

Human Anatomy and Physiology Alignment Checklist

Lesson	Task	Met (Y/N)	ACOS #	Standard
From Molecules to Organisms: Structures and Processes				
1.01,1.02, 1.04	1.01,1.02,1.04, 1.06, 1.11	Y	1	Develop and use models and appropriate terminology to identify regions, directions, planes, and cavities in the human body to locate organs and systems.
Notes				
1.05	1.05 (2), 1.06, 1.11	Y	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 these tissues are specialized to conduct the function of that tissue (e.g., lining, protecting).
Notes				(numbers in parenthesis indicate the number of tasks)
1.06, 1.07, 1.08, 1.09, 1.10	1.06, 1.07 (2), 1.08, 1.09, 1.10, 1.11	Y	3	Obtain and communicate information to explain the integumentary system's structure and function, including layers and accessories of skin and types of membranes.
Notes				(numbers in parenthesis indicate the number of tasks)
1.03, 1.08, 1.09, 1.10	1.03, 1.09, 1.10, 1.11	Y	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.
Notes				
6.01,6.02, 6.03, 6.04,6.05,	6.01, 6.02 (2), 6.04,6.05 (task #1)	Y	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).
Notes				(numbers in parenthesis indicate the number of tasks) (numbers and task in parenthesis indicate specific tasks)
6.03, 6.05,	6.03, 6.05 (3),	Y	4a	Obtain and communicate information to demonstrate understanding of the growth and development of the skeletal system (e.g., bone growth and remodeling).

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			Notes	(numbers in parenthesis indicate the number of tasks)
6.05	6.05(3), 6.11	Y	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).
			Notes	(numbers in parenthesis indicate the number of tasks)
6.06,6.07, 6.08, 6.09, 6.10	6.06 (3), 6.07, 6.08, 6.09,6.11	Y	5	Develop and use models to illustrate the anatomy of the muscular system, including muscle locations and groups, actions, origins and insertions
			Notes	(numbers in parenthesis indicate the number of tasks)
6.06, 6.07, 6.10	6.10	Y	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).
			Notes	
7.01, 7.02, 7.03, 7.04, 7.05	7.01 (3), 7.02, 7.03, 7.04, 7.05 (4), 7.09	Y	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
			Notes	(numbers in parenthesis indicate the number of tasks)
7.05	7.05 (task 1), 7.09	Y	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.
			Notes	(numbers and task in parenthesis indicate specific tasks)
7.05	7.05 (task3)	Y	6b	Design a medication to treat a disorder associated with neurotransmission, including mode of entry into the body, form of medication, and desired effects.*
			Notes	(numbers and task in parenthesis indicate specific tasks)
3.01,3.02, 3.03, 3.04,	3.01 (3, task #1 & 2), 3.02, 3.03, 3.04, 3.05 (task #4),3.10	Y	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).

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			Notes	(numbers in parenthesis indicate the number of tasks) (numbers and task in parenthesis indicate specific tasks)
3.02,3.04,3.05	3.02, 3.05 (4), 3.10	Y	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).
			Notes	(numbers in parenthesis indicate the number of tasks)
3.01, 3.02, 3.04	3.01 (task 3)	Y	7b	Design and carry out an experiment to test various conditions that affect the heart (e.g., heart rate, blood pressure, electrocardiogram [ECG] output).
			Notes	(numbers and task in parenthesis indicate specific tasks)
4.01, 4.02, 4.03, 4.04	4.01, 4.02 (2), 4.03(2) 4.05	Y	8	Communicate scientific information to explain the relationship between structures and functions, both mechanical (e.g., chewing, churning in stomach) and chemical (e.g., enzymes, hydrochloric acid [HCl] in stomach), of the digestive system, including accessory organs (e.g., salivary glands, pancreas).
4.04	4.04 (2), 4.05	Y	8a	Obtain and communicate information to demonstrate an understanding of the disorders of the digestive system (e.g., ulcers, Crohn's disease, diverticulitis).
			Notes	(numbers in parenthesis indicate the number of tasks)
3.06,3.07, 3.08, 3.09	3.06,3.07 3.08, 3.10	Y	9	Develop and use a model to explain how the organs of the respiratory system function
			Notes	
3.07, 3.08, 3.09	3.07, 3.08, 3.09, 3.10	Y	9a	Engage in argument from evidence describing how environmental (e.g., cigarette smoke, polluted air) and genetic factors may affect the respiratory system, possibly leading to pathological conditions (e.g., cystic fibrosis).
			Notes	
8.01,8.02, 8.03,8.04, 8.05, 8.06, 8.07,	8.01,8.02,8.03 8.04 (2), 8.06, 8.07, 8.08	Y	10	Obtain, evaluate, and communicate information to differentiate between the male and female reproductive systems, including pathological conditions that affect each.

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			Notes	(numbers in parenthesis indicate the number of tasks)
8.05	8.05 (2), 8.08	Y	10a	Use models to demonstrate what occurs in fetal development at each stage of pregnancy.
			Notes	(numbers in parenthesis indicate the number of tasks)
5.01,5.02, 5.03, 5.04, 5.05, 5.06	5.01, 5.02(2), 5.03, 5.04, 5.05 (task 1), 5.07	Y	11	Use models to differentiate the structures of the urinary system and to describe their functions
			Notes	(numbers in parenthesis indicate the number of tasks) (numbers and task in parenthesis indicate specific tasks)
5.03, 5.05,5.06	5.03, 5.05 (task 2 and three), 5.06, 5.07	Y	11a	Analyze and interpret data related to the urinary system to show the relationship between homeostatic imbalances and disease (e.g., kidney stones, effects of pH imbalances).
			Notes	(numbers and task in parenthesis indicate specific tasks)
2.01,2.02, 2.04,2.05,2.06,	2.01, 2.02 (2), 2.04 (task two), 2.08	Y	12	Obtain and communicate information to explain the lymphatic organs and their structure and function
			Notes	(numbers in parenthesis indicate the number of tasks) (numbers and task in parenthesis indicate specific tasks)
2.02,2.03,2.04, 2.05,2.06	2.03,2.04 (2), 2.05(2),2.06(2), 2.08	Y	12a	Develop and use a model to explain the body's lines of defense and immunity
			Notes	(numbers in parenthesis indicate the number of tasks)
2.07	2.07(2), 2.08	Y	12b	Obtain and communicate information to demonstrate an understanding of the disorders of the immune system (e.g., acquired immunodeficiency syndrome [AIDS], severe combined immunodeficiency [SCID]).
			Notes	(numbers in parenthesis indicate the number of tasks)
7.06, 7.07, 7.08,	7.06 (2),7.07, 7.09	Y	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.

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			Notes	(numbers in parenthesis indicate the number of tasks)
7.08	7.08, 7.09	Y	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.
			Notes	

Engineering, Technology, and Applications of Science (ETS) core ideas are denoted with an asterisk (*).