



**6<sup>th</sup> Grade UNIT 5 OVERVIEW: Growing and Flowing**

<p><b>Unit Outcomes</b> At the end of this unit, your student should be able to:</p>	<p><b>Key Vocabulary</b> Terms to deepen the student’s understanding</p>	
<ul style="list-style-type: none"> <li>✓ Describe the structures and functions of flowering plants that allow them to survive, reproduce, and defend themselves.</li> <li>✓ Compare and contrast the processes of photosynthesis and respiration.</li> <li>✓ Explain how energy travels from the sun to producers and is then transferred to consumers and decomposers.</li> <li>✓ Describe how plants respond to changes in their environment.</li> <li>✓ Compare different biomes and their abiotic factors that affect an organism’s ability to survive.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Fertilization</li> <li>✓ Pollination</li> <li>✓ Petal</li> <li>✓ Sepal</li> <li>✓ Stamen</li> <li>✓ Anther</li> <li>✓ Filament</li> <li>✓ Pistil</li> <li>✓ Ovary</li> <li>✓ Ovule</li> <li>✓ Photosynthesis</li> <li>✓ Stomata</li> <li>✓ Guard Cells</li> <li>✓ Respiration</li> <li>✓ Glucose</li> <li>✓ Energy</li> <li>✓ Decomposers</li> <li>✓ Producers</li> <li>✓ Consumers</li> </ul>	<ul style="list-style-type: none"> <li>✓ Food Web</li> <li>✓ Food Chain</li> <li>✓ Energy Pyramid</li> <li>✓ Transpiration</li> <li>✓ Tropism</li> <li>✓ Dormancy</li> <li>✓ Biomes</li> <li>✓ Abiotic</li> <li>✓ Biotic</li> <li>✓ Limiting Factor</li> <li>✓ Predator</li> <li>✓ Prey</li> <li>✓ Population</li> <li>✓ Community</li> <li>✓ Ecosystem</li> <li>✓ Organism</li> <li>✓ Chlorophyll</li> <li>✓ Habitat</li> </ul>
<p><b>Key Standards Addressed</b> Connections to Common Core/NC Essential Standards</p>	<p><b>Where This Unit Fits</b> Connections to prior and future learning</p>	
<p>6.L.1.1 Summarize the basic structures and functions of flowering plants required for survival, reproduction and defense.</p> <p>6.L.1.2 Explain the significance of the process of photosynthesis, respiration and transpiration to the survival of green plants and other organisms.</p> <p>6.L.2.1 Summarize how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within food chains and food webs from producers to consumers to decomposers.</p> <p>6.L.2.2 Explain how plants respond to external stimuli to enhance survival in the environment.</p> <p>6.L.2.3 Summarize how the abiotic factors of biomes affect the ability of organisms to grow, survive and/or create their own food through photosynthesis.</p>	<p>Coming into this unit, students should have a strong foundation in:</p> <ul style="list-style-type: none"> <li>✓ Understanding the life cycle of seed plants and environmental conditions that determine how well plants survive and grow.</li> <li>✓ Identifying plant structures that relate to a plants survival in their environment.</li> <li>✓ Understanding how animals meet their needs by using behaviors in response to information received from the environment.</li> <li>✓ Describing the effects of the interconnected relationships of plants and animals to their ecosystem.</li> <li>✓ Comparing the characteristics of ecosystems such as estuaries, salt marshes, oceans, lakes and ponds, forests, and grasslands.</li> </ul> <p>This unit builds to the following future skills and concepts:</p> <ul style="list-style-type: none"> <li>✓ Compare the structures and functions of plant and animal cells.</li> <li>✓ Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms.</li> <li>✓ Explain how factors such as food, water, shelter, and space affect populations in an ecosystem.</li> </ul>	



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	<ul style="list-style-type: none"> <li>✓ Summarize the relationship among producers, consumers, and decomposers including the positive and negative consequences of such interactions.</li> <li>✓ Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide and oxygen).</li> <li>✓ Explain the environmental consequences of the various methods of obtaining, transforming and distributing energy.</li> </ul>
<p style="text-align: center;"><b>Additional Resources</b></p> <p>Materials to support understanding and enrichment</p>	<p style="text-align: center;"><b>“Learning Checks”</b></p> <p>Questions Parents Can Use to Assess Understanding</p>
<ul style="list-style-type: none"> <li>✓ CK12 Textbook               <ul style="list-style-type: none"> <li>○ <a href="#">Plants</a></li> <li>○ <a href="#">Photosynthesis</a></li> <li>○ <a href="#">Respiration</a></li> <li>○ <a href="#">Flow of Energy</a></li> <li>○ <a href="#">Plant Responses</a></li> <li>○ <a href="#">Limiting Factors of Population Growth</a></li> </ul> </li> <li>✓ Discovery Education               <ul style="list-style-type: none"> <li>○ <a href="#">Seasons in the Cell</a></li> <li>○ <a href="#">Seasons in the Cell (Spanish)</a></li> <li>○ <a href="#">Cellular Respiration</a></li> <li>○ <a href="#">Cellular Respiration (Spanish)</a></li> <li>○ <a href="#">The Yeast You Can Do</a></li> <li>○ <a href="#">The Yeast You Can Do (Spanish)</a></li> <li>○ <a href="#">One Tomato, Two Tomato</a></li> <li>○ <a href="#">One Tomato, Two Tomato (Spanish)</a></li> <li>○ <a href="#">Got Habitat?</a></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>✓ How do flowering plants survive, reproduce, and defend themselves?</li> <li>✓ How do the processes of respiration, photosynthesis and transpiration allow organisms to survive?</li> <li>✓ How does energy cycle through organisms on Earth?</li> <li>✓ How is the Sun connected to life on Earth?</li> <li>✓ How do plants survive in harsh or changing environments?</li> <li>✓ How do abiotic factors affect organisms?</li> <li>✓ How do different organisms survive in different biomes?</li> </ul>