

PRESCOTT UNIFIED SCHOOL
DISTRICT Instructional Guide

Grade Level: 10-12	Subject: Anatomy & Physiology	Quarter Semester: 1-4 1 & 2	Core Text: <i>Human Anatomy & Physiology, Marieb</i>
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Time Block	Unit / Theme	Content (Nouns)	Skills (Verbs)	Standards Focus	Assessments / Benchmarks
Quarter 1 Week 1	Intro to Anatomy & Physiology	Note-taking Skills Following Directions Portfolio Instructions Lab Safety Rules History of Anatomy & Physiology Definition and Levels of Organization of Anatomy & Physiology	Differentiate between safe and unsafe lab procedures Understand the progression of knowledge that has led to modern anatomy & physiology Define anatomy and physiology and describe their subdivisions. Analyze concepts in text and determine the meaning of symbols and key terms.	S4C5PO5 ELA RST 10.4, 10.5, 10.10	Lab Safety Presentation, Lab Safety Quiz, Returned signed safety agreement
Week 2-4	Orientation to Human Body & Introduction to Organ Systems	Basic Functions of Human Life Homeostasis Overview of Human Systems Directional Terms External Anatomical Regions Body Cavities Language of Anatomy Current Topics in Medical Research	Define homeostasis and explain its importance List functions that humans must perform to maintain life Verbally describe or demonstrate anatomical position Use proper anatomical terminology to describe body directions, surfaces and planes Locate major body cavities and the organs in each Cite evidence determine central idea and summarize	S3C3PO1 S4C5PO5 ELA RST 10.1, 10.2, 10.8	Unit Quiz & Exam, Presentation

Week 5-7	Chemistry Comes Alive	Matter and Energy Composition of Matter Molecules & Mixtures Chemical Bonds and Reactions Radioisotopes & Medical imaging Inorganic Compounds Organic Compounds & Enzymes	Differentiate matter & energy Define chemical element and list the four elements that make up the majority of the human body Describe the types of chemical reactions Define radioisotope and describe how radioisotopes are used in the diagnosis and treatment of disease Translate textual information in visual form. Explain the concept of pH, and state the pH of blood Compare and contrast carbohydrates,	S4C5PO2 S5C1PO4,5,6 & 8 S5C4PO12 &13 ELA RST 10.7	Unit Quiz & Exam, Poster Project (medical imaging)
			Describe lipids, proteins, and nucleic acids in terms of their building blocks, structures and functions in the body Define enzyme, and explain the role of enzymes Comparison of two research studies, or one research study and student completed enzyme lab. Follow and evaluate procedures-lab	ELA RST 10.6, 10.9 ELA RST 10.3	
Week 8-9	Tissues	Cell overview Epithelial Muscle Connective Nervous	Describe the plasma membrane structure and types of transport into and out of the cell Identify the four major tissue types Explain how the four major tissue types differ structurally and functionally Give the locations of various types of tissues in the body	S4CIP03 & 4 S4C5P05	Tissue Microscope Labs, Unit quiz and exam

<p>Quarter 2 Week 10-13</p>	<p>Integumentary System</p>	<p>Introduction to the integumentary system Structure and function of the integument Layers of the epidermis Characteristics of the dermis Specialized cells of the epidermis and dermis Diseases and conditions of the integument Accessory structures</p>	<p>List the functions of the integumentary system and explain how these functions are accomplished When provided with a diagram or model of the skin, recognize and name the structures, layers and cell types Name the layers of the epidermis and describe the characteristics of each Name the factors that provide protective function to the skin and pigmentation Describe the distribution and function of the epidermal derivatives Analyze concepts in text and determine the meaning of symbols and key terms. Follow and evaluate procedures-lab Translate textual information in visual form.</p>	<p>S4C5P05 ELA RST 10.4,10.5,10.10 ELA RST 10.3 ELA RST 10.7</p>	<p>Poster Presentations, Cat Integument Lab, Unit quiz and exam</p>
<p>Week 14-17</p>	<p>Skeletal System</p>	<p>Axial & appendicular skeleton Functions of the skeletal system Classifications of bones Anatomical structure of long bone Bone formation and remodeling Analysis of skeletal remains Comparative skeletal analysis</p>	<p>Identify the bones that comprise the axial and appendicular skeleton Describe the functions of the skeletal system Classify bones based on bone structure and shape Identify the major areas of a long bone Describe the process of bone formation and remodeling On a skull diagram identify the bones, bone structures and sutures of the</p>	<p>S4C5P05</p>	<p>Cat Human Comparative Lab, Analysis of Skeletal Remains Lab, Bone Walk, Unit Quizzes, Unit Exam and lab practical</p>

