

Mount Pleasant Central School District

Kindergarten, Science



We believe that all students should have a strong understanding of science and its application to critically assess information in the modern world and make decisions to solve real-world problems.

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
Using Force to Change Motion	1st Trimester	- Pushes and Pulls -Speed and Direction	-Direction -Motion -Force -Pull -Push	(K-PS2-1) Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. (K-PS2-2) Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	-Planning & Carrying Out Investigations -Analyzing & Interpreting Data	-Different amounts of strength and different directions can change the motion of an object. -A push or pull can change the speed or direction of an object's motion.	-CER/Assessments
Humans and the	2nd	- Animal Needs	- Animal, food, grow,	(K-LS1-1) Use	-Developing and	-Plants and animals	-CER/Assessments

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Needs of Organisms	Trimester	-Plant Needs -Reducing Human Impact	pattern, plant, water -Grow, light, plant, sun, water -Air, design, idea, impact, land, physical model, problem, solution	observations to describe patterns of what plants and animals (including humans) need to survive. (K-ESS2-2) Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. (K-ESS3-3) Communicate	Using Models -Analyzing & Interpreting Data -Engaging in Argument from Evidence -Obtaining, Evaluating & Communicating Evidence	(including humans) have basic needs to survive. -An organism's surroundings must provide all the basic needs necessary for the organism to survive. -Humans can make choices to reduce their impacts on the land, water, and air.	

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				<p>solutions that will reduce the impact of humans on living organisms and non-living things in the local environment.</p> <p>(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.</p>			

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Living Things and Their Habitats	2nd Trimester	<ul style="list-style-type: none"> - Habitats -Organisms' Impact on Environments -Uses of Natural Resources 	<ul style="list-style-type: none"> - Air, habitat, humans, relationship, resource, water -Animals, environment, humans, impact, needs, plant -Humans, natural, relationship, resource 	<p>(K-ESS3-1) Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.</p> <p>(K-ESS2-2) Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</p>	<ul style="list-style-type: none"> - Systems & System Models -Developing & Using Models -Engaging in Argument from Evidence 	<ul style="list-style-type: none"> -Plants and animals (including humans) have basic needs to survive. -Animals use natural resources from their environment to meet their needs. -Animals change their environment to meet their needs of food, water, and shelter. -An organism's surroundings must provide all the basic needs necessary for 	-CER/Assessments

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				<p>(K-2-ETS1-1) Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>(K-2-ETS1-2) Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it</p>		the organism to survive.	

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				function as needed to solve a given problem. (K-2-ETS1-3) Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.			
Weather	3rd Trimester	- Weather Conditions -Weather Patterns -Weather Hazards -Energy From The Sun -Solids and Liquids	- Weather, combination, particular region, particular time, rain, snow, sunlight, temperature, wind -Condition, local,	(ESS2.D) Weather is the combination of sunlight, wind, sun or rain and temperature in a particular region at a particular time. (ESS3.B) Natural	- Patterns -Cause & Effect -Asking Questions / Defining Problems -Planning & Carrying	-Weather is a combination of sunlight, wind, snow, rain, and temperature in a particular region at a particular time. -People measure	-CER/Assessments

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Unit Title	Month	Content	Vocabulary	Standards	Skills	Big Ideas	Assessments
			<p>pattern</p> <p>-Community, engineering, event, forecast, meteorologist, region, severe weather, solution</p> <p>-Earth's surface, heat, materials, structure, sunlight</p> <p>-Freeze, liquid, melt, solid, temperature</p>	<p>Hazards- Some types of severe weather are more likely than others in a given region.</p> <p>(ETS1.A) Defining and delimiting an engineering problem.</p> <p>(PS3.B) Conservation of energy and energy transfer.</p> <p>(K-PS3-1) Make observations to determine the effect of sunlight on</p>	<p>Out Investigations</p> <p>-Analyzing & Interpreting Data</p> <p>-Constructing Explanations & Designing Solutions</p> <p>-Obtaining, Evaluating & Communicating Evidence</p>	<p>these conditions to describe and record the weather and to notice patterns over time.</p> <p>-Some types of severe weather are more likely in certain areas. Weather scientists forecast severe weather so communities can prepare to respond.</p> <p>-Sunlight warms Earth's surface.</p> <p>-Different substances</p>	

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				<p>Earth's surface.</p> <p>(K-PS3-2) Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.</p> <p>(K-2-ETS1-1) Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through</p>		<p>can be solid or liquid depending on their temperature.</p>	

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				the development of a new or improved object or tool. (K-PS1-1) Plan and conduct an investigation to test the claim that different kinds of matter exist as either solid or liquid, depending on temperature.			
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 people want to	- Asking Questions and Defining Problems -Developing and Using Models	A situation that people want to change or create can be approached as a problem to be solved through engineering.	STEM Design Challenges

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				<p>change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>(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.</p> <p>(K-2-ETS1-3) Analyze data from tests of two objects designed to</p>	-Analyzing and Interpreting Data	<p>-Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solution.</p> <p>-Because there is always more than one possible solution to a problem, it is useful to compare and test designs.</p>	

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				solve the same problem to compare the strengths and weaknesses of how each performs.			