

Kindergarten NYSSLS/NGSS Aligned Curriculum 2019-2020

K. Matter and its Interactions

| Standard | Performance Expectations | Clarification | Disciplinary Core Idea | Mystery Science and other resources | Catholic Identity |
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| 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. | Emphasis should be on solids and liquids at a given temperature and that a solid may be a liquid at higher temperature and a liquid may be a solid at a lower temperature. | PS1.A: Structure and Properties of Matter Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. (K-PS1-1) | Video: 3 states of matter for kids States of Matter | God created a well-ordered universe. |

Kindergarten NYSSLS/NGSS Aligned Curriculum 2019-2020

K. Forces and Interactions: Pushes and Pulls

| Standard | Performance Expectations | Clarification | Disciplinary Core Idea | Mystery Science or other resources | Catholic Identity |
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| 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. | Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other. | <p>PS2.A: Forces and Motion Pushes and pulls can have different strengths and directions. (K PS2-1), (K-PS2-2)</p> <p>Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-1), (K-PS2-2)</p> | <p>Force Olympics (6-9 weeks)- This unit will help students develop their first concept of “force”, and the idea that by playing with forces and thinking about them, we can accomplish surprisingly big things.</p> | <p>Respect for others, conflict resolution.</p> |
| 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. | Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn. | <p>PS2.B: Types of Interactions When objects touch or collide, they push on one another and can change motion. (K-PS2-1)</p> <p>PS3.C: Relationship Between Energy and Forces (NYSED) A push or a pull may cause stationary objects to move, and a stronger push or pull in the same or opposite direction makes an object in motion speed up or slow down more quickly. (secondary to K-PS2-1)</p> <p>ETS1.A: Defining Engineering Problems. A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.</p> | <p>The Gigantic Turnip by Aleksei Tolstoy</p> | |

Kindergarten NYSSLS/NGSS Aligned Curriculum 2019-2020

| K. Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | | | | | |
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| Standard | Performance Expectations | Clarification | Disciplinary Core Idea | Mystery Science | Catholic Identity |
| K-LS1-1 | Use observations to describe patterns of what plants and animals (including humans) need to survive. | Examples of patterns could include that animals need to take in food, but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and that all living things need water and other materials to live, grow, and thrive. | <p>LS1.C: Organization for Matter and Energy Flow in Organisms. (NYSED) All animals need food, air, and water in order to live, grow, and thrive. Animals obtain food from plants or from other animals. Plants need water, air, and light to live, grow, and thrive. (K-LS1-1)</p> <p>ESS2.E: Biogeology Plants and animals can change their environment. (K-ESS2-2)</p> | Plant and Animal Secrets (6-9 Weeks) Animals and plants need things in order to survive, and their lives are all about meeting those needs. It's the secret to why they do the many strange and wonderful things they do! Knowing how they meet their needs can even help you find plants and animals near where you live | <p>The Story of Creation.</p> <p>Give thanks for our homes.</p> <p>Easter flowers at Mass feasts, mistletoe, holly, ivy, laurel & poinsettia plants- symbols of Christ, symbols of life (butterflies, rabbits, chicks)</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. | Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete. | <p>ESS3.A: Natural Resources Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)</p> | | |
| K-ESS3-1 | Use a model to represent the relationship between the needs of different plants or animals (including | Examples of relationships could include that deer eat buds and leaves; therefore, they usually live in forested areas, and grasses need sunlight, so they | <p>ESS3.C: Human Impacts on Earth Systems Things that people do to live comfortably can affect the world</p> | | |

Kindergarten NYSSLS/NGSS Aligned Curriculum 2019-2020

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| | humans) and the places they live. | often grow in meadows. Plants, animals, and their surroundings make up a system. | around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary to K-ESS2-2), (K-ESS3-3) | | |
| K-ESS3-3 | Communicate solutions that will reduce the impact of humans on living organisms and non-living things in the local environment. | Examples of human impact on the environment (land, water, air, plants, and animals) could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles. | ETS1.B: Developing Possible Solutions 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. (secondary to K-ESS3-3) | | |

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K. Weather and Climate

| Standard | Performance Expectations | Clarification | Disciplinary Core Idea | Mystery Science | Catholic Identity |
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| K-ESS2-1 | Use and share observations of local weather conditions to describe patterns over time. | Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months. | <p>PS3.B: Conservation of Energy and Energy Transfer Sunlight warms Earth’s surface. (K-PS3-1), (K-PS3-2)</p> <p>ESS2.D: Weather and Climate Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1)</p> <p>ESS3.B: Natural Hazards Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. (K-ESS3-2)</p> <p>ETS1.A: Defining and Delimiting an Engineering Problem. Asking questions, making</p> | <p>Weather Watching (6-9 weeks)</p> <p>This unit will help students develop the habit of becoming weather watchers who take pleasure in noticing weather patterns and predicting changes.</p> | <p>The Church Seasons: Advent, Christmas Epiphany, Easter & Pentecost</p> <p>Noah’s Ark</p> |
| K-ESS3-2 | Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. | Emphasis is on local forms of severe weather and local resources available for preparedness measures. | | | |

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| K-PS3-1 | Make observations to determine the effect of sunlight on Earth's surface. | Examples of Earth's surface could include sand, soil, rocks, and water | observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2) | | |
| K-PS3-2 | Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. | Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun. | | | |