Mount Pleasant Central School District

2nd 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
Changes to the Earth	1st Trimester	-Quick Changes to Land -Slow Changes to Land -Effects of wind and water	-Earth events -Earthquake -Erosion -Weathering	(2-ESS1-1) Use information from several sources to provide evidence that Earth events can occur quickly or slowly. (2-ESS2-1) Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	-Developing and Using Models -Constructing Explanations and Designing Solutions -Obtaining, Evaluating, and Communicating Information	-Earth events can occur quickly or slowly. -Engineering solutions can be designed to slow or prevent wind or water from changing the shape of the land.	CER/Assessments
Mapping Land and Water	2nd Trimester	-Mapping Our World -Forms of Water on Earth	-Bodies of water -Physical model	(2-ESS2-2) Develop a model to represent the shapes and kinds of land and bodies of	-Developing and Using Models -Constructing	-Maps can show shapes and types of landforms and water in an area.	CER/Assessments

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				water in an area. (2-ESS2-3) Obtain information to identify where water is found on Earth and that it can be solid or liquid.	Explanations and Designing Solutions -Obtaining, Evaluating, and Communicating Information	-Water on Earth is found in oceans, rivers, lakes, and ponds. -Water on Earth exists as a liquid or as solid ice.	
Selecting and Using Materials in the Design Process	3rd Trimester	-Properties and States of Matter -Properties of Materials	-Matter -Observable property -Temperature -Reversible -Substance	(2-PS1-1) Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. (2-PS1-2) Analyze data obtained from	- Planning and Carrying Out Investigations -Analyzing and Interpreting Data -Constructing Explanations and Designing Solutions	-Matter can be described and classified by certain properties you can see and measure. -Different properties are suited for different purposes.	CER/Assessments

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				testing different materials to determine which materials have the properties that are best suited for an intended purpose. (2-PS1-3) Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	-Engaging in Argument from Evidence	-Objects are made from pieces that can be taken apart and put back together as other objects. -Changes in the properties of materials due to adding or taking away heat can sometimes be reversed; other times, they cannot be reversed.	

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				(2-PS1-4) Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.			
Organisms: Needs and Interactions	3rd Trimester	-What Plants Need -Animals and Plant Dependence -Diversity of Living Things	-Pollination -Disperse -Diversity -Habitat	(2-LS2-1) Plan and conduct an investigation to determine if plants need sunlight and water to grow. (2-LS2-2) Develop a simple model that mimics the function	- Developing and Using Models -Planning and Carrying Out Investigations	-Plants depend on water and light to grow. -Plants depend on animals for pollination and to move seeds around. -Some animals	CER/Assessments

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				of an animal in dispersing seeds or pollinating plants. (2-LS4-1) Make observations of plants and animals to compare the diversity of life in different habitats.		depend on plants for food. -There are many different kinds of living things on land and in water.	
Engineering Design	Throughout the Year	-Engineering content is connected to the other science concepts taught throughout the year.	-Design Process -Problem -Solution -Improve	(K-2-ETS1-1) Ask questions, make observations, and gather information about a situation	-Asking Questions and Defining Problems -Developing and	-A situation that people want to change or create can be approached as a problem to be solved	STEM Design Challenges

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				people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-2) Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. (K-2-ETS1-3) Analyze	Using Models -Analyzing and Interpreting Data	through engineering. -Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. -Because there is always more than one possible solution to a problem, it is useful to compare and test	

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				data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.		designs.	

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