Goodheart-Willcox Publisher
18604 West Creek Drive • Tinley Park, IL 60477 • 800.323.0440 • www.g-w.com

Goodheart-Willcox Publisher Correlation of ***Introduction to Anatomy and Physiology 2e*** ©2021 to the Alabama 2015 for Human Anatomy and Physiology.	
STANDARD	**G-W CORRELATING PAGES**
1. Develop and use models and appropriate terminology to identify regions, directions, planes, and cavities in the human body to locate organs and systems.	5–9, 11
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).	69–79
3. Obtain and communicate information to explain the integumentary system's structure and function, including layers and accessories of skin and types of membranes.	90–100
3.a. 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.	101–113
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).	122–150
4.a. Obtain and communicate information to demonstrate understanding of the growth and development of the skeletal system (e.g., bone growth and remodeling).	127–128, 130–131
4.b. 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).	155–163
5. Develop and use models to illustrate the anatomy of the muscular system, including muscle locations and groups, actions, origins and insertions.	174–199, 215

	5.a. 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).	180–188, 200–207
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.		218–223, 230–244
	6.a. 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.	245–253, 261
	6.b. Design a medication to treat a disorder associated with neurotransmission, including mode of entry into the body, form of medication, and desired effects.	253
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).		378–394, 411, 414–441, 461
	7.a. 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).	395–405, 411, 442–453, 461
	7.b. Design and carry out an experiment to test various conditions that affect the heart (e.g., heart rate, blood pressure, electrocardiogram [ECG] output).	437–440, 442–445, 453, 461
8. Communicate scientific information to explain the relationship between the 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 the accessory organs (e.g., salivary glands, pancreas).		516–535, 549
	8.a. Obtain and communicate information to demonstrate an understanding of the	536–543, 549

	disorders of the digestive system (e.g., ulcers, Crohn's disease, diverticulitis).	
9. Develop and use a model to explain how the organs of the respiratory system function.		340–356
	9.a. 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).	359–367
10. Obtain, evaluate, and communicate information to differentiate between the male and female reproductive systems, including pathological conditions that affect each.		569–610, 620–629, 636
	10.a. Use models to demonstrate what occurs in fetal development at each stage of pregnancy.	611–618
11. Use models to differentiate the structures of the urinary system and to describe their functions.		552–570, 587
	11.a. 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).	571–581, 586–587
12. Obtain and communicate information to explain the lymphatic organs and their structure and functions.		464–473
	12.a. Develop and use a model to explain the body's lines of defense and immunity.	464–491, 507
	12.b. 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]).	492–499, 507
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.		300–319
	13.a. 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.	320–329