

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.
SCS		P6	Attend to precision.
		P7	Look for and make use of structure.
SCS		P8	Look for and express regularity in repeated reasoning.
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.
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.
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 economy <p>Use matrices to determine the input/output for a two- or more sector economy</p>		
Essential Terminology			
Literacy Integration	Literacy Standards	Level	Standard
	Literature Connections		Standard Name
Technology Integration	Technology Standards	Level	Standard
	Websites		Standard Name
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 Test	
Differentiation	Remediation		
	Enrichment		