MCS MYP Science 6 Subject Group Overview

Unit Name	Solar System and Beyond & Human Energy Needs	Earth – Moon – Sun & Human Energy Needs	Earth's Changing Landscape Part I & Human Energy Needs	Earth's Changing Landscape Part II & Human Energy Needs	Water in Earth's Processes & Human Energy Needs	Climate and Weather & Human Energy Needs	Human Energy Needs
Time Frame	6 Weeks	5 Weeks	5 Weeks	5 Weeks	5 Weeks	8 Weeks	Ongoing Throughout Year
Standards	S6E1. a, b, c, d, e S6E6. a	S6E2.a., b., c. S6E3.d. S6E6.a.	S6E3.c. S6E5.a., f. S6E6.a.	S6E5.b., c., d., e., g., h. S6E6.a.	S6E3.a., b., c. S6E6.b. S6E6.a.b.c	S6E2.c. S6E3.d. S6E4.a., b., c., d., e. S6E6.b., c.	S6E6.a. b, c
Approaches To Learning Instructional Strategies	SEP: ● Ask questions ● Develop models ● Analyze & interpret data ATL: ● Keep an organized and logical system of information ● Thinking: Critical Thinking, Creative Thinking & Transfer Use models and simulations to explore complex systems and issues	SEP: ● Develop & use a model ● Construct explanations ● Analyze & interpret data ATL: ● Thinking: Critical Thinking, Creative Thinking & Transfer Use models and simulations to explore complex systems and issues3/23/26	SEP: ● Ask questions ● Construct explanations ATL: ● Collect, record, and verify data ● Collect and analyze data to identify solutions and make informed decisions ● Make guesses, ask"what if" questions, and generate testable hypothesis	SEP: ● Plan & carry out investigations ● Construct explanations ● Ask questions ● Develop models ● Construct an argument ATL: Communication ● Make inferences and draw conclusions ● Exercise leadership and take on variety of roles within groups	SEP: ● Ask questions ● Plan & carry out investigations ● Design & evaluate solutions ATL: Access information to be informed and to inform others Collect and analyze data to identify solutions and/or make informed decisions	SEP: ● Analyze & interpret data ● Plan & carry out investigations ● Develop models ● Construct explanations ● Construct an argument ● Design & evaluate solutions ATL: ● lLocate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media	SEP: ● Ask questions ● Construct an argument ● Design & evaluate solutions ATL: Critical Thinking ● Gather and organize relevant information to formulate an argument

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	Statement of Inquiry	Scientific and technical advancements have led to changes in the models used to explain the motion and orientation of objects in space. Phenomena: How/why do our planets orbit the sun? Year-Long- Why is Earth the only planet in our solar system that is able to support life?	System models can be used to demonstrate and explain the motion and orientation of the Earth, Moon, and Sun. Phenomena: Why do we see the moon in different phases? What causes solar and lunar eclipses? Why doesn't everyone experience four seasons?	Scientific and technical innovations allow us to visualize, model, and explain changes to the Earth's surface. Phenomena: What causes major geologic events, such as earthquakes and volcanoes, and how do they impact Earth's surface?	Scientific and technical innovations allow us to visualize, model, and explain changes to the Earth's surface. Phenomenon: What drives weathering, erosion, and deposition and how do these processes impact the Earth's surface?	Sustainable management of the Earth's water resources means that human needs must be balanced with those of the natural world. Phenomena: Why is the water cycle a self-renewing process? How do humans impact the water cycle?	Innovations and advancements in science and technology allow meteorologists to identify patterns and more accurately predict weather systems. Phenomena: What causes local and global winds? Why do different parts of the Earth experience different climates?	Scientific and technological advancements have allowed for the use of renewable and sustainable energy resources. Phenomenon: How can renewable resources, such as hydro, solar, wind, geothermal, and tidal, be used as energy resources?
	Global Context	Scientific and technical innovation	Motion and orientation in time and space	Scientific and technical innovation	Scientific and technical innovation	Globalization and sustainability	Scientific and technical innovation	Scientific and technical innovation
	Key Concepts	Systems	Change	Cause and effect	Change	Systems	Systems	Relationships
	Related Concepts	Movement (MYP) Models (MYP/CCC)	Movement (MYP) Models (MYP/CCC)	Transformation (MYP) Energy (MYP/CCC)	Transformation (MYP) Energy (MYP/CCC)	Environment (MYP) Transformation (MYP) Balance (MYP) Energy (MYP/CCC)	Patterns (MYP/CCC)	Energy (MYP/CCC)

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	Design Cycle Transdisciplinary	Engineering Design Cycle (A-D) Core Ideas: ● Origins of the Universe ● Milky Way Galaxy ● Engineering & Technology ● Gravity ● Inertia ● Formation of the Solar System ● Structure of the Solar System	Engineering Design Cycle (A-D) Core Ideas: ● Lunar Cycle (Eclipses) ● Day/Night ● Seasons ● Elliptical Orbit ● Tilt of the Earth ● Revolution/ Rotation ● Direct/In direct Sunlight ● Gravity ● Tides	Engineering Design Cycle (A-D) Core Ideas: ● Plate Tectonics ● Layers of the Earth ● Geological Features ● Geological Events	Engineering Design Cycle (A-D) Core Ideas: ●Mineral Formation ● Rock Cycle ● Weathering ● Erosion ● Deposition ● Geological Features	Engineering Design Cycle (A-D) Core Ideas: ● Water Cycle ● Thermal Energy Transfer ● Conservation of Water ● Temperature ● Salinity ● Density	Engineering Design Cycle (A-D) Core Ideas: ● Ocean and Atmosphere Patterns ● Waves and Currents ● Water Cycle ● Air Masses ● Unequal Heating and Rotation of the Earth ● Weather ● Natural Disasters ● Conservation of Atmosphere	Engineering Design Cycle (A-D) Core Ideas: ● Renewable and NonRenewable Resources ● Global Climate Change
	MYP Assessments/ Performance Tasks	MYP Project (A) Universe Data Analysis (C)	Moon Phases Model (A)	Edible Plate Tectonics (B)	Stream Table (B)	Human Impact on Water (D)	Safest Place in America (C)	Climate Change Project (D)
	Differentiation For Tiered Learners	Marietta City Schools teachers provide specific differentiation of learning experiences for all students. Details for differentiation for common learning experiences are included on the district unit planners.						