

<b>Planned Course: Anatomy &amp; Physiology</b>	<b>Course Number: S406</b>	<b>Department: Science</b>
<b>Unit: Transporting and Processing</b>	<b>Grade Level: 11-12</b>	
<b>Estimated Time: 10 weeks</b>	<b>Level/Track: Honors</b>	<b>Date Approved: 2/12/2018</b>

<b>PA Academic Standards or PA Assessment Anchors</b>	<b>Core Concepts (in question format)</b> • Skills/Knowledge	<b>Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)</b>	<b>Assessments (include types and topics)</b>
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<p>S11.B Biological Sciences</p> <p>S11.B.1 Structure and function of Organisms</p> <p>S11.B.1.1 Explain structure and function at multiple levels of organization.</p>	<p>S11.B.1.1.3 Compare and contrast cellular processes (e.g., photosynthesis and respiration, meiosis and mitosis, protein syntheses and DNA replication).</p> <ul style="list-style-type: none"> <li>▶ What are the digestive system functions of ingesting food, breaking down food secreting enzymes, absorbing and eliminating products?</li> <li>▶ How does the digestive system decompose food?</li> <li>▶ Where does our bodies energy source come from?</li> <li>▶ Are food and energy necessary for life?</li> <li>▶ What nutrients are necessary to maintain our health?</li> </ul>	<ul style="list-style-type: none"> <li>– Lecture</li> <li>– Read text</li> <li>– Chapter questions</li> <li>– Diagrams – Barron’s Detailed</li> <li>– Trace food paths</li> <li>– Lab – Nutrition and Digestion</li> <li>– Lab – The Stomach</li> <li>– Dissection – Fetal Pig – one specimen per student</li> <li>– Lab – Anatomy of the Human Digestive System</li> <li>– Lab – A Window in the Stomach</li> </ul>	<ul style="list-style-type: none"> <li>• Homework</li> <li>• Individual Lab report</li> <li>• Written quiz- subjective</li> <li>• Individual Dissection techniques</li> <li>• DetailedPlate drawing</li> </ul>
<p>S11.B.2 Continuity of Life</p> <p>S11.B.2.1 Explain the mechanisms of the theory of evolution.</p>	<p>S11.B.2.1.1 Explain the theory of evolution by interpreting data from fossil records, similarities in anatomy and physiology, or DNA studies that are relevant to the theory</p>		<ul style="list-style-type: none"> <li>• Homework</li> <li>• Individual Lab report, Level 1,2,3 analysis questions</li> </ul>

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	<p>of evolution.</p> <ul style="list-style-type: none"> <li>▶ What are the primary functions of the respiratory system?</li> <li>▶ What effects does carbon dioxide have on the body?</li> <li>▶ How are oxygen and energy released from the body?</li> <li>▶ What are the functions of the respiratory organs?</li> </ul>	<ul style="list-style-type: none"> <li>– Read text</li> <li>– Lecture</li> <li>– Class discussion</li> <li>– Respiratory chart</li> <li>– Anatomical man</li> <li>– Questions</li> <li>– Vocabulary</li> <li>– Lab – Anatomy of the Respiratory System</li> <li>– Lab – Respiratory Gases – Inspiration Activities</li> <li>– Lab – Testing for Carbon Dioxide during Exhalation</li> <li>– Dissection – Fetal Pig – one specimen per student</li> </ul>	<ul style="list-style-type: none"> <li>• Individual Dissection technique</li> <li>• Detailed Plate drawings</li> </ul>
<p>S11.B.1 Structure and function of Organisms</p> <p>S11.B.1.1 Explain structure and function at multiple levels of organization.</p>	<p>S11.B.1.1.3 Compare and contrast cellular processes (e.g., photosynthesis and respiration, meiosis and mitosis, protein syntheses and DNA replication).</p> <ul style="list-style-type: none"> <li>▶ How does the circulatory system link the blood, heart and blood vessels?</li> <li>▶ What does blood transport?</li> <li>▶ How are wastes removed</li> </ul>	<ul style="list-style-type: none"> <li>– Read text</li> <li>– Diagrams – Barron’s detailed</li> <li>– Worksheets</li> <li>– Blood trace</li> <li>– Lab – The Circulatory System</li> <li>– Charts</li> <li>– Skeleton</li> <li>– Lecture</li> <li>– Lab – Fetal Pig – one specimen per student</li> </ul>	<ul style="list-style-type: none"> <li>• Written quiz - subjective</li> <li>• Group presentations</li> <li>• Detailed Plate drawing</li> <li>• Color-coded diagrams</li> <li>• Individual Lab reports – 1,2,3 level analysis questions</li> </ul>

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	<p>from the body cells?</p> <ul style="list-style-type: none"> <li>▶ How is blood a vital supporter for cellular activities?</li> </ul> <p>S11.B.1.1.2 Compare and contrast the structural and functional similarities and differences among living things (e.g., classify organisms into classification groups, compare systems).</p> <ul style="list-style-type: none"> <li>▶ What are the functions of the cardiovascular system?</li> <li>▶ What are the parts of this system?</li> <li>▶ How does the heart act like a pump?</li> <li>▶ How do blood vessels provide gas exchange nutrient exchange and the removal of wastes?</li> </ul>	<ul style="list-style-type: none"> <li>– Lab – Simulating the steps of Digestion</li> </ul> <p><u>Enrichment</u></p> <ul style="list-style-type: none"> <li>– CNN Health Lines</li> <li>– Read text</li> <li>– Lecture</li> <li>– Answer – Question</li> <li>– Anatomical man</li> <li>– Heart Structure</li> <li>– Color-code diagram</li> <li>– Lab – Blood and Heart</li> <li>– Dissection – Fetal Pig completed – one specimen per student</li> <li>– Lab – Red Blood Cell</li> <li>– Lab – External Anatomy of the Heart</li> <li>– Lab – Internal Anatomy of the Heart</li> <li>– Lab – The Heart Cycle</li> </ul>	<ul style="list-style-type: none"> <li>• Written quiz - subjective</li> <li>• Detailed Plate drawings</li> <li>• Written Pig Test – subjective, definition, short answer and open ended essay</li> <li>• Identity test for Fetal Pig – completed using individual lab stations with numbered pinned pigs for testing identification</li> <li>• Individual Lab report – Level 1,2,3 analysis questions</li> </ul>
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