Algebra II Scope and Sequence Aligned to SATEC Resources—DRAFT (4/06)

Linear Functions

This unit includes linear equations, inequalities, and systems. There should be an emphasis on the connection between the 5 representations: graph, table, problem situation, pictorial, symbolic. Within this unit, connections to foundations for functions and how all functions have same traits should be made.

Objective	TEKS	TEKS Clarification	TAKS Objectives	SATEC Lesson / Resources[1]	SATEC Correlated Assessments	Dana Center Assessments	Resources / Text
Formulate linear functions from a given situation.		Revisit data activity from Foundations for Functions and reinforce common function characteristics. Revisit data to extend the discussion of linear functions to writing equations, graphing and translating functions, and analyzing parameter changes in the context of situation. Write and graph linear equations in the y = mx + b form, including transforming from Ax + By = C to y = mx + b. Graph lines from Ax + By = C using x and y-intercepts. Write equations of parallel and perpendicular lines. Review solving one-variable equations and inequalities as	Objectives 1, 2, 3, 4	Weight of Money Don't Get Zapped!	Weight of Money: Reflect and Apply		Algebra II Institute Part I: 2.2
Use tools to simplify expressions and transform and solve equations.	2A.2A						
Analyze situations and formulate linear equations or systems of linear equations or inequalities.	2A.3A			Weight of Money Don't Get Zapped!	Weight of Money: Reflect and Apply	Weather Woes	Algebra II Institute Part I: 4.2
Use tools including matrices, algebraic and technological methods to solve systems of linear equations and inequalities.	2A.3B					The Mild and Wild Amusement Park	Algebra II Institute Part A: 1.1
Interpret and determine the reasonableness of solutions to systems of equations or inequalities.	2A.3C			Crickets	Crickets: Reflect and Apply		

[1] The SATEC Resources and Coordinated Assessments are available on the Mathematics TEKS Toolkit at www.mathtekstoolkit.org/instruction/scope/alg2scope/satec.php. The Dana Center Assessments are on the toolkit at www.mathtekstoolkit.org/instruction/alg2.php.

For a given application, identify the mathematical domain and range and the domain and range for the situation.	2A.1A	needed. Graph two-variable inequalities. Write and solve equations and inequalities from application problems. Solve systems using graphs, algebra, and matrices. Use inverse matrices as a tool to solve systems with technology; this is not to be an in-depth look at matrices, therefore a minimal amount of time should be spent on matrix operations. Use technology such as graphing calculators and/or computers to link multiple representations.		Weight of Money Don't Get Zapped!	Weight of Money: Reflect and Apply		
Collect and organize data, make scatterplots, fit the curve to a function, interpret the results, and model, predict, and make decisions.	2A.1B			Weight of Money Don't Get Zapped!	Weight of Money: Reflect and Apply		
Identify and sketch a linear function.	2A.4A			Weight of Money Don't Get Zapped!	Weight of Money: Reflect and Apply		
Extend parent functions with parameters and describe parameter changes of graphs of parent functions.	2A.4B			Weight of Money Don't Get Zapped!	Weight of Money: Reflect and Apply		
Recognize inverse relationships between various functions.	2A.4C			Mirror, Mirror	Mirror, Mirror: Reflect and Apply		Intro to Inverse Functions
Perceive functions and equations as means for analyzing and understanding relationships and as a tool for expressing generalizations.	BU A3						
Perceive connections between algebra and geometry and use tools of one to solve problems of the other.	BU A5						

Use math processes throughout, including problem solving, computation, communication, connections, reasoning, multiple representations, modeling, and justification.	BU A6			Weight of Money Don't Get Zapped!	Weight of Money: Reflect and Apply		