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Goodheart-Willcox Correlation of *Introduction to Anatomy & Physiology* ©2021 to Oklahoma Academic Standards for Science Course: Anatomy – Grades 9-12

Standard	Correlating Textbook Pages
Demonstrate employability skills required by business and industry.	
Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.	33
Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.	32-33
Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.	33
Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.	33
Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.	33
Present a professional image through appearance, behavior and language.	33
Classify the basic structural and functional organization of the human body and identify body planes, cavities, regions, directional terms, tissues, organs and parts of the cell.	--
Define anatomy, physiology, homeostasis, metabolism and cellular respiration.	52, 646, 653, 639, 659
Identify body planes, cavities, abdominal regions and directional terms. (These will be utilized later in the various anatomy systems).	5-9
Describe and demonstrate anatomical position utilizing directional terms.	
Classify the basic structural and functional organization of the human body beginning at the cellular level to also include tissues, organs and systems.	12
Identify the structural components of a cell, and describe the function and relationship of each component.	55-68

Explain the process of mitosis and meiosis.	65, 591-593, 612
Identify the major types of tissue, and provide examples of each type.	69-79
Demonstrate recognition of subjective and objective observations. Document signs and symptoms in the simulated electronic medical record.	24-26
Analyze the anatomy, physiology and basic pathophysiology of the integumentary system, and evaluate and monitor body temperature.	--
Analyze the basic structures and functions of the integumentary system	93-100
Identify and explain medical terms related to the integumentary system, and utilize appropriately when documenting in a simulated electronic medical record.	100
Research common diseases, disorders and emerging diseases of the integumentary system including the pathophysiology, prevention, diagnosis and treatment that might be utilized in each.	101-113
Make observations of the skin to include: color, temperature to touch, scarring, bruising, abrasions, lacerations, or other abnormalities.	101-113
Discuss the role of the integumentary system in homeostasis regarding body temperature.	
Demonstrate measuring and recording of temperature, and identify abnormal results.	93-94
Investigate the anatomy, physiology, and basic pathophysiology of the cardiovascular system, and evaluate and monitor blood pressure and pulse.	--
Analyze the basic structures and functions of the cardiovascular system.	414 - 453
Identify and explain medical terms related to the cardiovascular system, and utilize when documenting in electronic medical record.	421-422, 426, 440-441, 452-453
Research common diseases, disorders, and emerging diseases of the cardiovascular system including the pathophysiology, prevention, diagnosis and treatment (including biomedical therapies) that might be utilized in each.	442-452

Describe the components of blood, and the functions of each. Research when blood components are prescribed for a patient and why.	
Identify and describe the functions of the chambers, valves and associated vessels of the heart.	414-418
Distinguish differences in anatomy and pathology of blood vessels to include arteries, arterioles, capillaries, venules, and veins.	427-430
Identify and trace the flow of blood through the heart, and provide distinction between the pulmonary and systemic circulation.	430-436
Name the parts of the conduction system of the heart, and trace the impulses during initiation and conduction.	425
Demonstrate measuring and recording blood pressure and pulse, and identify abnormal results.	
Examine the anatomy, physiology and basic pathophysiology of the respiratory system, and evaluate and monitor respirations.	--
Analyze the basic structures and functions of the respiratory system.	340-367
Identify and explain medical terms related to the respiratory system, and utilize when documenting in electronic medical record.	347, 355-356, 367
Research common diseases, disorders, and emerging diseases of the respiratory system including the pathophysiology, prevention, diagnosis and treatment (including biomedical therapies) that might be utilized in each.	357-367
Differentiate between the upper and lower respiratory tract while tracing the pathway of air into and out of the respiratory system.	340-346
Explain the physiology of breathing, to include the process of gas exchange.	350-352
Analyze the interdependence of the cardiovascular and respiratory systems as they relate to gas exchange, circulation, and the support of vital organs of the human body.	417-418
Demonstrate measuring and recording respirations, and identify abnormal results.	
Evaluate the anatomy, physiology, and basic pathophysiology of the muscular and skeletal systems, and perform technical skills related to the systems.	--

Analyze the basic structures and functions of the muscular system.	174-270
Analyze the basic structures and functions of the skeletal system, including locating and identifying the bones of the skeletal system and hemopoiesis.	120-163
Explain the relationship between the muscular and skeletal systems, and identify their interdependence as they relate to body structure, movement and posture.	122-123
Identify and explain medical terms related to the muscular and skeletal systems, and utilize when documenting in the electronic medical record.	
Research common diseases, disorders, and emerging disorders of the muscular and skeletal systems including pathophysiology, prevention, diagnosis and treatment that might be utilized.	155-162, 200-206
Differentiate between the axial and appendicular skeletons.	132, 142
Describe the development of the skeletal system.	122-130
Locate and identify the types of joints in the skeletal system.	
Locate and identify the types of muscles in the muscular system.	174-176
Perform range of motion (ROM) for joints such as the shoulder, wrist and ankle.	152-153
Differentiate between active and passive range of motion.	151-154