

7<sup>th</sup> Grade Life Science Curriculum St. Leo School  
10/13/11

Month	Content	Skills
<p><b>August</b></p>	<p><b>Living Things - Develops an understanding of the organism.</b></p> <p>Classification</p>	<ul style="list-style-type: none"> <li>• Distinguishes between unicellular and multicellular organisms.</li> <li>• Recognizes organisms are organized into tissues, organs, and systems.</li> <li>• Knows classification schemes and how organisms are grouped together on the bases of common characteristics.</li> <li>• Understands that kingdoms are subdivided into phylum etc.</li> <li>• Identifies characteristics and examples from the Five-Kingdom Classification System.</li> <li>• Completes objectives #182 - 190</li> </ul>
<p><b>September</b></p>	<p>Cell – Develops an understanding of the cell</p> <p>Cell Structure and Function</p> <p>Cell Processes and Energy</p>	<ul style="list-style-type: none"> <li>• Identifies cells as the basic units of living structures</li> <li>• Identifies structures of generalized plant and animal cells</li> <li>• Identifies the processes that are required for cells to maintain life:               <ul style="list-style-type: none"> <li>- food acquisition</li> <li>- growth</li> <li>- movement</li> </ul> </li> </ul>

Month	Content	Skills
		<p>response to stimuli</p> <ul style="list-style-type: none"> <li>- reproduction</li> <li>- respiration</li> <li>- excretion</li> <li>- secretion</li> </ul> <ul style="list-style-type: none"> <li>• Identifies the stages of meiosis and mitosis</li> <li>• Understands photosynthesis</li> </ul>
October	<p>Genetics – Understands the science of heredity</p> <p>Science Fair</p> <p>Heredity</p> <p>Modern Genetics</p>	<ul style="list-style-type: none"> <li>• Knows that the “blueprint” of an organism is passed from cell to cell by duplication of DNA</li> <li>• Predicts single trait expression in off-spring using Mendel’s laws</li> <li>• Explains the genetic bases of r determination of sex in an individual</li> <li>• Describes the functions of DNA, RNA, chromosomes and genes in humans</li> <li>• Understands genetic dominance and recessiveness and identifies common traits in humans which are dominant and recessive</li> </ul> <p>Knows that in sexual reproduction the union of gametes is usually necessary to restore normal gene complement and to produce viable offspring</p> <ul style="list-style-type: none"> <li>• Knows that genetic principles that apply to families apply to populations as well</li> <li>• Recognizes terms conventionally used in the study of population genetics</li> </ul>

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<b>November</b>	Changes Over Time and Evolution  Science Fair	<ul style="list-style-type: none"> <li>• Knows that over time populations adapt genetically to their environments</li> <li>• Lists some of the effects of introducing new genes into a gene pool.</li> <li>• Knows that a living thing is a product of its heredity and environment</li> <li>• List the predominant theories concerning the origin of life</li> <li>• Identifies the factors of evolutionary process which produces changes in a species</li> <li>• Identifies various prehistoric organism such as dinosaurs, brachiopods, trilobites</li> </ul>
<b>December</b>	Viruses and Bacteria  Science Fair	<ul style="list-style-type: none"> <li>• Identifies characteristics and examples from the Monera Kingdom</li> </ul>

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<b>January</b>	Protists and Fungi	<ul style="list-style-type: none"> <li>• Identifies characteristics and examples from the Protists and Fungi Kingdoms</li> </ul>
<b>February - March</b>	Animals	<ul style="list-style-type: none"> <li>• Identifies characteristics and examples of:               <ul style="list-style-type: none"> <li>• Porifera (sponges)</li> <li>• Cnidaria (hydra, jelly fish)</li> <li>• Platyhelminthes (flatworms)</li> <li>• Nematoda (roundworms)</li> <li>• Annelida (earthworms)</li> <li>• Mollusca (snails, clams, etc.)</li> <li>• Echinodermata (starfish, sea urchins, etc.)</li> <li>• Arthropoda (crayfish, insects, etc.)</li> <li>• Chordata/Verbrata                   <ul style="list-style-type: none"> <li>- Fish</li> <li>- Amphibians</li> <li>- Reptiles</li> <li>- Birds</li> <li>- Mammals</li> </ul> </li> </ul> </li> <li>• Contrasts instinct with learned behavior</li> <li>• Describes ways in which animals communicate</li> </ul>

