

ABSS Math Unit Planning Template

Introduction:

Grade/Course: 9_12 Discrete Mathematics			Suggested Unit Pacing (# of days): 8 days		
Unit Number and Title: Unit 4 - Matrices			Mathematical Practices		
			P1	Make sense of problems and persevere in solving them.	
Conceptual Overview			P2	Reason abstractly and quantitatively.	
			P3	Construct viable arguments and critique the reasoning of others.	
Essential Understandings			P4	Model with mathematics.	
			P5	Use appropriate tools strategically.	
CCSS			P6	Attend to precision.	
			P7	Look for and make use of structure.	
CCSS			P8	Look for and express regularity in repeated reasoning.	
CCSS	Vector and Matrix Quantities	CCSS.9_12.MA.N.VM.6	(+)	Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.	
CCSS	Vector and Matrix Quantities	CCSS.9_12.MA.N.VM.8	(+)	Add, subtract, and multiply matrices of appropriate dimensions.	
CCSS	Vector and Matrix Quantities	CCSS.9_12.MA.N.VM.9	(+)	Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.	
SCS	The learner will use matrices and graphs to model relationships and solve problems.	SCS.9_12.MA.1.01.a		Display and interpret data.	
SCS	The learner will use matrices and graphs to model relationships and solve problems.	SCS.9_12.MA.1.01.b		Write and evaluate matrix expressions to solve problems.	
Learning Targets	<ul style="list-style-type: none"> Determine the dimensions of a matrix Identify which matrices can be added, subtracted or multiplied. Add, subtract and multiply matrices using the calculator. Define categories for the rows and columns of a matrix. Multiply matrices to solve problems. Show associative and distributive properties hold for multiplication but commutative does not. Create a transition matrix using given probabilities of an occurrence Use matrix multiplication to calculate from Markov Chain information Use Leslie population model to predict populations in the future Use matrices to calculate the Leslie Population Model to predict populations in the future Use matrices to calculate the total population in the future Make inferences of what may happen to a population and use matrices to support Create the equations and calculate for the input/output of a one sector <u>economy</u> <p>Use matrices to determine the input/output for a two- or more sector economy</p>				
Essential Terminology					
Literacy Integration	Literacy Standards	Level	Standard	Standard Name	
	Literature Connections				
Technology Integration	Technology Standards	Level	Standard	Standard Name	
	Websites				
Assessment	Formative				
	Performance Tasks				
Resources	Summative				
	Learning Plan	Instructional Sequence	1- intro matrices (add, subtract, multiply) 2- matrix multiplication 3- Markov Chains 4- leslie pt 1 5- leslie pt 2 (be sure to talk about inferences of what happens with the table) 6- Leontief input/output 7- Review 8- Test		
Differentiation	Remediation				
	Enrichment				