem Simplifying Radicals Operations with Radical Expressions Solving Radical Equations Graphing Square Root Functions Trigonometric Ratios 	Student Text Online Text Chalk Board Smart Board White Board Khan Academy Pearson Teacher Resources Chrome Books Calculators Manipulatives	F-IF.C.7a A-REI.B.4b A-APR.B.3 A-CED.A.2 A.REI.B.4a F-LE.A.1a S-ID.B.6b A.REI.C.7 G-SRT.C.8 A.REI.A.2 F-IF.C.7b	
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APRIL	Rational Expressions and Functions	 Simplifying Rational Expressions Multiplying and Dividing Rational Expressions Dividing Polynomials Adding and Subtracting Rational Expressions Solving Rational Expressions Inverse Variation Graphing Rational Expressions 	Student Text Online Text Chalk Board Smart Board White Board Khan Academy Pearson Teacher Resources Chrome Books Calculators Manipulatives	A-APR.D.7 A.APR.D.6 A.CED.A.1 F-IF.B.5 F-IF.B.4 A.CED.A.2
MAY	Data Analysis and Probability	 Organizing Data Using Matrices Frequency and Histograms Measures of Central Tendency and Dispersion Standard Deviation Box-and-Whisker Plots Designing Your Own Survey Samples and Surveys Two-Way Frequency Table Permutations and Combination Theoretical and Experimental Probability Conducting Simulations Probability of Compound Events Conditional Probability 	Student Text Online Text Chalk Board Smart Board White Board Khan Academy Pearson Teacher Resources Chrome Books Calculators Manipulatives	S-ID.A.1 S-ID.A.2 S-IC.B.3 S-ID.B.5 S-CP.A.1 S-IC.B.5 S-CP.B.7 S-CP.A.5