







**\*\* HUMAN ANATOMY AND PHYSIOLOGY \*\***

Timeline	Unit/theme	Standard	Student Focused Objective	Resources/ Suggested Activities
12 DAYS (AUG 1 - 16)	Intro to Anatomy	SC15.HAP.1 Develop and use models and appropriate terminology to identify regions, directions, planes, and cavities in the human body to locate organs and systems.	<p>Learning Targets:</p> <ul style="list-style-type: none"> <li>I can accurately use appropriate anatomical terminology. Examples: proximal, superficial, medial, supine, superior, inferior, anterior, posterior</li> <li>I can Identify anatomical body planes, body cavities, and abdominopelvic regions of the human body.</li> <li>I can develop anatomically correct models using my knowledge of terminology of body planes and regions.</li> </ul>	<p> Introduction to Anatom...</p> <p><a href="#">Anatomical Directions Quiz</a>  <a href="#">Anatomy Arcade - Anatomical Terminology Word Search</a></p> <p> The Semipermeable M...</p> <p><a href="#">Cell Defense: The Plasma Membrane</a>            Podcast on Spotify:            Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan  <a href="#">Episode 1: Body Organization</a>  <a href="#">Episode 2: Homeostasis</a></p>
8 DAYS (AUG 19 - 28)	Histology	SC15.HAP.2 Analyze characteristics of tissue types (e.g., epithelial tissue) and construct an explanation of how the chemical and structural organizations of the cells that form	<p>Learning Targets:</p> <ul style="list-style-type: none"> <li>I can classify connective, muscular, nervous, and connective tissues.</li> <li>I can describe the similarities and differences between tissues using my knowledge of their</li> </ul>	<p><a href="#">TED Ed Video: How to 3D Print Human Tissues</a></p> <p> Tissues, Part 1: Crash ...</p> <p> Tissues, Part 2 - Epithe...</p> <p> EPITHELIAL TISSUE ...</p>


		these tissues are specialized to conduct the function of that tissue (e.g., lining, protecting).	characteristics.	<a href="#">Epithelial Tissues</a> <a href="#">Exocrine Gland and En...</a> <a href="#">Connective Tissue Types and Examples</a>  Podcast on Spotify: Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan <a href="#">Episode 8: Histology</a>
8 DAYS (Aug 29 - Sept 16)	Integumentary System	SC15.HAP.3 Obtain and communicate information to explain the integumentary system's structure and function, including layers and accessories of skin and types of membranes.  SC15.HAP.3a Analyze the effects of pathological conditions (e.g., burns, skin cancer, bacterial and viral infections, chemical dermatitis) to determine the body's attempt to maintain homeostasis.	Learning Targets: <ul style="list-style-type: none"> <li>• I can identify and describe functions of the integumentary system.</li> <li>• I can analyze pathological conditions and describe their implications on the integumentary system.</li> <li>• I can describe how the structure of the integumentary system and its accessory organs dictate its function.</li> </ul>	<a href="#">Skin Picture Quiz</a> <a href="#">What Makes Tattoos Permanent?</a> <a href="#">Doing Your Nails and Hair in Space - Astronaut Samantha Cristoforetti's Tips   Video</a> <a href="#">Science of Laser Hair Removal</a>  Podcast on Spotify: Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan <a href="#">Episode 9: Integumentary System Part 1: Skin and Accessory Structures</a> <a href="#">Episode 10: Integumentary System Part 2: Skin Color</a>  <a href="#">Melanoma - BlackDoctor.org</a>

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				<a href="#">- Where Wellness &amp; Culture Connect</a>
12 DAYS (Sept 17 - Oct 4)	Skeletal System	<p>SC15.HAP.4 Use models to identify the structure and function of the skeletal system (e.g., classification of bones by shape, classification of joints and the appendicular and axial skeletons).</p> <p>SC15.HAP.4a Obtain and communicate information to demonstrate understanding of the growth and development of the skeletal system (e.g., bone growth and remodeling).</p> <p>SC15.HAP.4b Obtain and communicate information to demonstrate understanding of the pathology of the skeletal system (e.g., types of bone fractures and their treatment, osteoporosis, rickets, other bone diseases).</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> <li>• I can identify the bones that compose the skeletal system.</li> <li>• I can describe the function of the skeletal system.</li> <li>• I can classify the different types of joints and explain their movements</li> <li>• I can identify the four types of bones</li> <li>• I can research various types of skeletal system disorders</li> </ul>	<p> Skull Bones Mnemonic...  <a href="#">Whack-A-Bone HUB</a>  <a href="#">Bend a Bone with Vinegar - ScienceBob.com</a></p> <p>Podcast on Spotify:  Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan  <a href="#">Episode 11: Skeletal System Part 1</a>  <a href="#">Episode 12: Skeletal System Part 2</a>  <a href="#">Episode 13: Bone Formation and Growth</a></p>
12 DAYS (Oct 7 - Oct 24)	Muscular System	<p>SC15.HAP.5 Develop and use models to illustrate the anatomy of the muscular system, including muscle locations and groups,</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> <li>• I can develop and use models to illustrate the muscular system.</li> <li>• I can explain the physiology of the</li> </ul>	<p><a href="#">Poke-A-Muscle Muscle Structure and Fibers Quiz</a>  <a href="#">Muscle Movement Diagram</a></p>

