



MIDDLE SCHOOL (6 <sup>th</sup> – 8 <sup>th</sup> ) LIFE SCIENCE	
Cardinal Newman Standards: Catholic Identity Integration	
<ul style="list-style-type: none"> <li>• <b>CS.S.712.GS1:</b> Exhibit a primacy of care and concern at all stages of life for each human person as an image and likeness of God. (NGSS.MS.LS1.1; LS1.2; LS1.3; LS1.5; LS1.8; LS2.2; LS3.1; LS3.2; LS4.3; LS4.5)</li> <li>• <b>CS.S.712.GS3:</b> Value the human body as the temple of the Holy Spirit. (NGSS.MS.LS1.1; LS1.2; LS1.3; LS1.4; LS1.5; LS1.7; LS1.8; LS2.1; LS2.3; LS2.4; LS3.1; LS4.3; LS4.4; LS4.5)</li> <li>• <b>CS.S.712.IS7:</b> Describe humanity’s natural situation in, and dependence upon, physical reality and how man carries out his role as a cooperator with God in the work of creation. (NGSS.MS.LS1.1; LS1.3; LS1.4; LS1.5; LS1.6; LS1.7; LS2.1; LS2.2; LS2.3; LS2.4; LS2.5; LS3.2; LS4.3; LS4.4; LS4.5; LS4.6)</li> <li>• <b>CS.S.712.IS12:</b> Analyze and articulate the Church’s approach to the theory of evolution. (NGSS.MS.LS1.3; LS1.4; LS1.5; LS2.2; LS2.4; LS3.1; LS3.2; LS4.1; LS4.2; LS4.3)</li> <li>• <b>CS.S.712.IS13:</b> Relate how the human soul is specifically created by God for each human being, does not evolve from lesser matter, and is not inherited from our parents. (NGSS.MS.LS1.1; LS1.2; LS1.8; LS3.1; LS3.2; LS4.1; LS4.2; LS4.3; LS4.5)</li> <li>• <b>CS.S.712.DS3:</b> Subscribe to the premise that nature should not be manipulated at will, but should be respected for its natural purpose and end as destined by the creator God. (NGSS.MS.LS2.1; LS2.2; LS2.3; LS2.5; LS3.1; LS4.3; LS4.4; LS4.5; LS4.6)</li> </ul>	
Priority Skills	Supporting Skills
<ul style="list-style-type: none"> <li>• Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function.</li> <li>• Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.</li> <li>• Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.</li> <li>• Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism (photosynthesis in plants).</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and articulate that living things are made of cells, and consist of either one cell or many different numbers and types of cells.</li> <li>• Understand that environmental and genetic factors influence the growth of organisms.</li> <li>• Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.</li> <li>• Understand and articulate the concept of energy flow and cycling of matter in ecosystems.</li> <li>• Recognize that asexual reproduction produces different results than sexual reproduction, and exhibit basic understand of each type of reproduction in nature.</li> </ul>



Priority Skills	Supporting Skills
<ul style="list-style-type: none"> <li>Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem and across multiple ecosystems.</li> <li>Evaluate competing design solutions for maintaining biodiversity and ecosystem services.</li> <li>Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth.</li> <li>Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.</li> </ul>	<ul style="list-style-type: none"> <li>Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.</li> </ul>
<b>Essential Questions</b>	
<ul style="list-style-type: none"> <li>How does learning about our physical bodies help us understand more about God's plan for us?</li> <li>How do cells contribute to the function of living organisms?</li> <li>How do living and non-living things operate and cooperate in a balanced, or unbalanced, ecosystem?</li> <li>How do living organisms pass traits from one generation to the next, and how does this differ from the human soul?</li> <li>How do organisms change over time in response to changes in the environment, and how does understanding this design help us see God's plan for the natural world?</li> </ul>	
<b>Vital Vocabulary</b>	
<ul style="list-style-type: none"> <li>Adaptation, Allele, Anatomy, Biodiversity, Carriers, Cell, Cell Membrane, Chloroplast, Chromosome, Community, Consumers, Cytoplasm, Decomposers, DNA, Dominant, Embryo, Energy Pyramid, Ecosystem, Evolution, Food Chain, Food Web, Gene, Genetic Variation, Genotype, Heredity, Mitochondria, Nucleus, Organ, Organ System, Organism, Photosynthesis, Punnett Square, Producers, Reproduction, Respiration, Recessive, Symbiosis, Tissues, Trait, Trophic Levels.</li> </ul>	

*Additional Resources:* [Cardinal Newman Science Resources, Appendix E](#)