

## Accelerated Algebra 1 Geometry A Subject Group Overview

Unit Name	Relationships between Quantities and Expressions	Reasoning with Linear Equations and Inequalities	Modeling and Analyzing with Exponential Functions (DOE Unit 4)	Modeling and Analyzing Quadratic Functions (DOE Unit 3)
<b>Time Frame</b>	3 Weeks (9 Hours)	4 Weeks (15 Hours)	3 Weeks (12 hours)	5 Weeks (18 hours)
<b>Standards</b>	MGSE9-12.Q.1, 2, 3 MGSE9-12.SSE.1, 1a, 1b MGSE9-12.APR.1 MGSE9-12.RN.2, 3	MGSE9-12.A.CED.1, 2, 3, 4 MGSE9-12.A.REI.1, 3, 5, 6, 10, 11, 12 MGSE9-12.F.BF.1, 1a, 2 MGSE9-12.F.IF.1, 2, 3, 4, 5, 6, 7, 7a, 9	MGSE9-12.A.CED.1, 2 MGSE9-12.F.BF.1, 1a, 2, 3 MGSE9-12.F.IF.1, 2, 3, 4, 5, 6, 7, 7e, 9	MGSE9-12.A.SSE.2, 3, 3a, 3b MGSE9-12.A.CED.1, 2, 4 MGSE9-12.A.REI.4, 4a, 4b; F.BF.1, 3 MGSE9-12.F.IF.1, 2, 4, 5, 6, 7, 7a, 8, 8a, 9
<b>Approaches To Learning Instructional Strategies</b>	<ul style="list-style-type: none"> <li>● Understand and use mathematical notation</li> <li>● Organize and depict information logically</li> <li>● Use appropriate strategies for organizing complex information</li> <li>● Draw reasonable conclusions and generalizations</li> <li>● Test generalizations and conclusions</li> <li>● Analyze complex concepts and project into their constituent parts and synthesize them into create new understanding</li> <li>● Use models and simulations to explore complex systems and issues</li> </ul>	<ul style="list-style-type: none"> <li>● Understand and use mathematical notation</li> <li>● Take effective notes in class</li> <li>● Consider ideas from multiple perspectives</li> <li>● Present information in a variety of formats and platforms</li> </ul>	<ul style="list-style-type: none"> <li>● Understand and use mathematical notation</li> <li>● Take effective notes in class</li> <li>● Structure information in summaries, essays, and reports</li> <li>● Identify trends and forecast possibilities</li> <li>● Make connections between various sources of information</li> <li>● Present information in a variety of formats and platforms</li> </ul>	<ul style="list-style-type: none"> <li>● Give and receive meaningful feedback</li> <li>● Negotiate ideas and knowledge with peers and teachers</li> <li>● Use and interpret a range of discipline-specific terms and symbols</li> <li>● Draw reasonable conclusions and generalizations</li> <li>● Apply existing knowledge to generate new ideas, products or processes</li> <li>● Apply skills and knowledge in unfamiliar situations</li> </ul>
<b>Statement of Inquiry</b>	Algebraic expressions represent scale, duration, and variability, can have equivalent forms, and are combined through the arithmetic operations.	The way relationships change causes generalizations and patterns.	Patterns and representations create relationships that can be used to determine opportunity and risk.	Modeling using a logical process helps us to understand the world.
<b>Global Context</b>	Orientation in Space and Time – Scale, duration, frequency, and variability	Scientific and technical innovation – Systems, models, methods Products, processes, solutions	Scientific and Technological Innovations Opportunity and Risk	Scientific and Technical Innovation Exploration: Systems, Models, Methods
<b>Key Concept</b>	Form	Form	Relationships	Logic

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<b>Related Concepts</b>	Change Equivalent Quantity	Change Generalization Pattern Representation	Patterns Representation	Generalization Model Representation
<b>Design Cycle Transdisciplinary</b>	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate
<b>MYP Assessment/ Performance Tasks</b>	Common Test Common Quiz	Common Test Common Quiz MYP Assessments – Rubrics A, B	Common Test Common Quiz MYP Assessments – Rubrics C, D	Common Unit Test Common Unit Quizzes MYP Assessments – Rubrics A, B
<b>Differentiation For Tiered Learners</b>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>

