

2nd Grade NYSSLS/NGSS Aligned Curriculum 2019-2020

2-PS1-1.2. Structure and Properties of Matter

Standard	Performance Expectations	Clarification	Disciplinary Core Idea	Mystery Science And other resources	Catholic Identity
2-PS1-1.	Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.	<p>PS1.A: Structure and Properties of Matter</p> <ul style="list-style-type: none"> - 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. <p>(2-PS1-1)</p> <ul style="list-style-type: none"> - Different properties are suited to different purposes. <p>(2-PS1-2), (2-PS1-3)</p> <ul style="list-style-type: none"> - A great variety of objects can be built up from a small set of pieces. <p>(2-PS1-3)</p> <p>PS1.B: Chemical Reactions</p> <ul style="list-style-type: none"> - Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not. <p>(2-PS1-4)</p>	<p>MS: Material Magic (5-10 weeks) This unit develops the idea that by taking advantage of the properties of materials, we can solve many problems in our lives. Students will develop an appreciation for the manmade materials of everyday objects and learn to recognize that those materials are chosen based on their properties. Through hands-on investigation, students will explore the material properties involved in meeting basic needs (such as clothing and cooking). They'll consider the solid and liquid states of matter to understand why plastic was invented. The unit ends with a brainstorming activity about futuristic inventions that might be possible using new materials.</p>	<p>Share ideas and thoughts about God and science topics</p> <p>Understand God created a well- ordered universe.</p> <p>Appreciate God's creation</p>
2-PS1-2.	Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	Examples of properties could include, strength, flexibility, hardness, texture, and absorbency. Assessment Boundary: Assessment of quantitative measurements is limited to length.			
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.	Examples of pieces could include blocks, building bricks, or other assorted small objects.			
2-PS1-4.	Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	An example of a reversible change could include freezing and melting. An example of an irreversible change could include cooking an egg.			

2nd Grade NYSSLS/NGSS Aligned Curriculum 2019-2020

2. Interdependent Relationships in Ecosystems

Standard	Performance Expectations	Clarification	Disciplinary Core Idea	Mystery Science And other resources	Catholic Identity
2-LS2-1.	Plan and conduct an investigation to determine if plants need sunlight and water to grow.	Assessment is limited to testing one variable at a time.	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <ul style="list-style-type: none"> - Animals depend on plants or other animals for food. (2-LS2-2) - (NYSED) Plants depend on water, light and air to grow. (2-LS2-1) - (NYSED) Some plants depend on animals for pollination and for dispersal of seeds from one location to another. (2-LS2-2) <p>LS4.D: Biodiversity and Humans</p> <ul style="list-style-type: none"> - There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1) <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> - (NYSED) Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas to other people (secondary to 2-LS2-2) 	<p>MS: Animal Adventures (3-6 weeks) This unit helps students develop a sense of wonder for biodiversity: the sheer range and variety of animals found on earth. Students gain practical experience in identifying animals and sorting them into scientific groups, and apply their knowledge in an engineering design challenge.</p> <p>MS: Plant Adventures (6-12 weeks) This unit develops the idea that plants are truly alive and face challenges every bit as dramatic as those of animals. Students will learn that plants have needs, and will reason from evidence to understand how plants meet their needs.</p>	<p>Share ideas and thoughts about God and science topics</p>
2-LS2-2.	Develop a simple model that illustrates how plants and animals depend on each other for survival.	Examples could include animals dispersing seeds or pollinating plants, and plants providing food, shelter, and other materials for animals.			<p>Understand God created a well- ordered universe.</p>
2-LS4-1.	Make observations of plants and animals to compare the diversity of life in different habitats.	Emphasis is on the diversity of living things in each of a variety of different habitats. Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.			<p>Appreciate God’s creation</p> <p>What does God have to do with Science laws?</p>

2nd Grade NYSSLS/NGSS Aligned Curriculum 2019-2020

2. Earth's Systems: Processes that Shape the Earth					
Standard	Performance Expectations	Clarification	Disciplinary Core Idea	Mystery Science And other resources	Catholic Identity
2-ESS1-1.	Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and weathering and erosion of rocks, which may occur slowly.	<p>ESS1.C: The History of Planet Earth - Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)</p> <p>ESS2.A: Earth Materials and Systems - Wind and water can change the shape of the land. (2-ESS2-1)</p>	<p>MS: Work of Water (4-8 weeks) This unit helps students develop the idea that water is a powerful force that reshapes the earth's surface. Students see that water isn't just something we drink. It carries sand to create beaches, carves out canyons and valleys and, as ice, scrapes entire areas flat.</p>	Share ideas and thoughts about God and science topics
2-ESS2-1.	Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	Examples of solutions could include different designs for using rocks, shrubs, grass, and trees to hold back wind, water, and land.	<p>ESS2.B: Plate Tectonics and Large-Scale System Interactions - Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)</p>		Understand God created a well-ordered universe.
2-ESS2-2.	Develop a model to represent the shapes and kinds of land and bodies of water in an area.		<p>ESS2.C: The Roles of Water in Earth's Surface Processes - Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)</p>		Appreciate God's creation
2-ESS2-3.	Obtain information to identify where water is found on Earth and that it can be solid or liquid.		<p>ETS1.C: Optimizing the Design Solution - Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (secondary to 2-ESS2-1)</p>		How are natural calamities part of God's plan for creation?

2nd Grade NYSSLS/NGSS Aligned Curriculum 2019-2020