



WEST SHORE SCHOOL DISTRICT
Algebra II Essentials Learning Module 2

Title of Module	Linear Equations	Grade Level	10-12
Curriculum Area	Algebra II Essentials	Time Frame	15 Days

Desired Results

Best Practices				
<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics 5. Use appropriate tools strategically 6. Attend to precision 7. Look for and make use of structure (Deductive Reasoning) 8. Look for and express regularity in repeated reasoning. 				
Transfer Goals				
<p>Students will be able to independently use their learning to...</p> <ul style="list-style-type: none"> • Connect old problem solving techniques to new curriculum. • Connect new material to real world applications. • Create viable mathematical arguments and use them to critique the arguments of fellow classmates. 				
Key Learnings/Big Ideas				
Students will review the essentials of Algebra I (linear equations) to prepare them for success in Algebra II.				
Content, Reading and Writing Standards				
CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problem	CC.2.2.HS.D.1 Interpret the structure of expressions to represent a quantity in terms of its context.	CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.	CC.2.2.HS.D.10 Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.	CC.2.2.HS.C.2 Graph and analyze functions and use their properties to make connections between the different representations.
CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.	CC.2.2.HS.D.7 Create and graph equations or inequalities to describe numbers or relationships.	CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.	CC.2.2.HS.C.1 Use the concept and notation of functions to interpret and apply	

			them in terms of their context.	
Essential Questions		Vocabulary (Best Practices)		
Unit EQ: How can Linear Equations be used to model the world around us? LEQs <ol style="list-style-type: none"> 1. What is a function? 2. How are linear equations solved and graphed? 3. How does Slope-Intercept Form help graph lines? 4. How do you find the equation of a line given various information? 5. How can the line of best fit be used to make predictions 		Utilize concepts & competencies to add to vocabulary Equation Expression Function Inequality Solution Evaluation Slope Slope-Intercept Form Y-axis, X-axis Y-Intercept, X-intercept Point-Slope Form Line of Best Fit		
Concepts Students will know...		Skills/Competencies (I Can...) Based on LEQs Students will be able to...		
<ol style="list-style-type: none"> 1. How to graph a variety of different equations and inequalities using Slope-Intercept form, Point-Slope Form, and Standard Form 2. Discern between an arbitrary relation and a function both graphically and algebraically. 3. How to find the equation of a line. 4. How to find the Line of Best fit given a set of data points. 		<ol style="list-style-type: none"> 1. I can graph a variety of different linear equations and inequalities in Slope-Intercept, Point-Slope, and Standard Forms 2. I can discern the difference between a function and any other arbitrary relation 3. I can find the equation of a line using the slope and a point. 4. I can use the graphing calculator to find the Line of Best Fit. 		

Formative Assessment		
Think-Pair-Share, Guided Note Checkpoints, Mini-Whiteboards, Tickets In/Out of the door, Line of Best Fit activity		
Summative Assessment		
Common Assessments		
Best Instructional Practices		
21 Century Skills		
Learning and Innovation Skills	Information, Media, and Technology Skills	Life and Career Skills
Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration	Information Literacy Media Literacy ICT (Information, Communications and Technology) Literacy	Flexibility and Adaptability Initiative and Self -Direction Productivity and Accountability Leadership and Responsibility
Extended Thinking Summarizing Vocabulary in Context Advance Organizers Non-verbal Representation Integration of Webb's Depth (examples) Integration of 21 st Century Skills (examples) Reading and writing across disciplines (examples) Differentiated options (examples)		

Resources

Student	Teacher

Adapted from Wiggins, Grant and J. Mc Tighe. (1998). *Understanding by Design*, Association for Supervision and Curriculum Development, ISBN # 0-87120-313-8 (ppk)