Classical Magnet School

Course _____Science (Grade 6)

	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
Essential Questions	How is scientific knowledge created and communicated? How do science and technology affect the quality of our lives?	How is scientific knowledge created and communicated? How do matter and energy flow through ecosystems?				How is scientific knowledge created and communicated? How do science and technology affect the quality of our lives? How do External and internal sources of energy affect the Earth's systems?			How is scientific knowledge created and communicated How do materials cycle through the Earth's systems?	
Themes	Introduction to Science *How to use the tools of science and the scientific method to solve problems.*	Environmental Science *An ecosystem is composed of all the populations that are living in a certain space and the physical factors with which they interact*				Weather and Climate *Variations in the amount of the sun's energy hitting the Earth's surface affect daily and seasonal weather patterns.*			Earth Science Water moving across and through earth materials carries with it the product of human activities.	
Topics	Identify questions that can be answered through scientific investigation. Design and conduct appropriate types of scientific investigations to answer different questions. Identify independent and dependent variables and those variables that are kept constant .	Populations in ecosystems are affected by biotic factors, such as other populations, and abiotic factors Populations in ecosystems can be categorized as producers , consumers and decomposers or organic matter	Describe predator – prey and symbiotic relationships Express how plants and other photosynthetic organisms use the sun's energy Interpret graphs that illustrate the fluctuation of populations over time.	Compare and contrast different biomes Distinguish a food chain from a food web and identify local examples of each .	Explain the impact of environmental conditions such as climate, elevation, topography or water quality on food chains Design and conduct appropriate types of scientific investigations to answer different questions.	Become aware of the weather and variables such as temperature, precipitation, and wind speed that make up weather conditions Develop ways to observe weather variables Identify layers of the atmosphere and why they are important to living things	Weather and seasons: variations for energy hitting the earth's surface affect daily and seasonal weather patterns. Recognize that there are different forms of precipitation and identify these forms	Identify instruments used by meteorologists and use simple weather instruments to measure air temperature and wind speed and direction Compare forms of hazardous weather including hurricanes, high winds, tornadoes, floods, blizzards and droughts and their effects on humans and the land.	Land and Water interactions Describe how waves. Wind. Water and ice shape and reshape the Earth's land surface by eroding rock and soil in some areas and depositing them in other areas Cycles of matter in the Earth's Systems	Use maps to identify land features and their locations Recognize that some changes in the Earth's surface, such as earth quakes and volcanic eruptions are abrupt, while other changes happen very slowly

	Use appropriate tools and techniques to make observations and gather data. Draw conclusions and identify sources of error									
Major Skills	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication	Analyzing Data Understanding Concepts Literacy Direct Investigation Communication
Standards	CINQ3 Design and conduct appropriate types of Scientific investigations to answer different questions CINQ 4 Use appropriate tools and techniques to make observations an gather data	6.2 An ecosystem is composed of all the populations that are living in a certain space and the physical factors with which they interact	C4 Describe how abiotic factors such as temperature, water and sunlight affect the ability of plants to create their own food through photosynthesis	C5 Explain how populations are affected by predator –prey relationships	C6 Describe common food webs in different Connecticut ecosystems CINQ3 Design and conduct appropriate types of Scientific investigations to answer different questions	C11 Explain how human activity may impact water resources on Connecticut such as ponds, rivers and the Long Island Sound ecosystems. CINQ3 Design and conduct appropriate types of Scientific investigations to answer different questions	C7 Describe the effect of heating on the movement of molecules in solid liquids and gases. Variations in the amount of sun's energy hitting the Earth's surface affect daily and seasonal weather patterns. C8 Explain how local weather conditions are related to the temperature. Pressure and water content of the atmosphere and the proximity to a large body of water.	C9 Explain how the uneven heating of the Earth's surface causes winds.	C18 Describe how folded and faulted rock layers provide evidence of the gradual up and down motion of the Earth's crust. C19 Explain how glaciations, weathering and erosion create and shape valleys and floodplains.	C20 Explain how the boundaries of tectonic plates can be inferred from the location of earthquakes and volcano
Field Trips / Guest Speakers Seminars Coached Projects	The Penny Boat Contest The Scientific Method	Peabody Natural History Museum World in a Bottle The Scientific Method: The Penny Boat Contest	The Science Fair Project Project Oceanology The Scientific Method: World in a Bottle	Science Fair Project Project Oceanology Deer Populations	Biomes in Miniature Project Oceanology The Robin	Watching the Weather Working Under Pressure	Project Oceanology The Beaufort Wind Scale	Joe Furey – Fox Meteorlogist Mark Dixon-Channel 3 Meteorologist Weather Maps	Boston Science Museum The Scientific Method: Dig In	

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