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		<ul style="list-style-type: none"> <li>• Identifies ways in which animals take care of their young</li>   <li>• List ways organisms adapt for survival</li> </ul>
<b>April - May</b>	Plants - Gymnosperms, Angiosperms, Vascular plants, Seed Plants, Photosynthesis	<ul style="list-style-type: none"> <li>• Identifies characteristics and examples from the Plant Kingdom</li>   <li>• Understanding of the life cycle of plants</li> <li>• Plant reproduction</li> <li>• Seed germination</li> <li>• Parts and functions of flower</li> <li>• Contrasts monocots and dicots</li> <li>• Structure and function of vascular plants</li> <li>• Process of photosynthesis.</li> </ul>

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Month	Content	Skills	
<p><b>September – February</b></p>	<p><b>Develops skills used in gathering, organizing, analyzing and applying information and or concepts</b></p> <p>2.1, 2.2, 2.3, 2.4, 2.6</p>	<ul style="list-style-type: none"> <li>• Observes objects and phenomena</li> <li>• Identifies, describes and classifies the properties of objects and phenomena</li> <li>• Uses common materials appropriately for laboratory experiments or demonstrations</li> <li>• Knows the standard units of measurement in both the metric and English units</li> <li>• Measures the size, mass and volume of objects</li> <li>• Recognizes cause and effect relationships</li> <li>• Uses scientific method               <ul style="list-style-type: none"> <li>- Makes inferences</li> <li>- Forms hypotheses</li> <li>- Determines procedures</li> <li>- Follows procedures</li> <li>- Control Variables</li> <li>- Collects and records data</li> <li>- Reports data graphically</li> <li>- Interprets data, graphs, tables etc.</li> <li>- Estimates results</li> <li>- Predicts outcomes</li> <li>- Draws conclusions</li> <li>- Makes deductions</li> <li>- Makes generalizations from obtained data</li> <li>- Organizes information in a written form</li> </ul> </li> </ul>	<p>Completes and Science Fair project following the scientific method.</p> <p>Completes various lab assignments.</p>

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<p><b>April – May</b></p>	<p><b>Human Biology – Identifies the major organs and structures of the body</b> 2.3, 2.4, 2.6 Organs and Systems</p>	<ul style="list-style-type: none"> <li>• Describes the structure and function of each of the five special sensory organs</li> <li>• Identifies the major organs and structures of the animal/human body systems;               <ul style="list-style-type: none"> <li>- Circulatory</li> <li>- Digestive</li> <li>- Endocrine</li> <li>- Excretory</li> <li>- Immune</li> <li>- Lymphatic</li> <li>- Muscular</li> <li>- Nervous</li> <li>- Reproductive</li> <li>- Respiratory</li> <li>- Skeletal</li> </ul> </li> </ul>	<p>Internet Frog Dissection</p>	<p>Appreciation for life given by God</p>	<p>Field study, lab, and follow-up activities to Louisville Science Museum.</p> <p>Internet activities with written responses (e.g. web quests on body systems).</p> <p>In class labs with written results.</p> <p>On-line or in class frog dissection. Research report.</p> <p>Tests: multiple choice, short response, and essay.</p>

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<b>May</b>	Functions 2.3, 2.4, 2.6	<ul style="list-style-type: none"><li>• Describes the main functions of the animal/human body systems:<ul style="list-style-type: none"><li>- All systems noted above</li></ul></li><li>• Understands the interrelationship of animal/human body systems</li><li>• Identifies the stages of embryonic development in selected organisms</li><li>• Understands the life cycle</li></ul>	Tests: multiple choice, short response, and essay.