Course: Algebra I

Carbon Career & Technical Institute

Month	Duration	PA Keystone Assessment Anchors	Content	Assessment	Instructional Activities	Resources
Aug. and Sept.	21 Days	 A1.1.1.3 Use exponents, roots, and/or absolute values to solve problems. A1.1.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, and exponents). A1.2.1.1 Analyze and/or use patterns or relations A1.2.3.1 Use measures of dispersion to describe a set of data. A1.2.3.2 Use data displays in problem solving settings and/or to make predictions. 	 A1.1.1.3.1 - Simplify/evaluate expressions involving properties/laws of exponents, roots, and/or absolute values to solve problems. A1.1.1.1.1 - Compare and/or order any real numbers. A1.1.1.4.1 - Use estimation to solve problems. A1.2.1.1.1 - Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically. A1.2.1.1.3 - Identify the domain or range of a relation. A1.2.3.1.1 - Calculate from one representation of a linear function to another. A1.2.3.2.1 - Estimate or calculate to make predictions based on a circle, line, bar graph, measures of central tendency, or other representations. A1.2.3.2.2 - Analyze data, make predictions, and/or answer questions based on displayed data. A1.2.3.2.3 - Make predictions using the equations or graphs of best-fit lines of scatter plots. 	Tests, Quizzes, Homework, Classwork, Notebook, Bell Ringers, Class Participation, CDT, Study Island	Direct Instruction, One-to-One Instruction, Group Work, Classwork, Homework, Demonstrations, Tutoring, Real World Problems.	Textbook, Digital Interactive Text, Worksheets (KUTA, Dale Seymore EdHelper), Study Island, Calculators, Video Streaming, Websites (SAS, Glencoe, etc.)
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Direct Instruction,

		 A1.1.1.3.1 - Simplify/evaluate expressions involving properties/laws of exponents, roots, and/or absolute values to solve problems. A1.2.3.3.1 - Find probabilities for compound events (e.g., find probability of red and blue, find probability of red or blue) and represent as a fraction, decimal, or percent. 			
First weeks of Nov.	 A1.1.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, and exponents). A1.1.2.1 Write, solve, and/or graph linear equations using various methods. A1.2.2.1 Describe, compute, and/or use the rate of change (slope) of a line 	 A1.1.1.1.1 - Compare and/or order any real numbers. Note: Rational and irrational may be mixed A1.1.2.1.1 - Write, solve, and/or apply a linear equation (including problem situations). A1.2.2.1.1 - Identify, describe, and/or use constant rates of change. A1.1.2.1.2 - Use and/or identify an algebraic property to justify any step in an equation solving process. A1.1.2.1.3 - Interpret solutions to problems in the context of the problem situation. 	Tests, Quizzes, Homework, Classwork, Notebook, Bell Ringers, Class Participation, CDT, Study Island	Direct Instruction, One-to-One Instruction, Group Work, Classwork, Homework, Demonstrations, Tutoring, Real World Problems.	Textbook, Digital Interactive Text, Worksheets (KUTA, Dale Seymore EdHelper), Study Island, Calculators, Video Streaming, Websites (SAS, Glencoe, etc.)

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Last week of Nov. thru Dec.	22 Days	A1.1.3.1 Write, solve, and/or graph linear inequalities using various methods	 A1.1.3.1.2 - Identify or graph the solution set to a linear inequality on a number line. A1.1.3.1.1 - Write or solve compound inequalities and/or graph their solution sets on a number line (may include absolute value inequalities). A1.1.3.1.3 - Interpret solutions to problems in the context of the problem situation. Note: Limit to linear inequalities. 	Tests, Quizzes, Homework, Classwork, Notebook, Bell Ringers, Class Participation, CDT, Study Island	Direct Instruction, One-to-One Instruction, Group Work, Classwork, Homework, Demonstrations, Tutoring, Real World Problems.	Textbook, Digital Interactive Text, Worksheets (KUTA, Dale Seymore EdHelper), Study Island, Calculators, Video Streaming, Websites (SAS, Glencoe, etc.)
Jan.	21 Days	 A1.2.1.1 Analyze and/or use patterns or relations A1.2.2.1 Describe, compute, and/or use the rate of change (slope) of a line 	 A1.2.1.1.1 - Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically. A1.2.1.1.2 - Determine whether a relation is a function, given a set of points or a graph. A1.2.2.1.1 - Identify, describe, and/or use constant rates of change. 	Tests, Quizzes, Homework, Classwork, Notebook, Bell Ringers, Class Participation, CDT, Study Island	Direct Instruction, One-to-One Instruction, Group Work, Classwork, Homework, Demonstrations, Tutoring, Real World Problems.	Textbook, Digital Interactive Text, Worksheets (KUTA, Dale Seymore EdHelper), Study Island, Calculators, Video Streaming, Websites (SAS, Glencoe, etc.)

