

MCS Advanced Mathematical Decision Making Subject Group Overview

Unit Name	U1: Using The Power of Mathematical Reasoning to Make Decisions	U2: Using Probability to Make Decisions	U3: Using Statistical Studies to Make Decisions	U4: Using Mathematical Models to Make Decisions	U5: Using Vectors and Matrices to Make Decisions	U6: Using Network Models to Make Decisions	U7: Culminating Capstone Unit
Time Frame	5 – 6 weeks	5 – 6 weeks	5 – 6 weeks	6 – 7 weeks	3 – 4 weeks	3 – 4 weeks	1 – 2 weeks
Standards	AMDM.QPR.2 AMDM.QPR.3 AMDM.PAR.4 AMDM.MM.1 AMDM.MP.1-8	AMDM.PR.5 AMDM.PR.6 AMDM.MM.1 AMDM.MP.1-8	AMDM.DSR.7 AMDM.MM.1 AMDM.M.1-8	AMDM.PAR.8 AMDM.FGR.9 AMDM.GSR.10 AMDM.MM.1 AMDM.MP.1-8	AMDM.PAR.11 AMDM.MM.1 AMDM.MP.1-8	AMDM.PAR.12 AMDM.MM.1 AMDM.MP.1-8	ALL STANDARDS AMDM.MP.1-8
Content Specific Information	<ul style="list-style-type: none"> ● Estimating large numbers ● Using ratios and proportions ● Indices using weighted sums and averages ● Validating identification numbers ● The counting principle ● Voting and selection processes ● Apply ranking algorithms ● Modeling 	<ul style="list-style-type: none"> ● Determining probability ● Everyday decisions based on probability ● Expected value ● Zero-sum games ● Modeling 	<ul style="list-style-type: none"> ● Statistical investigations ● Analyzing data ● Sources of variability ● Modeling and analyzing with graphical representations ● Make decisions in various business enterprises including financial decision-making 	<ul style="list-style-type: none"> ● Make decisions in various business enterprises including financial decision-making ● Relationships in data ● Exponential functions in financial situations ● Basic trigonometric principles for inaccessible distances ● linear, exponential, logistic, and piecewise functions ● Modeling 	<ul style="list-style-type: none"> ● Vectors ● Geometric transformations and solving using matrices ● Modeling 	<ul style="list-style-type: none"> ● Networks, Circuits and Paths ● Spanning trees ● Graph coloring ● PERT charts 	<ul style="list-style-type: none"> ● Students to create a presentation, report, or demonstration that could include their models used to answer an overarching driving question
Common Assessments/ Performance Projects	Unit Quiz Unit 1 Test	Unit Quiz Unit 2 Test Carnival Project	Unit Quiz Unit 3 Test	Unit Quiz Unit 4 Test Finance Project	Unit Quiz Unit 5 Test	Unit Quiz Unit 6 Test	Final/Culminating Project
Differentiation For Tiered Learners	Marietta City Schools teachers provide specific differentiation of learning experiences for all students. Details for differentiation for learning experiences are included on the district unit planners.						