**CV Guarantee**

**(Math Integrated 1 / 9th Grade)**

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| **Big Idea: Linear Equations/Slope Intercept form**  Students will look at how slope represents rate of change given a variety of situations.   In particular, students will develop an algebraic method for writing the equation of a line when given only two points on the line. | | | |
| **Standards:**  A-CED.2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.  F-IF.4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. | | **Timeline:** Q2 (10 – 12 days) | |
| **Key Vocabulary:**  Delta X, Delta Y, Coefficient, Constant term, Dependent variable, evaluate, Figure 0, function, graph, growth, horizontal line, independent variable, linear equations, negative slope, parameter, positive slope, rate of change, situation, slope, slope triangle, starting value, undefined slope, units, unit rate, variable, x -> y table, x-intercept, y=mx+b, y-intercept, zero slope | | **Vocabulary Activities:**  Quizlet.Live  Sentence Frames  Kahoot | |
| **Knowledge** | **Reasoning** | **Performance Skills** | **Product Examples** |
| I can use tables to identify connections between the growth of a pattern, the number of tiles in Figure 0, and its linear equation.  I can identify if an equation is written in the form y=mx+b.  I can understand speed as a rate. | I can use slope triangles both to compare the relative steepness of lines and to build intuition about positive, negative, and zero slopes.  I can investigate the slope of vertical lines. | I can write linear equations relating the figure number of a geometric pattern and its number of tiles.  I can solve for the *y-*intercept to write the equation of a line algebraically. | I can develop an algorithm for determining the slope of a line through two points without graphing.  I can use my knowledge of *y* = *mx*+*b* to write the equations of lines from two points on a table or graph. |
| **Resources:**  CPM – Online textbook with appropriate online tools (Desmos) | | | |