BLUE VALLEY DISTRICT CURRICULUM

MATHEMATICS | Intro to Algebra 2

ORGANIZING THEME/TOPIC	CONTENT	FOCUS STANDARDS & SKILLS	ACTIVITES/TASKS
Weeks 1-2	Order of operations, evaluating and simplifying expressions, and the distributive property.	6.EE.2c – Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are parentheses to specify a particular order (Order of Operations).	
Weeks 3-7	Solving one and two-step equations, solving equations with variables on both sides, and solving equations with the distributive property.	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.	
Weeks 8-9	Literal equations and absolute value equations	A-CED.4 – Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance R.

A-REI.11 – Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ | |

		and y = g(x) intersect are the solutions of the equation f(x) = g(x); find solutions approximately, e.g. using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are constant and absolute value.	
Weeks 10-14	Solving and graphing inequalities and compound inequalities.	A-CED.1: Create equations and inequalities in one variable and use them to solve problems arising from linear functions.	
Weeks 15-20	Linear functions: tables, graphing, slope-intercept, point-slope, and standard forms. Write equations and find slopes of parallel and perpendicular lines. Solves systems graphically and algebraically. Applications.	G-GPE.5: Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g. find the equation of a line parallel or perpendicular to a given line that passes through a given point). S-ID.8: Compute (using technology) and interpret the correlation coefficient of a linear fit. F-IF.6: Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specific interval. S-ID.7: Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. A-REI.6: Solve systems of linear equations exactly and approximately (e.g. with graphs), focusing on pairs of linear equations in two variables.	
Weeks 21-24	Polynomials: Identifying, simplifying, adding, subtracing, subtracting, and multiplying (monomial/binomial,	A-APR.1: Understand that polynomials form a system analogous to the integers, namely the operations of addition, subtracting, and multiplication.	

	binomial/binomial, binomial/trinomial).	F-BF.1b: Write a function that describes a relationship between two quantities. (b) Combine standard function types using arithmetic operations.	
Weeks 25-30	Exponents: Multiplying and dividing like bases, raising a power to a power, negative exponents, rational exponents, and zero exponents. Radicals: Simplifying radicals, adding and subtracting radicals, multiplying and dividing radicals.	N-RN.2: Rewrite expressions involving radicals and rational (integer) exponents using the properties of exponents. A-SSE.3c: Transform exponential expressions.	
Weeks 31-36	Quadratics: Solving using the square root method, relationship between zeros and graph (x-intercepts), graphing, factoring (GCF, factor by grouping, a = 1, a > 1). Use the zero-product property and use the quadratic formula.	A-REI.4b: Solve quadratic equations in one variable. (b) Solve quadratic equations by inspection (e.g. $x^2 = 49$), taking square roots, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives non-real solutions.	