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Feb.	21 Days	 A1.2.1.2 Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.2.1 Describe, compute, and/or use the rate of change (slope) of a line. A1.2.2.2 Analyze and/or interpret data on a scatter plot. 	 A1.2.1.2.1 - Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2 - Translate from one representation of a linear function to another (i.e., graph, table, and equation). A1.2.2.1.1 - Identify, describe, and/or use constant rates of change. A1.2.2.1.2 - Apply the concept of linear rate of change (slope) to solve problems. A1.2.2.1.3 - Write or identify a linear equation when given; the graph of the line, two points on the line, or the slope and a point on the line. A1.2.2.1.4 - Determine the slope and/or <i>y</i>-intercept represented by a linear equation or graph. A1.2.2.2.1 - Draw, identify, find, and/or write an equation for a line of best fit for a scatter plot. 	Tests, Quizzes, Homework, Classwork, Notebook, Bell Ringers, Class Participation, CDT, Study Island	Direct Instruction, One- to-One Instruction, Group Work, Classwork, Homework, Demonstrations, Tutoring, Real World Problems.	Textbook, Digital Interactive Text, Worksheets (KUTA, Dale Seymore EdHelper), Study Island, Calculators, Video Streaming, Websites (SAS, Glencoe, etc.)

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Mar.	19 Days	A1.1.2.2 Write, solve, and/or graph systems of linear equations using various methods. A1.1.3.2 Write, solve, and/or graph systems of linear inequalities using various methods.	 A1.1.2.2.1 - Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination. Note: Limit systems to two linear equations. A1.1.2.2.2 - Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear equations. A1.1.3.2.1 - Write and/or solve a system of linear inequalities using graphing. Note: Limit systems to two linear inequalities. A1.1.3.2.2 - Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear inequalities. A1.1.3.2.2 - Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear inequalities. 	Tests, Quizzes, Homework, Classwork, Notebook, Bell Ringers, Class Participation, CDT, Study Island	Direct Instruction, One- to-One Instruction, Group Work, Classwork, Homework, Demonstrations, Tutoring, Real World Problems.	Textbook, Digital Interactive Text, Worksheets (KUTA, Dale Seymore EdHelper), Study Island, Calculators, Video Streaming, Websites (SAS, Glencoe, etc.)

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Apr.	18 Days	A1.1.1.1 Represent and/or use numbers in equivalent forms (e.g.,	A1.1.1.1.2 - Simplify square roots (e.g., $\sqrt{24} = 2\sqrt{6}$).	Tests, Quizzes, Homework,	Direct Instruction, One- to-One Instruction,	Textbook, Digital Interactive Text,

Мау	A1.1.1.2 Apply number theory	A1.1.1.2.1 - Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM)	Tests, Quizzes, Homework,	Direct Instruction, One- to-One Instruction,	Textbook, Digital Interactive Text,
	concepts to show relationships between real numbers in problem solving settings. A1.1.1.5 Simplify expressions involving polynomials.	 for sets of monomials. A1.1.1.5.1 - Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial. A1.1.1.5.2 - Factor algebraic expressions, including difference of squares and trinomials. Note: Trinomials are limited to the form ax²+bx+c where a is equal to 1 after factoring out all monomial factors. A1.1.1.5.3 - Simplify/reduce a rational algebraic expression. 	Classwork, Notebook, Bell Ringers, Class Participation, CDT, Study Island A minimum of 10 assessments per marking period	Group Work, Classwork, Homework, Demonstrations, Tutoring, Real World Problems.	Worksheets (KUTA, Dale Seymore EdHelper), Study Island, Calculators, Video Streaming, Websites (SAS, Glencoe, etc.)