		<p>actions, origins and insertions.</p> <p>SC15.HAP.5a Plan and conduct investigations to explain the physiology of the muscular system (e.g., muscle contraction/relaxation, muscle fatigue, muscle tone), including pathological conditions (e.g., muscular dystrophy).</p>	<p>muscular system.</p> <ul style="list-style-type: none"> <li>• I can compare and contrast the different types of muscle movements i.e. contraction/relaxation.</li> <li>• I can explain how different pathological conditions impact the muscular system.</li> </ul>	<p><a href="#">Quiz</a></p> <ul style="list-style-type: none"> <li>▶ What makes muscles g...</li> <li>▶ Anatomy and Physiolo...</li> <li>▶ Anatomy and Physiolo...</li> </ul> <p>Podcast on Spotify:          Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan</p> <p><a href="#">Episode 14: Muscle Tissue Part 1</a></p> <p><a href="#">Episode 15: Muscle Tissue Part 2</a></p> <p><a href="#">Episode 16: Muscle Tissue Part 3</a></p>
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<p>18 DAYS (Oct 25 - Nov 20)</p>	<p>Nervous System</p>	<p>SC15.HAP.6 Obtain, evaluate, and communicate information regarding how the central nervous system and peripheral nervous system interrelate, including how these systems affect all other body systems to maintain homeostasis.</p> <p>SC15.HAP.6a Use scientific evidence to evaluate the effects of pathology on the nervous system (e.g., Parkinson’s disease, Alzheimer’s disease, cerebral palsy, head trauma) and argue possible prevention and treatment options.</p> <p>SC15.HAP.6b Design a medication to treat a disorder associated with neurotransmission, including mode of entry into the body, form of medication, and desired effects.*</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> <li>• I can explain the differences in the function of the peripheral and central nervous systems</li> <li>• I can label the parts of the sensory organs</li> <li>• I can recognize diseases and disorders that impact the nervous system.</li> <li>• I can develop a treatment plan to address a neurological disease.</li> </ul>	<p> How does anesthesia ...</p> <p><a href="#">Brain and Nervous System - BlackDoctor.org - Where Wellness &amp; Culture Connect</a></p> <p>Podcast on Spotify: Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan</p> <p><a href="#">Episode 17: Intro to the Nervous System</a>  <a href="#">Episode 18: The Nervous System Part 2</a>  <a href="#">Episode 19: Intro to the Spinal Cord</a>  <a href="#">Episode 20: Spinal Nerves and Reflexes</a>  <a href="#">Episode 21: Intro to the Human Brain</a>  <a href="#">Episode 22: Brain Barriers and Cranial Nerves</a>  <a href="#">Episode 23: Meninges and Cerebrospinal Fluid</a>  <a href="#">Episode 24: The Cerebrum</a>  <a href="#">Episode 25: The Brainstem, Diencephalon, and Cerebellum</a>  <a href="#">Episode 26: Autonomic Nervous System Part 1</a>  <a href="#">Episode 27: Autonomic Nervous System Part 2</a></p>
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6 DAYS (Nov 21 - Dec 5)	Endocrine System	<p>SC15.HAP.13 Obtain, evaluate, and communicate information to support the claim that the endocrine glands secrete hormones that help the body maintain homeostasis through feedback loops.</p> <p>SC15.HAP.13a Analyze the effects of pathological conditions (e.g., pituitary dwarfism, Addison's disease, diabetes mellitus) caused by imbalance of the hormones of the endocrine glands.</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> <li>• I can identify and describe the functions of the endocrine glands.</li> <li>• I can evaluate how the secretion of hormones impacts the function of the body and its organs.</li> <li>• I can research and evaluate how common disorders impact the endocrine system.</li> </ul>	<p><a href="#">Endocrine Ed</a></p> <ul style="list-style-type: none"> <li>▶ Endocrine System, Par...</li> <li>▶ The Endocrine System</li> <li>▶ Exocrine Gland and En...</li> </ul> <p>Podcast on Spotify:            Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan  <a href="#">Episode 33: Endocrine System</a></p>
13 DAYS (Dec 6 - Jan 14)	Cardiovascular System	<p>SC15.HAP.7 Use models to determine the relationship between the structures in and functions of the cardiovascular system (e.g., components of blood, blood circulation through the heart and systems of the body, ABO blood groups, anatomy of the heart, types of blood vessels).</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> <li>• I can identify the structures and functions of the cardiovascular system.</li> <li>• I can compare and contrast the main components of blood</li> <li>• I can discuss treatment and prevention of common pathologies of the cardiovascular system.</li> </ul>	<p><a href="#">Blood Typing Video</a>  <a href="#">ecg-sim-page - SkillStat</a></p> <p>Podcast on Spotify:            Anatomy and Physiology Bit by Bit with Dr. Steve Sullivan  <a href="#">Episode 39: Blood Erythrocytes, and Blood Type</a></p>

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		<p>SC15.HAP.7a Engage in argument from evidence regarding possible prevention and treatment options related to the pathology of the cardiovascular system (e.g., myocardial infarction, mitral valve prolapse, varicose veins, arteriosclerosis, anemia, high blood pressure).</p> <p>SC15.HAP.7b Design and carry out an experiment to test various conditions that affect the heart (e.g., heart rate, blood pressure, electrocardiogram [ECG] output).</p>	<ul style="list-style-type: none"> <li>I can evaluate and interpret the results of various cardiovascular tests i.e. heart rate, blood pressure, ECG.</li> </ul>	<p><a href="#">Episode 42: Anatomy of Blood Vessels</a>  <a href="#">Episode 43: Blood Pressure</a></p> <p><a href="#">Heart Health - BlackDoctor.org - Where Wellness &amp; Culture Connect</a></p>
7 FLEX DAYS	<p>Topics: Intro to Anatomy, Histology, Integumentary, Skeletal, Muscular, Nervous, Endocrine, and Cardiovascular systems</p>	Standards: 1, 2, 3, 4, 5, 6, 7, and 13	Flex days will consist of initial introductions, lab safety, reviews, and exams.	