



Stockton Unified School District

EDISON HIGH SCHOOL
Home of the Vikings



Essential Outcomes Chart: What is it we expect students to learn?

Grade:	9-12	Subject:	Algebra 1	Semester	1-2	Team Members:	Louie Tolentino Catherine Wheeler	Graham Weiss Tory Kooyman		
Standard Description		Example Rigor		Prerequisite Skills		Common Assessment		When Taught?		Extension Standards
What is the essential standard to be learned? Describe in student-friendly vocabulary.		What does proficient student work look like? Provide an example and/or description.		What prior knowledge, skills, and/or vocabulary is/are needed for a student to master this standard?		What assessment(s) will be used to measure student mastery?		When will this standard be taught?		What will we do when students have learned the essential standard(s)?
1.Essential Outcome: Understand and use the language and properties of algebra. <ul style="list-style-type: none"> • A-SSE.1 Interpret expressions that represent a quantity in terms of its context: <ul style="list-style-type: none"> ○ Interpret parts of an expression, such as terms, factors, and coefficients. ○ Interpret complicated expressions by viewing one or more of their parts as a single entity. 		Understanding the uses of mathematical properties and applying them to simplifying expressions.		Basic Understanding of Mathematical Operations		PLC Created Formative and Summative Assessments		TBD		Extension activities located in Algebra I PLC Google Drive.
2.Essential Outcome: Create and Solve multi-step equations and inequalities in one variable including integers, decimals, fractions and whole numbers.		Being able to solve for an unknown variable using properties of equality and inequalities with inverse operations.		Whole Number Operations Integer Operations Decimal Operations Fraction Operations Algebra Vocabulary Solving One-Step Equations		PLC Created Formative and Summative Assessments		TBD		Extension activities located in Algebra I PLC Google Drive.

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<ul style="list-style-type: none"> • A-CED.1 Create/Use equations and inequalities in one variable including ones with absolute value to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions. • A-CED.3 Create equations that describe numbers or relationships. • A-CED.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. • A-REI.1 Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method. 					
<p>3.Essential Outcome: Graph Linear Equations using various formats.</p> <ul style="list-style-type: none"> • A-CED.1 Create/Use equations and inequalities in one variable including ones with absolute value to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions. • A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. • A-REI.10 Understand that the graph of an equation in two variables is the set of all its solutions plotted in the 	<p>Be able to recognize and graph linear equations from slope-intercept, standard and point-slope form on a coordinate plane.</p>	<p>Plotting points on a Coordinate Plane Reading a Graph Using a Table to find input and output of a function.</p>	<p>PLC Created Formative and Summative Assessments</p>	<p>TBD</p>	<p>Extension activities located in Algebra I PLC Google Drive.</p>

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<p>coordinate plane, often forming a curve (which could be a line)</p> <ul style="list-style-type: none"> • S-ID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. • F-IF.1 Understand that a function assigns each element of the domain exactly one element of the range. • F-IF.2 Use function notation and evaluate functions for inputs in their domains. • F-IF.5 Relate the domain of a function to its graph. • F-IF.7.b Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. 					
<p>4. Essential Outcome: Solve Systems of Equations and Inequalities.</p> <ul style="list-style-type: none"> • A-CED.1 Create/Use equations and inequalities in one variable including ones with absolute value to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions. • A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. • A-REI.6 Solve systems of linear equations exactly and approximately 	<p>Identify the solutions of a system of equations and inequalities by graphing, substitution, and elimination.</p>	<p>Graphing Linear Equations Evaluating Substitution Algebraic Properties</p>	<p>PLC Created Formative and Summative Assessments</p>	<p>TBD</p>	<p>Extension activities located in Algebra I PLC Google Drive.</p>

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<p>(e.g. with graphs), focusing on pairs of linear equations in two variables</p> <ul style="list-style-type: none"> • A-REI.12 Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality) The solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes • F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically, in tables). 					
<p>5.Essential Outcome: Solve Quadratic Functions Using various methods.</p> <ul style="list-style-type: none"> • A-CED.1 Create/Use equations and inequalities in one variable including ones with absolute value to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions. • A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. 	<p>Solve quadratic functions by graphing, factoring and using the quadratic formula. Determine the solutions, axis of symmetry, vertex and discriminant of a given quadratic function.</p>	<p>Using a Table to Graph independent and dependent variables.</p>	<p>PLC Created Formative and Summative Assessments</p>	<p>TBD</p>	<p>Extension activities located in Algebra I PLC Google Drive.</p>
<p>6.Essential Outcome: Add, subtract, multiply, division, & factoring polynomial expressions.</p> <ul style="list-style-type: none"> • A-ARP.1 That polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication 	<p>Students can simplify algebraic expressions such as $(2x^2)^3$ and $4x^2 * 3x^3$ etc. using mathematical properties (ex. the properties of exponents)</p>	<p>Properties of Algebra Basic Mathematical Operations</p>	<p>PLC Created Formative and Summative Assessments</p>	<p>TBD</p>	<p>Extension activities located in Algebra I PLC Google Drive.</p>

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<p>7.Essential Outcome: Simplify Radical Expressions.</p> <ul style="list-style-type: none"> • N-RN.2 Rewrite expressions involving radicals and rational exponents using the properties of exponents. 	<p>Students can simplify $\sqrt{126}$ and other radicals. This skill helps when solving quadratics and other intricate equations involving roots.</p>	<p>Understanding of Squares Prime Factorization Multiplication Facts</p>	<p>PLC Created Formative and Summative Assessments</p>	<p>TBD</p>	<p>Extension activities located in Algebra I PLC Google Drive.</p>
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