

3rd Grade Unit	Major Outcomes	Catholic Identity	Assessments/activities	Resources
<p><b>Science Processes</b></p>	<p><b>Inquiry Process</b>  <i>K-7 Standard S.IP: Develop an understanding that scientific inquiry and reasoning involves observing, questioning, investigating, recording, and developing solutions to problems.</i>  <b>S.IP.E.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.</b>  <b>S.IP.03.11</b> Make purposeful observation of the natural world using the appropriate senses.  <b>S.IP.03.12</b> Generate questions based on observations.  <b>S.IP.03.13</b> Plan and conduct simple and fair investigations.  <b>S.IP.03.14</b> Manipulate simple tools that aid observation and data collection (for example: hand lens, balance, ruler, meter stick, measuring cup, thermometer, spring scale, stop watch/timer).  <b>S.IP.03.15</b> Make accurate measurements with appropriate units (centimeters, meters, Celsius, grams, seconds, minutes) for the measurement tool.  <b>S.IP.03.16</b> Construct simple charts and graphs from data and observations.  <b>Inquiry Analysis and Communication</b>  <i>K-7 Standard S.IA: Develop an understanding that scientific inquiry</i></p>	<p>-Sense of wonder and awe of God’s creation          -understands science from the perspective that God created a well-ordered universe          -discovering God’s gifts          -demonstrates attitudes of curiosity and discovery          -discovering God’s gifts and grace in others          -participates in the learning community to the benefit of all          -shares solution and reasoning          -considers and respects the ideas of others</p>	<p><b>Included in units as applicable.</b></p>	

	<p><i>and investigations require analysis and communication of findings, using appropriate technology.</i></p> <p><b>S.IA.E.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.</b></p> <p><b>S.IA.03.11</b> Summarize information from charts and graphs to answer scientific questions.</p> <p><b>S.IA.03.12</b> Share ideas about science through purposeful conversation in collaborative groups.</p> <p><b>S.IA.03.13</b> Communicate and present findings of observations and investigations.</p> <p><b>S.IA.03.14</b> Develop research strategies and skills for information gathering and problem solving.</p> <p><b>S.IA.03.15</b> Compare and contrast sets of data from multiple trials of a science investigation to explain reasons for differences.</p> <p><b>Reflection and Social Implications</b></p> <p><i><b>K-7 Standard S.RS:</b> Develop an understanding that claims and evidence for their scientific merit should be analyzed. Understand how scientists decide what constitutes scientific knowledge. Develop an understanding of the importance of reflection on scientific knowledge and its application to new situations to better understand the</i></p>			
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<p><b>Changes in the Earth's Crust</b></p>	<p><i>role of science in society and technology.</i>  <b>S.RS.E.1 Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.</b>  <b>S.RS.03.11</b> Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.  <b>S.RS.03.14</b> Use data/samples as evidence to separate fact from opinion.  <b>S.RS.03.15</b> Use evidence when communicating scientific ideas.  <b>S.RS.03.16</b> Identify technology used in everyday life.  <b>S.RS.03.17</b> Identify current problems that may be solved through the use of technology.  <b>S.RS.03.18</b> Describe the effect humans and other organisms have on the balance of the natural world.  <b>S.RS.03.19</b> Describe how people have contributed to science throughout history and across cultures.</p> <p><b><i>K-7 Standard E.SE: Develop an understanding of the properties of Earth materials and how those properties make materials useful. Understand gradual and rapid changes in Earth materials and</i></b></p>	<p>-sense of wonder and awe of God's creation  - understands science from the perspective that God created a well-ordered</p>	<p>-Create a clay model of the 3 layers of the Earth and identify each layer.</p>	<p>-book, Addison-Wesley <u>Destinations in Science – Bryce and Zion / Landforms</u>  - play dough  - variety of types of soil</p>
