

Prince William County Schools  
**Life Science**  
Suggested Pacing Guide 2018 – 2019  
2018 - 2019



FIRST QUARTER (48 DAYS)	SECOND QUARTER (45 DAYS)	THIRD QUARTER (43 DAYS)	FOURTH QUARTER (45 DAYS)
<p style="text-align: center;"><b>August 27-November 2</b></p> <p><b>Unit 1 Cell Structure &amp; Function (5 weeks)</b> LS.2a-c, LS.1</p> <ul style="list-style-type: none"> <li>➤ Classroom procedures and laboratory safety</li> <li>➤ Cell structure and function</li> <li>➤ Compare/contrast plant/animal cells</li> <li>➤ Development of cell theory</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><b>Unit 2 Life Processes &amp; Cellular Organization (3 weeks)</b> LS.3, LS.1</p> <ul style="list-style-type: none"> <li>➤ Cells, tissues, organs, and systems</li> <li>➤ Patterns of cellular organization and their relationship to life processes in living things</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><i>Note: One week each quarter is reserved for review, assessment, inclement weather and other events that might impact pacing.</i></p> <p>Sept. 3 – Labor Day: No School Oct 8, Nov. 5 and 6 – In-service/Workdays</p>	<p style="text-align: center;"><b>November 7-January 25</b></p> <p><b>Unit 3 Photosynthesis (3 weeks)</b> LS.5a-b, LS.1</p> <ul style="list-style-type: none"> <li>➤ Energy transfer between sunlight and chlorophyll</li> <li>➤ Transformation of water and carbon dioxide into sugar and oxygen</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><b>Unit 4 Cell Growth &amp; Reproduction (1 week)</b> LS.2d</p> <ul style="list-style-type: none"> <li>➤ Cell division</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><b>Unit 5 DNA &amp; Heredity (4 weeks)</b> LS.12, LS.1</p> <ul style="list-style-type: none"> <li>➤ Structure and role of DNA</li> <li>➤ Function of genes and chromosomes</li> <li>➤ Genotypes and phenotypes</li> <li>➤ Characteristics that can and cannot be inherited</li> <li>➤ Genetic engineering and its applications</li> <li>➤ Historical contributions and significance of discoveries related to genetics</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p>Nov. 12 – Veterans’ Day: No School Nov. 21-23 – Fall Break Dec. 21-Jan 1 – Winter Break Jan 21 – Martin Luther King Birthday: No School Jan. 28 – In-service/Workday</p>	<p style="text-align: center;"><b>January 29-March 29</b></p> <p><b>Unit 6 Classification of Living Things (4 weeks)</b> LS.4, LS.1</p> <ul style="list-style-type: none"> <li>➤ Characteristics of domains of organisms</li> <li>➤ Characteristics of kingdoms of organisms</li> <li>➤ Characteristics of major animal phyla and plant divisions</li> <li>➤ Characteristics that define a species</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><b>Unit 7 Evolution &amp; Genetic Variation (2 weeks)</b> LS.13, LS.1</p> <ul style="list-style-type: none"> <li>➤ Relationship mutation, adaptation, natural selection, and extinction</li> <li>➤ Evidence of evolution</li> <li>➤ How environmental influences, as well as genetic variation, can lead to diversity of organisms.</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><b>Unit 8 Energy Flow &amp; Cycling of Matter (2 weeks)</b> LS.6a-b, d, LS.5c, LS.8a, LS.1</p> <ul style="list-style-type: none"> <li>➤ Carbon, water, and nitrogen cycles</li> <li>➤ Interactions resulting in a flow of energy and matter throughout the system</li> <li>➤ Importance of photosynthesis</li> <li>➤ Energy flow in food webs &amp; energy pyramid</li> <li>➤ Relationships among producers, consumers, and decomposers in food webs</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p>Feb 18 – Presidents’ Day: No School April 1 – In-service/Workday</p>	<p style="text-align: center;"><b>April 2-June 11</b></p> <p><b>Unit 9 Populations &amp; Communities (3 weeks)</b> LS.7, LS.8b-e, LS.1</p> <ul style="list-style-type: none"> <li>➤ Competition, cooperation, social hierarchy, territorial imperative</li> <li>➤ Influence of behavior on a population</li> <li>➤ Relationship between predators and prey</li> <li>➤ Symbiotic relationships</li> <li>➤ Niches</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><b>Unit 10 Biomes &amp; Ecosystems (3 weeks)</b> LS.6c, LS.9, LS.1</p> <ul style="list-style-type: none"> <li>➤ Differences between ecosystems and biomes</li> <li>➤ Land, marine, and freshwater ecosystems</li> <li>➤ Complex relationships within terrestrial, freshwater, and marine ecosystems</li> <li>➤ Adaptations that enable organisms to survive within a specific ecosystem</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p><b>Unit 11 Environmental Change Over Time (2 weeks)</b> LS.10, LS.11, LS.1</p> <ul style="list-style-type: none"> <li>➤ Phototropism, hibernation, and dormancy</li> <li>➤ Factors impacting population size</li> <li>➤ Eutrophication, climate changes, and catastrophic disturbances</li> <li>➤ Change in habitat size, quality, or structure</li> <li>➤ Change in species competition</li> <li>➤ Population disturbances and factors that threaten or enhance species survival, environmental issues, food production and harvest</li> <li>➤ Science process skills (<i>infused</i>)</li> </ul> <p>April 15-19 – Spring Break May 27 – Memorial Day: No School June 12-13 – Workdays</p>

**Note: To ensure consistency countywide, schools are highly encouraged to adhere to the sequence of science content outlined above.**