

Corsica Stickney Curriculum Map

Subject: Algebra 1 Grade: 9th Unit 3: Module 5 lessons 5.1, 5.2, 5.3 Module 6 lessons 6.1, 6.2, 6.3, 6.4, 6.5 Module 7 lessons 7.1, 7.2, 7.3	Teacher: Mr. Jason Broughton Duration: October
Summary of unit: Students will learn about: linear functions. Rate of change and slope. Slope-intercept form and point-slope form. Modeling linear relationships. using functions to solve one-variable equations. Linear inequalities in two variables	
Stage 1 – Desired Results	
Standards F-LE.1b ...Recognize situations in which one quantity changes at a constant rate per unit interval relative to another F-IF.7a Graph linear... functions and show intercepts F-IF.6 Calculate and interpret the average rate of change of a function... Estimate the rate of change from a graph. F-IF.7a Graph linear... functions and show intercepts A-CED.2 Create equations in two...variables to represent relationships between quantities A-CED.2 Create equations in two... variables to represent relationships between quantities F-BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$,... and $f(x + k)$ for specific values of k (both positive and negative)... A-CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. 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 $f(x) = g(x)$... A-REI.12 Graph the solutions to a linear inequality in two variables as a halfplane...	Essential Questions: What is a linear function? How can you identify and use intercepts in linear relationships? How can you relate rate of change and slope in linear relationships? How can you represent a linear function in a way that reveals its slope and y-intercept? How can you represent a linear function in a way that reveals its slope and a point on its graph? How can you write a linear equation in standard form given properties of the line including its slope, and points on the line? What are the ways in which you can transform the graph of a linear function? How can you model linear relationships given limited information? How can you use functions to solve one-variable equations? How do you write and graph linear inequalities in two variables?

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Language objective	Mathematical practices	Integrate mathematical practice
Describe a situation that can be represented by a linear function, and write an equation for the function. Explain to a partner how to find the x-and y-intercepts for an equation. Describe the rate of change in a real-world situation by using the words for every, each, or per to relate two quantities. Explain to a partner how to write a linear function in slope-intercept form. Explain to a partner how to write a linear function in point-slope form. Work in pairs to complete a table to decide which form of a linear equation to use. Be able to explain transformations of linear functions using English words and mathematical language. Explain to a partner how to write a linear equation based on a verbal model describing a situation. Explain to a partner how to use functions to solve one-variable equations.	MP.5 Using Tools MP.2 Reasoning MP.6 Precision	MP.5 Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

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Explain to a partner how an inequality represents a situation. Explain how to graph a linear inequality in two variables.		
Stage 2 – Assessment Evidence		
Performance Tasks: Homework quizzes, worksheet, Tests.	Unit Pre-Assessment: Assign ready-made or customized practice tests to prepare students for high-stakes tests	
Stage 3 – Learning Plan		
Learning Activities: procedures/topics Reading and discussing lesson with class. Giving students examples to be completed in class. Students taking notes and using notes to complete homework assignments.		
Lesson Descriptions		
MODULE 5 Linear Functions Lesson 5.1 Understanding Linear Functions Lesson 5.2 Using Intercepts Lesson 5.3 Interpreting Rate of Change and Slope		
MODULE 6 Forms of Linear Equations Lesson 6.1 Slope-Intercept Form Lesson 6.2 Point-Slope Form Lesson 6.3 Standard Form Lesson 6.4 Transforming Linear Functions Lesson 6.5 Comparing Properties of Linear Functions		
MODULE 7 Linear Equations and Inequalities Lesson 7.1 Modeling Linear Relationships Lesson 7.2 Using Functions to Solve One-Variable Equations Lesson 7.3 Linear Inequalities in Two Variables		