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	<p><i>features of the surface of Earth. Understand magnetic properties of Earth.</i></p> <p><b>E.SE.E.1 Earth Materials-</b> Earth materials that occur in nature include rocks, minerals, soils, water, and the gases of the atmosphere. Some Earth materials have properties which sustain plant and animal life.</p> <p><b>E.SE.03.13</b> Recognize and describe different types of Earth materials (mineral, rock, clay, boulder, gravel, sand, soil, water, and air). *</p> <p><b>E.SE.03.14</b> Recognize that rocks are made up of minerals.</p> <p><b>E.SE.E.2 Surface Changes-</b> The surface of Earth changes. Some changes are due to slow processes, such as erosion and weathering; and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.</p> <p><b>E.SE.03.22</b> Identify and describe natural causes of change in the Earth's surface (erosion, glaciers, volcanoes, landslides, and earthquakes).</p> <p><b>E.SE.E.3 Using Earth Materials-</b> Some Earth materials have properties that make them useful either in their present form or designed and modified to solve human problems. They can enhance the quality of life as in the case of materials used for building or fuels used for heating and transportation.</p> <p><b>E.SE.03.31</b> Identify Earth materials used to construct some common objects (bricks, buildings,</p>	<p>universe</p> <p>-discovering God's gifts</p> <p>-demonstrates attitudes of curiosity and discovery</p>	<p>-Give natural and man-made causes of erosion and weathering of rock and soil.</p> <p>-Explain what soil is and give examples of types of soil.</p>	<p>- videos</p> <p>-posters</p> <p>Study trip to Ledges in Grand Ledge to observe examples of erosion and weathering</p>
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	<p>roads, glass). *</p> <p><b>E.SE.03.32</b> Describe how materials taken from the Earth can be used as fuels for heating and transportation.</p>			
<p><b>Muscular and Skeletal Systems</b></p>	<p><b>L.OL.M.4 Animal Systems-</b>  <b>Multicellular organisms may have specialized systems that perform functions which serve the needs of the organism.</b></p> <p><b>L.OL.05.41</b> Identify the general purpose of selected animal systems (digestive, circulatory, respiratory, skeletal, muscular, nervous, excretory, and reproductive).</p> <p><b>L.OL.05.42</b> Explain how animal systems (digestive, circulatory, respiratory, skeletal, muscular, nervous, excretory, and reproductive) work together to perform selected activities.</p> <p>The Skeletal System is part of the Michigan Model Health program. Students are asked to:  Name major bones, joints, and muscles  Explain function of joints  Classify joints of different types  Explain importance of exercise</p>	<ul style="list-style-type: none"> <li>-sense of wonder and awe of God’s creation</li> <li>-understands science from the perspective that God created a well-ordered universe</li> <li>-discovering God’s gifts</li> <li>-demonstrates attitudes of curiosity and discovery</li> <li>-consciously lives in accord with beliefs</li> </ul>	<ul style="list-style-type: none"> <li>-dissection of chicken quarter to identify specific bones, joints, and muscles</li> <li>-Label major bones, muscles, and joints.</li> </ul>	<ul style="list-style-type: none"> <li>-model of human skeletal system</li> <li>-variety of books</li> <li>-videos</li> <li>-posters</li> <li>-fresh chicken quarters for dissection</li> <li>-latex gloves</li> <li>-kitchen scissors</li> </ul>

<p><b>Chemical and Physical Changes in Matter</b></p>	<p><b>P.PM.E.1 Physical Properties- All objects and substances have physical properties that can be measured.</b>  <b>P.PM.02.12</b> Describe objects and substances according to their properties (color, size, shape, texture, hardness, liquid or solid, sinking or floating).  <b>P.PM.02.13</b> Measure the length of objects using rulers (centimeters) and meter sticks (meters).  <b>P.PM.02.14</b> Measure the volume of liquids using common measuring tools (graduated measuring cups, measuring spoons, graduated cylinders, and beakers).*  <b>P.PM.02.15</b> Compare the weight of objects using balances.  <b>P.PM.E.4 Material Composition- Some objects are composed of a single substance, while other objects are composed of more than one substance.