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Unit Name	Comparing and Contrasting Functions	Describing Data	Transformations in the Coordinate Plane	Similarity, Congruence, and Proofs	Right Triangle Trig
<b>Time Frame</b>	2.5 Weeks (9 Hours)	2 Weeks (8 Hours)	2 Weeks (8 Hours)	6.5 Weeks (24 Hours)	2 Weeks (8 Hours)
<b>Standards</b>	MGSE9-12.F.LE.1, 1a, 1b, 1c, 2, 3, 5 MGSE9-12.F.BF.3 MGSE9-12.F.IF.1, 2, 4, 5, 6, 7, 9	MGSE9-12.S.ID.1, 2, 3, 5, 6a, 6c, 7, 8, 9	MGSE9-12.CO.1, 2, 3, 4, 5	MGSE9-12.CO.6, 7, 8, 9, 10, 11, 12, 13 MGSE9-12.SRT.1, 2, 3, 4, 5	MGSE9-12.SRT. 6, 7, 8
<b>Approaches To Learning Instructional Strategies</b>	<ul style="list-style-type: none"> <li>● Understand and use mathematical notation</li> <li>● Use and interpret a range of discipline-specific terms and symbols.</li> <li>● Demonstrate persistence and perseverance</li> <li>● Make connections between various sources of information</li> <li>● Gather and organize relevant information to formulate an argument</li> <li>● Apply existing knowledge to generate new ideas, products or processes</li> <li>● Combine knowledge, understanding and skills to create products or solutions</li> </ul>	<ul style="list-style-type: none"> <li>● Identify trends and forecast possibilities</li> <li>● Combine knowledge, understanding and skills to create products or solutions</li> <li>● Interpret data</li> </ul>	<ul style="list-style-type: none"> <li>● Combine knowledge, understanding, and skills to create products or solutions.</li> <li>● Organize and depict information logically</li> </ul>	<ul style="list-style-type: none"> <li>● Combine knowledge, understanding and skills to create products or solutions</li> <li>● Students are transferring their knowledge and skills of similarity and congruence into an authentic real-life problem.</li> <li>● Considering content (What did I learn today? What do I not yet understand? What questions do I have now?)</li> <li>● Students are expected to reflect on their results and methods through all activities and tasks to understand better the relationship between dilations, similarity, and congruence.</li> </ul>	<ul style="list-style-type: none"> <li>● Give and receive meaningful feedback</li> <li>● Negotiate ideas and knowledge with peers and teachers</li> <li>● Use and interpret a range of discipline-specific terms and symbols</li> <li>● Draw reasonable conclusions and generalizations</li> <li>● Apply existing knowledge to generate new ideas, products or processes</li> <li>● Apply skills and knowledge in unfamiliar situations</li> </ul>
<b>Statement of Inquiry</b>	Justifying through relationships allows understanding and exploration through our own thinking in real life.	Exploring multiple representations of quantifiable data using models enhances understanding of relationships.	Repeated patterns in our world can lead to deeper understanding of natural relationships.	Mathematicians use congruent & similar triangles to generalize and prove relationships.	Repeated patterns in our world can lead to a deeper understanding of natural relationships.

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<b>Global Context</b>	Personal and Cultural Expressions Metacognition and abstract thinking	Scientific and technical innovation	Orientation in Space and Time: scale, duration, frequency and variability	Identities and relationships	Scientific and Technical Innovation  Exploration: Mathematical puzzles, principles and discoveries
<b>Key Concept</b>	Relationships	Relationships	Relationships	Logic	Relationships
<b>Related Concepts</b>	Justification Patterns	Quantity Representation	Space and Pattern	Generalization Justification	Pattern and Model
<b>Design Cycle Transdisciplinary</b>	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate	Math 5E Lesson Structure: Engage Explore Explain Extend Evaluate
<b>MYP Assessments/ Performance Tasks</b>	Common Unit Test & Quiz MYP Assessment – Rubric C	Common Test Common Quiz MYP Assessments – Rubrics, D	Common Test Common Quiz	Common Test Common Quiz	Common Test Common Quiz
<b>Differentiation For Tiered Learners</b>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>	<ul style="list-style-type: none"> <li>● SWD/504- Accommodations provided</li> <li>● Extensions- Enrichment Tasks and Projects</li> </ul>
<b>Course Levels</b>	<b>Marietta City Schools offers Enhanced, Honors, Accelerated, and AP classes to provide differentiated learning experiences for students.</b>				