MCS MYP Algebra: Concepts & Connections Subject Group Overview

Unit Name	U1: Modeling Linear Functions	U2: Linear Inequalities & Rational & Irrational Numbers (DOE Units 2 & 3)	U3: Modeling and Analyzing Exponential Expressions, Equations, and Functions (DOE Units 5 & 6)	U4: Modeling and Analyzing Quadratic Functions (DOE Unit 4)	U5: Investigating Data (DOE Unit 7)	U6: Algebraic Connections to Geometric Concepts (DOE Unit 8)	Milestone Review
Time Frame	4 – 5 weeks	2 – 4 weeks	4 - 5 weeks	7 - 8 weeks	3 weeks	2 - 3 weeks	2 - 4 weeks
Standards	A.FGR.2 A.MM.1 A.MP.1-8	A.PAR.4 A.NR.5 A.MM.1 A.MP.1-8	A.PAR.8 A.FGR.9 A.MM.1 A.MP.1-8	A.PAR.6 A.FGR.7 A.MM.1 A.MP.1-8	A.DSR.10 A.MM.1 A.MP.1-8	A.GSR.3 A.MM.1 A.MP.1-8	All standards A.MM.1 A.MP.1-8
Approaches To Learning Instructional Strategies	**Category:** Communication Skills **Cluster:** Communication **Skill Indicator:** Understand and use mathematical notation **Category:** Thinking Skills **Cluster:** Critical-thinking **Skill Indicator:** Gather and organize relevant information to formulate an argument.	**Category:** Thinking Skills **Cluster:** Transfer **Skill Indicator:** Combine knowledge, understanding and skills to create products or solutions	**Category:** Self-Management Skills **Cluster:** Organization **Skill Indicator:** Use appropriate strategies for organizing complex information **Category:** Thinking Skills **Cluster:** Critical-thinking **Skill Indicator:** Practice visible thinking strategies and techniques	**Category:** Thinking Skills **Cluster:** Critical-thinking **Skill Indicator:** Practice Observing carefully in order to recognize problems **Category:** Self-Management Skills **Cluster:** Affective **Skill Indicator:** Demonstrate persistence and perseverance **Category:** Research Skills **Cluster:** Information Literacy **Skill Indicator:** Understand and use technology systems	**Cluster:** Critical Thinking **Skill Indicator:** Identify trends and forecast possibilities **Category:** Communication Skills **Cluster:** Communication **Skill Indicator:** Negotiate ideas and knowledge with peers and teachers	**Category:** Thinking Skills **Cluster:** Creative-Thinking **Skill Indicator:** Apply existing knowledge to generate new ideas, products or process	Summary of all ATL's will be used.
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.	Application of logical reasoning principles, including validity and quantity, within mathematical models can enhance our understanding of the relationship between globalization and sustainability..	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.	Representing relationships in different quantities, data builds identities in sports.	Generalizing relationships between models can develop principles, processes and solutions through their various measurements.	

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Global Context	Identities and Relationships - Exploration: Physical, psychological and social development; transitional; health and well-being; lifestyle choices	Scientific and technical innovation Exploration: Systems, models, methods	Globalization and Sustainability Exploration: Consumption, conservation, natural resources and public goods	Scientific and Technical Innovation Exploration: Mathematical puzzles, principles, and discoveries	Identities & Relationships Exploration: Competition and Cooperation; teams, affiliation & leadership	Personal and Cultural Expression Exploration: 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.	Logic A method of reasoning and a system of principles used to build arguments and reach conclusions.	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.	Form The shape and underlying structure of an entity or piece of work, including its organization, essential nature and external appearance.	
Related Concepts	Change, Model, Pattern	Models, Systems, Validity	Generalization, Pattern, Representation	Representation, Systems, and Models	Quantity, Representation, Validity	Measurement, Models	
Design Cycle Transdisciplinary	● Inquiring and Analyzing ● Developing Ideas ● Creating a Solution ● Evaluating	● Inquiring and Analyzing ● Developing Ideas ● Creating a Solution ● Evaluating	● Inquiring and Analyzing ● Developing Ideas ● Creating a Solution ● Evaluating	● Inquiring and Analyzing ● Developing Ideas ● Creating a Solution ● Evaluating	● Inquiring and Analyzing ● Developing Ideas ● Creating a Solution ● Evaluating	● Inquiring and Analyzing ● Developing Ideas ● Creating a Solution ● Evaluating	
MYP Assessments/ Performance Tasks	MYP C- Linear Functions	MYP D - Concerts, Accounts, and Advertisements MYP C - Rational vs Irrational	MYP A - Exponential Expressions MYP B- Sequences	MYP A - Factoring MYP B - D.O.S	MYP D - Real world application of a data set		
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.						