

MCS MYP Honors Algebra: Concepts & Connections Subject Group Overview

Unit Name	U1: Modeling Linear Functions	U2: Analyzing Linear Inequalities	U3: Investigating Rational & Irrational Numbers	U4: Modeling and Analyzing Quadratic Functions	U5: Modeling and Analyzing Exponential Expressions & Equations	U6: Analyzing Exponential Functions	U7: Investigating Data	U8: Algebraic Connections to Geometric Concepts	U9: Culminating Capstone Unit
Time Frame	3 – 4 weeks	1 – 2 weeks	1 – 2 weeks	6 – 7 weeks	2 – 3 weeks	4 – 5 weeks	3 – 4 weeks	2 – 3 weeks	1 – 2 weeks
Standards	<ul style="list-style-type: none">• A.FGR.2• A.MM.1• A.MP.1-8 • 8.PAR.3*• 8.PAR.4.2*	<ul style="list-style-type: none">• A.PAR.4• A.MM.1• A.MP.1-8 • 8.PAR.3.5*	<ul style="list-style-type: none">• A.NR.5• A.MM.1• A.MP.1-8	<ul style="list-style-type: none">• A.PAR.6• A.FGR.7• A.MM.1• A.MP.1-8 • 8.FGR.5*	<ul style="list-style-type: none">• A.PAR.8• A.MM.1• A.MP.1-8	<ul style="list-style-type: none">• A.FGR.9• A.MM.1• A.MP.1-8	<ul style="list-style-type: none">• A.DSR.10• A.MM.1• A.MP.1-8 • 6.NR.2.2*	<ul style="list-style-type: none">• A.GSR.3• A.MM.1• A.MP.1-8 • 8.FGR.7.2, .5*	<ul style="list-style-type: none">• All standards• A.MM.1• A.MP.1-8
Approaches To Learning Instructional Strategies	<p>Category: Communication Skills Cluster: Communication Skill Indicator: Understand and use mathematical notation</p> <p>Category: Thinking Skills Cluster: Critical-thinking Skill Indicator: Gather and organize relevant information to formulate an argument.</p>	<p>Category: Thinking Skills Cluster: Transfer Skill Indicator: Combine knowledge, understanding and skills to create products or solutions</p> <p>Category: Communication Skills Cluster: Affective Skill Indicator: Demonstrate persistence and perseverance</p>	<p>Category: Self-Management Skills Cluster: Reflection Skill Indicator: Perseverance - demonstrate persistence and perseverance</p>	<p>Category: Self-Management Skills Cluster: Affective Skill Indicator: Demonstrate persistence and perseverance</p> <p>Category: Research Skills Cluster: Information Literacy Skill Indicator: Understand and use technology systems</p>	<p>Category: Self-Management Skills Cluster: Organization Skill Indicator: Use appropriate strategies for organizing complex information</p> <p>Category: Thinking Skills Cluster: Critical-thinking Skill Indicator: Practice visible thinking strategies and techniques</p>	<p>Category: Communication Skills Cluster: Communication Skill Indicator: Make effective summary notes for studying</p> <p>Category: Self-Management Skills Cluster: Affective Skill Indicator: Practice “bouncing back” after adversity, mistakes and failures</p>	<p>Cluster: Critical Thinking Skill Indicator: Identify trends and forecast possibilities</p> <p>Category: Communication Skills Cluster: Communication Skill Indicator: Negotiate ideas and knowledge with peers and teachers</p>	<p>Category: Thinking Skills Cluster: Creative-Thinking Skill Indicator: Apply existing knowledge to generate new ideas, products or process</p>	Summary of all ATL’s will be used.

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Statement of Inquiry	Forms of identities and relationships model psychological and social development using patterns and changes throughout health and well being activities.	Relationships formed by modeling systems validate products, processes, and solutions.	Exploring the relationships between rational and irrational numbers through models can enhance our understanding of their properties and applications in scientific and technical innovation	Investigating the relationship between quadratic functions and their models through representation and systems using scientific and technical innovations can lead to deeper understanding of their behavior and applications.	The application of logical reasoning principles, including validity and quantity, within mathematical models can enhance our understanding of the relationship between globalization and sustainability, particularly in the context of consumption, conservation of natural resources, and the provision of public goods.	Exploring the form of exponential functions and their relationship to scientific and technical innovation, including mathematical puzzles, principles, and discoveries, insights are given into the dynamic nature of change, space, and quantity within the global context of exponential growth and transformation..	Representing relationships in different quantities, data builds identities in sports.	Generalizing relationships between models can develop principles, processes and solutions through their various measurements.	
Global Context	Identities and Relationships- *Physical, psychological and social development; transitional; health and well-being; lifestyle choices	Scientific and technical innovation- *Systems, models, methods *Products, processes, solutions	Scientific and Technical Innovation Exploration: Modernization, industrialization and engineering	Scientific and Technical Innovation Exploration: Mathematical puzzles, principles, and discoveries	Globalization and Sustainability: Consumption, conservation, natural resources and public goods	Scientific and Technical Innovation- Mathematical puzzles, principals and discoveries	Identities & Relationships- Competition and Cooperation; teams, affiliation & leadership	Personal and Cultural Expression- Artistry, craft, creation, beauty	
Key Concepts	Form The shape and underlying structure of an entity or piece of work, including its organization, essential in nature and external appearance.	Relationships Identify and understand connections and associations between properties, objects, people, and ideas - including the human community's connections with the world in which we live.	Relationships Identify and understand connections and associations between properties, objects, people, and ideas - including the human community's connections with the world in which we live.	Relationships Identify and understand connections and associations between properties, objects, people, and ideas - including the human community's connections with the world in which we live.	Logic A method of reasoning and a system of principles used to build arguments and reach conclusions.	Form- The shape and underlying structure of an entity or piece of work, including its organization, essential nature and external appearance.	Relationships Identify and understand connections and associations between properties, objects, people, and ideas - including the human community's connections with the world in which we live.	Form The shape and underlying structure of an entity or piece of work, including its organization, essential in nature and external appearance.	

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Related Concepts	Change, Model, Pattern	Models, Systems, Validity	Equivalence, Models	Representation, Systems, and Models	Validity, Quantity, Models	Change, Space, Quantity	Quantity, Representation, Validity	Measurement, Models	
Design Cycle Transdisciplinary	DOE Instructional Plan: Engage Explore Apply Reflect	DOE Instructional Plan: Engage Explore Apply Reflect	DOE Instructional Plan: Engage Explore Apply Reflect	DOE Instructional Plan: Engage Explore Apply Reflect	DOE Instructional Plan: Engage Explore Apply Reflect	DOE Instructional Plan: Engage Explore Apply Reflect	DOE Instructional Plan: Engage Explore Apply Reflect	DOE Instructional Plan: Engage Explore Apply Reflect	
MYP Assessments/ Performance Tasks	MYP A - Unit 1 Quiz MYP B - DOE Identifying and Predicting Patterns Modified MYP C - DOE Detention Hall Buyout Reflection	MYP C - MVP 5.2 reflection MYP D - Concerts, Accounts & Advertisements	MYP A - Rational vs Irrational Assessment MYP C - DOE Evaluating Statements about Irrational and Rational Numbers	MYP A - Mid Unit Quiz MYP B - Difference of Squares MYP C - DOE Seeing Structure in Expressions Diagnostic	MYP A - Mid Unit Quiz	MYP A - Unit Quiz MYP C - Penny A Day	MYP A - Unit Quiz	MYP D - City Design	
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.								