

Course: Pre-AP Eighth Grade			Designated Six Weeks: Sixth Six Weeks		
Unit: Biochemistry			Days to teach: 16 days		
TEKS	Guiding Questions/ Specificity	Assessment	Vocabulary	Instructional Strategies	Resources/ Weblinks

Unit Subtopic: Biomolecules			Days to Teach: 8 days		
<p>Biology 9A compare the structures and functions of different types of biomolecules, including carbohydrates, lipids, proteins, and nucleic acids;</p>	<p>Guiding Questions:</p> <p>What are the characteristics of the 4 major biomolecules?</p> <p>Specificity:</p> <p>Understand the major categories of biological molecules: lipids, carbohydrates, proteins, and nucleic acids</p> <p>Teacher Notes:</p> <p>Understand that all living things contain organic compounds- contain carbon. (Do not confuse the definition of organic foods, i.e., foods grown without chemical herbicides or pesticides.</p>	<p>The nutrient group that organisms rely on for their energy production is</p> <p>A. Proteins B. Lipids C. Carbohydrates D. Nucleic acid Ans. C</p>	<p>Biomolecules</p> <p>Carbohydrates</p> <p>Monosaccharide</p> <p>Disaccharide</p> <p>Polysaccharide</p> <p>Lipid (Fat)</p> <p>Protein</p> <p>Amino Acid</p> <p>Nucleic Acid</p> <p>Nucleotide</p> <p>DNA</p> <p>RNA</p> <p>Heredity</p>	<p>Required Activity:</p> <p>Testing for Biomolecules</p> <p>Suggested Activity:</p> <p>Biomolecule Review Worksheet</p> <p>Strawberry DNA Extraction</p> <p>McMash Lab</p>	<p>Resources:</p> <p>Prentice Hall Science Explorer grade 8, 2002</p> <p>Simple Science Solutions Unit Information is located on Safari Montage Grade 8 Playlist</p> <p>Curriculum Binder CD</p> <p>Curriculum Binder CD</p> <p>Curriculum Binder CD</p> <p>Laying the Foundation (Biology/Online)</p>

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Unit Subtopic: Water as solvent			Days to Teach: 8 Days		
<p>IPC 6E relate the structure of water to its function as a solvent and investigate the properties of solutions and factors affecting gas and solid solubility, including nature of solute, temperature, pressure, pH, and concentration.</p>	<p>Guiding Questions:</p> <p>What is the structure of water? What is the function of water? (universal solvent), like dissolves like</p> <p>Specificity:</p> <p>Structure and Properties of water including:</p> <ul style="list-style-type: none"> Describe water as a polar molecule Cohesion Adhesion Surface tension <p>Including the nature of the solute and solvent.</p> <p>Teacher Note:</p> <p>Compare and contrast solubility of solids, liquids and gasses.</p> <p>Know the pH scale of common acids and bases.</p>	<p>Which factor makes water an effective solvent?</p> <p>F The presence of molecular oxygen</p> <p>G The polar nature of its molecules</p> <p>H Its lack of covalent bonds</p> <p>J Its abundance on Earth's surface</p>	<p>pH</p> <p>Neutralization</p> <p>Acid</p> <p>Base</p> <p>Adhesion</p> <p>Cohesion</p> <p>Surface tension</p> <p>Universal solvent</p> <p>Solvent</p> <p>Solute</p> <p>Polar</p> <p>Nonpolar</p>	<p>Required Activity:</p> <p>Biochemistry Station Lab</p> <p>Suggested Activity:</p> <p>Video</p> <p>Online tutorial</p> <p>ELPS Student Expectations:</p> <p>http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html</p> <ul style="list-style-type: none"> 2F: Visuals and Videos 4F: Visual and Contextual Support 1F: Cornell Notes 5B: Learning Log <p>Additional Assessment Questions</p>	<p>Resources:</p> <p>Prentice Hall Science Explorer grade 8, 2002</p> <p>Curriculum Binder CD</p> <p>United Streaming Video: Reviewing the pH scale</p> <p>http://www.biology.arizona.edu/biochemistry/tutorials/chemistry/page3.html</p> <p>Simple Science Solutions Unit Information and additional questions are located on Safari Montage Grade 8 Playlist</p>



Pre-AP Science

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