Algebra II – Unit 2: Systems of Linear Equations and Inequalities

Phoenixville Area School District

Stage 1 Desired Results							
PA Core Standards:	Transfer						
CC.2.2.HS.D.10 Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and	 TRANSFER GOALS Students will be able to independently use their learning to Number Sense: Develop a sound foundation to demonstrate the value of numbers by describing their various representations, relationships, and patterns. Fluency: Demonstrate automatic recall of addition. subtraction. multiplication. and division of 						
graphically.	 rational numbers. <i>Problem-Solving:</i> Persistently apply various problem-solving strategies and organized approaches to accurately understand and solve problems and provide evidence to support response. <i>Reasoning:</i> Demonstrate mathematical resilience and conceptual understanding through the use of vocabulary, written expression, graphical representation, and alternate strategies. 						
	Meaning						
	 UNDERSTANDINGS Students will understand that Mathematicians flexibly use symbols, numbers, words, and visual representations while maintaining the integrity of the relationship between quantities. Mathematicians think about reasonableness throughout the problem-solving process. Variables represent the unknown so that mathematicians can generalize a pattern rather than being limited to looking at specific values. Tools and strategies are strategically selected and used to solve particular applications. 	 ESSENTIAL QUESTIONS Students will keep considering What counts as an adequate solution? Does my answer make sense? Have I represented the relationships between the quantities appropriately? Does this model make sense in this context? How might I test this model? What tools should I use here to be most efficient and effective? How do I create an equation/ representation that describes the problem situation? How do I know if I got it right? Is one representation more appropriate than another? 					

Knowledge and Skills Acquisition			
KNOWLEDGE	SKILLS		
Students will know	Students will be skilled at		
 Students will know How to write and solve systems of 2 and 3 variable equations How to write, graph, and solve systems of linear inequalities When a system has 1 solution, no solution, or infinite solutions and what each solution means for the graph VOCABULARY System Substitution Linear Combination/Elimination Constraint/Feasible Region 	 Students will be skilled at Writing and solving systems of 2 variable equations graphically and algebraically and explaining the meaning of its solution through multiple choice, matching, and open response, and real-world application questions Writing and solving systems of linear inequalities graphically and analyzing solutions through matching, open response, and real-world application questions Writing and solving systems of 3 variable equations algebraically and explaining the meaning of solutions through open response and real-world application problems 		

Stage 2 – Evidence				
Code	Evaluative	Assessment Evidence		
A/M/T	Criteria		1	
	What	PERFORMANCE TASK(S)	Differentiation	
A/M/T	criteria will	Students will demonstrate understanding (meaning making and transfer) through complex	Considerations:	
	be used in	performance by		
Acquisition	each			
Meaning	assessment	[Performance Assessment Title]		
Making	attainment			
Transfer	of the	Goal: Your task is to		
	desired	Role/Audience: You are a		
	results?	Situation/Product: You will		
		 Success Criteria: Your [product] must include 		
	What		Differentiation	
	criteria will		Considerations:	
	be used in	[Unit Test]		
Acquisition	each	[Multiple Choice]		
Meaning	to evaluate	[True/False]		
Making	attainment	[Matching]		
Transfer	of the	[Constructed Response Prompts:]		
	desired			
	results?			