



Mount Pleasant Central School District

5th Grade, Science

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How can noticing natural phenomena in the world drive student curiosity to learn and grow as scientists? Students will explore the topics of Life Science, Physical Science, Earth and Space Science, Scientific Inquiry and Practices and Engineering and Technology. Our goals are to plan and carry out investigations, analyze data, construct explanations and design solutions. We emphasize finding patterns, discovering cause and effect, making observations, investigating relationships between structure and function and recognizing the influence of science on society and the natural world. Assessment will be through CER (Claim- Evidence- Reasoning) responses, end of unit tasks and performance based assessments (labs, investigations) which enable students to apply their learning to real world situations.

Unit Title	Month	Content	Vocabulary	Standards	Skills	Big Ideas	Assessments
Matter and Energy Flow in an Ecosystem	1st Trimester/ Classroom	<ul style="list-style-type: none"> - Energy Transfer -Matter and Energy in Plants -Food Webs -Matter Cycles -Ecosystems 	<ul style="list-style-type: none"> - body repair, energy, growth, motion -growth, material, matter, photosynthesis, plant, weight -bacteria, consumer, decomposer, food web, fungus, organism, producer -decomposer, environment, interactions, microbe, soil, waste 	<ul style="list-style-type: none"> -5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and used to maintain body warmth) was once energy from the sun. -5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water. -5-LS2-1 Develop a model to describe the movement of matter among plants (producers), animals (consumers), decomposers, and the environment. -3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified 	<ul style="list-style-type: none"> -Developing and Using Models -Engaging in Argument from Evidence -Connecting to Nature of Science -Describing Systems and System Models 	<ul style="list-style-type: none"> -Plants get the material needed for growth primarily from air and water. - Food webs consist of plants, animals that eat plants, animals that eat other animals, and decomposers. - Matter moves between the air and soil and among plants, animals, and decomposers that release waste matter back into the environment. 	CERs, end of unit assessments

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			-decomposer, ecosystem, environment, food web, interactions, interdependence, needs, organism, species	criteria for success and constraints on materials, time, or cost. -3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.		- Organisms survive and thrive in environments that meet their needs. - All the energy organisms have was once energy from the sun.	
Observing Our Sky	2nd Trimester/ Classroom	- Earth's Rotation -Observing the Stars -Objects in the Sky -Gravity	-axis, Earth, Moon, North Pole, orbit, rotation, South Pole -apparent brightness, distance, observe, star, sun -axis, North Pole,	-5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. -5-ESS1-1 Support an argument that differences in the apparent	-Analyzing and Interpreting Data -Identifying Patterns -Engaging in Argument from Evidence -Identifying Cause and Effect Relationships	-The Sun is a star that appears larger and brighter because it is closer than other stars. -Observable patterns occur because of the orbits of Earth and the Moon and	CERs, end of unit assessments

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			orbit, rotation, South Pole, star -evidence, force, gravity, planet	brightness of the sun compared to other stars is due to their relative distances from Earth. -5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down.		because of Earth's rotation. -The rotation of Earth causes day and night as well as changes in the length and direction of shadows. -Earth's gravity pulls objects toward the planet's center.	
Interactions in Matter	3rd Trimester/ Classroom	-Matter is Everywhere -Properties of Matter -Changes to Matter -Mixtures	-dissolve, gas, matter, microscope, model, particle -matter, measurement,	-5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen. -3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled	-Developing and Using Models -Planning and Carrying Out Investigations -Using Mathematics	-Matter is made up of particles that are too small to be seen. -Heating, cooling, or mixing substances does not cause the	CERs, end of unit assessments

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			observe, properties, standard units, temperature, volume, weight -chemical reaction, matter, matter conservation, properties, substance, weight -chemical reaction, mixture, properties, reversible, solution, substance	and failure points are considered to identify aspects of a model or prototype that can be improved. -5-PS1-3 Make observations and measurements to identify materials based on their properties. -5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. -5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	and Computational Thinking -Connecting to Nature of Science -Identifying Cause and Effect Relationships	total weight to change. -Materials can be identified by observing and measuring them. -Mixing certain materials can sometimes create a new substance.	

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Human Impact on the Earth's Systems	All Trimesters/ Science Lab	-Earth's Systems Interactions -Water Sources -Reducing Human Footprint	-atmosphere, biosphere, ecosystem, geosphere, hydrosphere, interactions, landform, molten rock, organism, sediment -atmosphere, fresh water, glacier, lake, ocean, stream, wetlands -agriculture, community, environment, interactions, land, ocean, resource,	-5-ESS2-1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. -5-ESS2-2 Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. -5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. -3-5-ETS1-1 Define a simple design problem reflecting a need or a	-Developing and Using Models -Describing Systems and System Models -Using Mathematics and Computational Thinking -Understanding Scale, Proportion and Quantity -Obtaining, Evaluating, and Communicating Information -Connecting to Nature of Science	-Earth's major systems (geosphere, biosphere, hydrosphere, and atmosphere) interact with each other. -Most of Earth's available water is in the ocean, and most of Earth's fresh water is frozen in glaciers and ice caps. -People can use information about Earth's systems and water to protect Earth's	

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			stream, vegetation	want that includes specified criteria for success and constraints on materials, time, or cost. -3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.		resources and environments	