			<p>skull</p> <p>Identify the parts of vertebrae and explain how the types of vertebrae differ from one another</p> <p>Describe differences between male and female skull and pelvis</p> <p>Identify the major bones of the skeleton</p> <p>Compare and contrast the similarities and differences between the skeletons of bipeds and quadrupeds differences.</p> <p>Cite evidence determine central idea and summarize skeletal disease research</p>	<p>ELA RST 10.6, 10.9</p> <p>ELA RST 10.1, 10.2, 10.8</p>	
Week 18	Final Exam & Review	Review of semester I content	Review of semester I skills	All semester standards	Final Exam-written & lab practical

			<p>Circuits</p> <p>Cite evidence to support analysis of text, determine central ideas and conclusions and assess the extent to which the reasoning and evidence support the author's claim (Cardiovascular Project)</p> <p>Identify the chambers and structures of the heart through dissection, compare and contrast findings that support or contradict text.</p> <p>Compare and contrast the structure and function of arteries, veins and capillaries</p> <p>Identify the major arteries and veins of the cat and human</p> <p>Determine blood pressure and describe the systolic and diastolic pressures</p> <p>List factors affecting blood pressure Describe the exchange that takes place across capillary walls</p>	<p>ELA RST 10.1, 10.2, 10.8</p> <p>ELA RST 10.6, 10.9</p>	<p>presentation cardiovascular disease</p> <p>Unit quizzes, Unit exam and lab practical</p>
<p>Quarter 4</p> <p>Week 10-11</p>	<p>Respiratory System</p>	<p>Respiratory structures</p> <p>Respiratory physiology</p> <p>Respiratory disorders</p>	<p>Name and identify the organs and structures of the respiratory system Describe protective mechanisms of the respiratory system</p> <p>Explain the mechanism of inspiration and expiration</p> <p>Analyze concepts in text and determine the meaning of symbols and key terms</p> <p>Describe the process of gas exchange and the nervous system controls of respiration</p>	<p>S4C5P05</p> <p>ELA RST 10.4, 10.5, 10.10</p>	<p>Respiratory Dissection lab, Quiz</p> <p>Unit exam and lab practical</p>

Week 12-13	Digestive System	Structure and function of the digestive system Metabolism	Name and identify structures of the alimentary canal and accessory digestive organs Describe the function of alimentary canal organs and accessory organs and structures Cite evidence to support analysis of text, determine central ideas and conclusions and assess the extent to which the reasoning and evidence support the author's claim (Digestive System Project) Describe the composition and function of saliva Describe the processes of chemical and mechanical digestion, including the production of and function of bile and digestive enzymes	S4C5P05 ELA RST 10.1, 10.2, 10.8	Digestive Dissection lab, Quiz Digestive Disease Project Unit exam and lab practical
Week 14	Urinary System	Structure of the urinary system Function of the urinary system	Describe the process of urine formation and the structures of the nephron Identify the structures and function of ureters, urinary bladder and urethra Explain the role of hormones in the urinary system (aldosterone, ADH, etc)	S4C5P05	Urinary Dissection lab, Quiz Unit exam and lab practical
Week 15	Reproductive System	Anatomy of male and female reproductive systems Male and female reproductive functions	When provided with a model or diagram, identify the structures of the male and female reproductive systems. Through dissection, identify reproductive structures of the male and female cat Name the endocrine and exocrine products of the testes. Discuss the composition of semen and the glands that produce it Trace the pathway followed by sperm from the testis to the body exterior Describe the function of the	S4C5P05	Reproductive Dissection lab, Quiz Unit exam and lab practical

			vesicular follicle and corpus luteum of the ovary		
Week 16-17	Nervous System	Function of the nervous system Organization of the nervous system: Central and peripheral nervous system Nervous system disorders	Define central nervous system and peripheral nervous system and list the major parts of each Follow and evaluate lab procedure (brain dissection) Describe the structure of a neuron Identify and indicate the functions of the major regions of the cerebral hemisphere, diencephalon, brain stem and cerebellum Name the three meningeal layers and their functions Explain the function of sympathetic and parasympathetic divisions of the autonomic nervous system Describe disorders of the nervous system Analyze authors purpose, assess the evidence of author's claims and reasoning, compare and contrast findings (Research project)	S4C5P05 ELA RST 10.3 ELA RST 10.1, 10.2, 10.6, 10.8, 10.9	Nervous system Dissection lab, Quiz Unit exam and lab practical
Week 18	Final Exam & Review	Review of semester 2 content	Review of semester 2 skills	All semester standards	Final Exam