

# Human Anatomy and Physiology CCP:

## Structure and Function (Transport)

| Stage 1 Desired Results                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                         |
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| <p>ESTABLISHED GOALS:</p> <p><u>Competencies:</u></p> <ul style="list-style-type: none"> <li>• <i>Structure &amp; Function</i> Students will demonstrate the ability to use evidence to support claims about the relationship among structure and function of natural and human designed objects.</li> <li>• <i>Stability &amp; Change in Systems</i> Students will demonstrate the ability to investigate and analyze static and dynamic conditions of natural and human designed systems in order to explain and predict changes over time.</li> <li>• <i>Nature of Science</i> Student will demonstrate the ability to work collaboratively and individually to generate testable questions or define problems, plan and conduct investigations using a variety of research methods in a various settings, analyze and interpret data, reason with evidence to construct explanations in light of existing theory and previous research, and effectively communicate the research processes and conclusions.</li> <li>• Students will demonstrate the ability to analyze and summarize text and integrate knowledge to make meaning of discipline-specific materials.</li> <li>• Students will demonstrate the ability to produce coherent and supported writing in order to communicate effectively for a range of discipline-specific tasks, purposes, and audiences.</li> <li>• Students will demonstrate the ability to speak purposefully and effectively by strategically making decisions about content, language use, and discourse style.</li> </ul> <p><u>Content Standards:</u></p> <ul style="list-style-type: none"> <li>• HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</li> <li>• HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</li> </ul> | <i>Transfer</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                         |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>ENDURING UNDERSTANDINGS</p> <p>Students will understand that...</p> <ul style="list-style-type: none"> <li>• models (e.g., physical, mathematical, computer models) can be used to simulate systems and interactions—including energy, matter, and information flows—within and between systems at different scales.</li> <li>• investigating or designing new systems or structures requires a detailed examination of the properties of different materials, the structures of different components, and connections of components to reveal its function and/or solve a problem.</li> <li>• feedback (negative or positive) can stabilize or destabilize a system.</li> </ul> | <p>ESSENTIAL QUESTIONS</p> <ul style="list-style-type: none"> <li>• Which system is most vital for supporting life?</li> </ul>                                                                                          |
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| Content Area Literacy Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 21 <sup>st</sup> Century Skills                                                                                                                                                                                       |
| <ul style="list-style-type: none"> <li>• RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.</li> <li>• RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.</li> <li>• RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</li> <li>• RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to <i>grades 11-12 texts and topics</i>.</li> <li>• RST.11-12.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.</li> <li>• RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</li> <li>• RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</li> <li>• RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</li> <li>• WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.</li> <li>• WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</li> <li>• WHST.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• <i>make judgments and decisions</i></li> <li>• <i>work creatively with others</i></li> <li>• <i>communicate clearly</i></li> <li>• <i>collaborate with others</i></li> </ul> |

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| <ul style="list-style-type: none"> <li>• WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</li> <li>• WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</li> <li>• WHST.11-12.9 Draw evidence from informational texts to support analysis, reflection, and research.</li> </ul> |  |
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| Stage 2 - Evidence         |                            |
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| <i>Evaluative Criteria</i> | <i>Assessment Evidence</i> |
|                            | PERFORMANCE TASK(S):       |
|                            | OTHER EVIDENCE:            |

| Stage 3 – Learning Plan                                                                                                                                                                                                   |                                |
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| <p><i>Summary of Key Learning Events and Instruction</i></p> <p><b>Subunits/ Systems:</b></p> <p><b>Digestive</b></p> <p><b>Respiratory</b></p> <p><b>Circulatory</b></p> <p><b>Lymphatic</b></p> <p><b>Endocrine</b></p> |                                |
| <i>Language Arts Integration</i>                                                                                                                                                                                          | <i>Mathematics Integration</i> |

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| <ul style="list-style-type: none"><li>● 1.OA.1 Use</li></ul>                                                                                                                                                                                                                                    | <ul style="list-style-type: none"><li>● 1.OA.1 Use</li></ul> |
| <b><i>Technology Integration</i></b>                                                                                                                                                                                                                                                            | <b><i>District Materials</i></b>                             |
| <ul style="list-style-type: none"><li>● 1.OA.1 Use</li></ul>                                                                                                                                                                                                                                    |                                                              |
| <b><i>SCIENCE AND ENGINEERING PRACTICES</i></b>                                                                                                                                                                                                                                                 |                                                              |
| S&EP 2. Developing and using models<br>S&EP 3. Planning and carrying out investigations<br>S&EP 4. Analyzing and interpreting data<br>S&EP 6. Constructing explanations (for science) and designing solutions (for engineering)<br>S&EP 8. Obtaining, evaluating, and communicating information |                                                              |