



**Science
Pre-Advanced Placement
Grade 5**

Unit Name: Second 6 Weeks –Life cont.-Earth & Environmental			
Date Taught	TEKS and AP Required Elements	Content/Vocabulary	Guiding Questions
	<p style="text-align: center;"><u>Plant Life</u> <u>Metamorphosis-Animal Life</u> <u>Cycles</u></p> <p>TEKS</p> <p>5.6C –describe and compare life cycles of plants and animals.</p> <p>5.5A,B –describe some cycle structures and processes found in a simple system.</p> <p>5.2B,C,E-analyze and interpret data</p> <p>4.6A-identify pattern of change such as metamorphosis.</p> <p>AP Biology Connections: III. Organisms & Populations: B. Structural and Function of Plants and Animals 1.Reproduction, Growth and Development</p>	<p>Germination Sprouting Pollination Fertilizer/nutrients Atmosphere Photosynthesis O₂, CO₂ Chlorophyll Sugar-glucose – energy Oxygen/carbon cycle Metamorphosis(incomplete and complete) Life cycle Interactions Survival</p>	<p>What is required to germinate a seed? Is there a better way?</p> <p>How does a bee pollinate a flower?</p> <p>What about birds or other insects?</p> <p>What other factors are there in pollination?</p> <p>Can you investigate the needs of a plant?</p> <p>What are the best growing conditions?</p> <p>How does photosynthesis work?</p> <p>What is the role of photosynthesis in our environment?</p> <p>What is metamorphosis? Can give examples of both types of metamorphosis? (refer back to bee)</p>



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<p>Dates taught:</p>	<p style="text-align: center;"><u>Carbon/Nitrogen Cycle</u></p> <p>TEKS</p> <p>5.5A- describe some cycle structures and processes found in a simple system.</p> <p>5.6B –identify the significance of water, carbon and nitrogen cycles.</p> <p>AP Environmental Science Connections: I. Interdependence of Earth’s Systems: Fundamental Principles and Concepts B. The Cycling of Matter</p>	<p>Cycle System Convert Nitrogen Carbon dioxide Fossil fuels (relating to carbon cycle) Waste products Nitrates or nitrogen compound Decay Bacteria Algae Organisms Decomposers/consumers/producers Photosynthesis</p>	<p>How do the systems relate to each other?</p> <p>How does life on earth depend on these cycles?</p> <p>How do animals and plants contribute to each cycle?</p> <p>What happens to a plant when it dies?</p> <p>How does this relate to the nitrogen cycle?</p> <p>What role does snail, earthworms or other decomposers have in the nitrogen cycle?</p> <p>How does the nitrogen cycle relate to plant growth?</p>
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<p>Dates Taught:</p>	<p style="text-align: center;"><u>Water Cycle</u></p> <p>TEKS</p> <p>5.5A, 5.6B- describe some cycles</p> <p>4.11C- Identify the sun as the major source of energy for earth, creation of wind, weather and water cycle.</p> <p>AP Environmental Science Connections: I. Interdependence of Earth's Systems: Fundamental Principles and Concepts B. The Cycling of Matter 1. Water</p>	<p>Energy Condensation Evaporation Precipitation Runoff Transpiration Ground water Water vapor Percolation Cloud formation Aquifers Water sheds Oceans Rivers Lakes Streams</p>	<p>What is the sun's role in the water cycle?</p> <p>How does the water cycle affect the earth?</p> <p>How is a cloud formed?</p> <p>What is water vapor?</p> <p>What causes water to evaporate?</p> <p>Where does the water go that does not evaporate?</p>
	<p style="text-align: center;"><u>Weather Patterns</u></p> <p>TEKS</p> <p>5.5 A,B,- describe some cycle structures and processes found in a simple system.</p> <p>4.6A –identify patterns of change such as weather.</p>	<p>Solar Winds Lightning/static Elec. Hurricane Tsunami, Barometric pressure Relative humidity Barometer Anemometer Wind vane Compass Doppler radar</p>	<p>What is the role of the sun's energy in producing weather?</p> <p>How are weather tool used to help predict weather cycles and patterns?</p> <p>Can you examine pictures, maps or models to determine missing information, limitations and evaluate information?</p>



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	<p>5.2DE, 5.3C-communicate valid conclusions, construct simple maps, to organize, examine and evaluate information.</p> <p>Fundamental Principles and Concepts of AP: B. The Cycling of Matter 1. Water</p>	<p>Grid Couture Map Longitude Latitude Surveyors Scale Cartographers(mapmakers) GPS, navigate, map legend</p>	
<p>Dates taught:</p>	<p style="text-align: center;"><u>Rock Cycle</u></p> <p>TEKS</p> <p>5.5 A,B,- describe some cycle structures and processes found in a simple system.</p> <p>5.11B, 3.11A-draw conclusions about what happened before using data from rock sequences.</p> <p>AP Environmental Science Connections: I. Interdependence of Earth's Systems: Fundamental Principles and Concepts B. The Cycling of Matter C. The Solid Earth</p>	<p>Cycle Sedimentary Igneous, metamorphic Sequences Magma Lava Volcano Tectonic plates Pressure Formation Weathering Minerals</p>	<p>How do rocks form?</p> <p>Can you explain the process of change?</p> <p>What is the role of rock formation as it relates to the earth's core?</p> <p>How can you draw conclusions about what happened before by looking at rock sequences?</p> <p>Are rocks considered a natural resource?</p> <p>How are rocks and minerals important to every day life and the formation of caves?</p>



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<p>Dates Taught:</p>	<p style="text-align: center;"><u>Sun's Role and Resources</u></p> <p>TEKS</p> <p>5.11C- identify past events that led to the formation of earths renewable, non-renewable, and inexhaustible resources</p> <p>5.12B – describe processes responsible for the formation of coal, oil, natural gas and minerals</p> <p>AP Environmental Science: I. Scientific Analysis, Interdependence of Earth's Systems: Fundamental Principles and Concepts Renewable and Non-Renewable Resources</p>	<p>Fossil fuels Renewable Non-renewable resources Exhaustible/ inexhaustible Oil Coal Natural gas Wind turbines Generators Turbines Transformers Sediments Hydro-electric Minerals Solar Trees Geothermal Biomass fuels Power plants</p>	<p>How do fossil fuels form?</p> <p>Can you classify the earth's resources?</p> <p>What alternative resources are currently being developed and why?</p> <p>Can you take a position of where our society should focus our efforts in developing alternative resources?</p> <p>What minerals from our earth are used to make other products?</p>
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