</b>  <b>P.PM.02.41</b> Recognize that some objects are composed of a single substance (water, sugar, salt) and others are composed of more than one substance (salt and pepper, mixed dry beans). *  <i><b>K-7 Standard P.PM:</b> Develop an understanding that all matter has observable attributes with physical and chemical properties that are described, measured, and compared. Understand that states of matter exist as solid, liquid, or gas; and have physical and chemical</i></p>	<p>-sense of wonder and awe of God’s creation          -understands science from the perspective that God created a well-ordered universe          -discovering God’s gifts          -shares solution and reasoning          -demonstrates attitudes of curiosity and discovery</p>	<p>-Explain how a solution, mixture, and reaction are created.           -Explain how a solution and mixture can be separated.           Give characteristics of a solid, liquid, and gas.           Explain how temperature can change one form of matter to another.           Give examples of solids, liquids, and gases.</p>	<p>-salt, pepper, vinegar, water, containers, cooking oil, baking soda</p>
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	<p><i>properties. Understand all matter is composed of combinations of elements, which are organized by common attributes and characteristics on the Periodic Table. Understand that substances can be classified as mixtures or compounds and according to their physical and chemical properties.</i></p> <p><b>P.PM.E.5 Conductive and Reflective Properties- Objects vary to the extent they absorb and reflect light energy and conduct heat and electricity.</b></p> <p><b>P.PM.03.51</b> Demonstrate how some materials are heated more than others by light that shines on them.</p> <p><b>P.PM.03.52</b> Explain how we need light to see objects: light from a source reflects off objects and enters our eyes.</p>			
<p><b>Parts and Function of Plants</b></p>	<p><i><b>K-7 Standard L.OL:</b> Develop an understanding that plants and animals (including humans) have basic requirements for maintaining life which include the need for air, water, and a source of energy. Understand that all life forms can be classified as producers, consumers, or decomposers as they are all part of a global food chain where food/energy is supplied by plants which need light to produce food/energy. Develop an understanding that plants and animals can be classified by observable traits and physical characteristics. Understand that all living organisms are composed of cells and they</i></p>	<ul style="list-style-type: none"> <li>-sense of wonder and awe at God’s creation</li> <li>-understands science from the perspective that God created a well-ordered universe</li> <li>-discovering God’s gifts</li> <li>-demonstrates attitudes of curiosity and discovery</li> </ul>	<ul style="list-style-type: none"> <li>-identify parts of function of parts of a plant</li> <li>-identify the parts of plants we eat</li> <li>-plant bush bean plants, observe and record growth</li> <li>-students complete 3 paragraph research report on function of each part of the plant, how seeds travel, and what parts of plants we eat.</li> </ul>	<ul style="list-style-type: none"> <li>-consumable plant booklets</li> <li>-variety of plant books</li> <li>-videos</li> <li>-posters</li> <li>-live plants</li> <li>-live flowers</li> <li>-study trip to Fenner Nature Center</li> </ul>

	<p><i>exhibit cell growth and division. Understand that all plants and animals have a definite life cycle, body parts, and systems to perform specific life functions.</i></p> <p><b>L.OL.E.3 Structures and Functions- Organisms have different structures that serve different functions in growth, survival, and reproduction.</b></p> <p><b>L.OL.03.31</b> Describe the function of the following plant parts: flower, stem, root, and leaf.</p> <p><b>L.OL.03.32</b> Identify and compare structures in animals used for controlling body temperature, support, movement, food-getting, and protection (for example: fur, wings, teeth, scales). *</p> <p><b>L.OL.E.4 Classification- Organisms can be classified on the basis of observable characteristics.</b></p> <p><b>L.OL.03.41</b> Classify plants on the basis of observable physical characteristics (roots, leaves, stems, and flowers).</p> <p><b>L.OL.03.42</b> Classify animals on the basis of observable physical characteristics (backbone, body coverings, limbs). *</p>			