

Anatomy Pacing Guide

First Nine Weeks		
Week(s)	Topics & Objectives	Standards
1	<p>1. Apply inquiry-based and problem-solving processes and skills to scientific investigations.</p> <p>a. Use current technologies such as CD-ROM, DVD, Internet, and on-line data search to explore current research related to a specific topic</p>	1a
2	Clarify research questions and design laboratory investigations	1b
3	Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).	1c
4	Organize data to construct graphs (e.g., plotting points, labeling x-and y-axis, creating appropriate titles and legends for circle, bar, and line graphs) to draw conclusions and make inferences.	1d
5	Evaluate procedures, data, and conclusions to critique the scientific validity of research	1e
6	Formulate and revise scientific explanations and models using logic and evidence (data analysis).	1f
7	Collect, analyze, and draw conclusions from data to create a formal presentation using available technology (e.g., computers, calculators, SmartBoard, CBL's, etc.)	1g
8	<p>2. Demonstrate an understanding of the basic organization of the body.</p> <p>a. Apply and relate appropriate anatomical terms to the body in anatomical position. (DOK 1)</p> <ul style="list-style-type: none"> • Relationship of body parts • Major cavities and essential organs 	2a
9	Explain how specific mechanisms (e.g., feedback, transport, pH, temperature regulation, etc.) maintain homeostasis	2b

Second Nine Weeks		
Week(s)	Topics & Objectives	Standards
10	Describe the relationships and interactions of biochemical composition of the human body to body functions. (DOK 2) <ul style="list-style-type: none"> • Compounds and elements necessary for maintaining life 2010 Mississippi Science Framework Approved July 25, 2008 110 <ul style="list-style-type: none"> • Major groups of organic substances in the human body • Major types of chemical reactions employed within the organ systems • Effects of external factors (e.g., heat, pH, etc.) on enzymatic Reactions 	2c
11	Categorize the relationship of the cell and its functions to the more complex levels of organization within the body. (DOK 2) <ul style="list-style-type: none"> • Anabolic and catabolic reactions within a human cell • Four major categories of tissues and their location, structure, and function 	2d
12	3. Demonstrate an understanding of the structure, functions, and relationships of the body systems. a. Identify structures and explain functions of the components of the integumentary system.	3a
13	Research and distinguish among common integumentary system disorders in terms of origin, manifestation, and treatments	3b
14	Compare the structure and functions of the skeletal system with its relationship to movement. (DOK 1) <ul style="list-style-type: none"> • Structures which comprise bone • Difference between endochondrial and intramembranous ossification 	3c
15	Major bones of the axial and appendicular skeleton, noting inherent differences between males and females <ul style="list-style-type: none"> • Types of joints and their movements 	3c

16	Research and draw conclusions about changes in the skeletal system associated with disease, disorder, injury, age, and stress	3d
17	Compare the functions and structures of the muscular system with its relationship to movement. (DOK 1) <ul style="list-style-type: none"> • Major components and functions of skeletal muscle fiber • Major skeletal muscles and the process of contraction • Three types of muscles in the body 	3e
18	Research and evaluate the impact of medical technology on muscle physiology and disease	3f

Third Nine Weeks		
Week(s)	Topics & Objectives	Standards
19	Relate the components of the nervous system to the senses and the functions of the human body systems. (DOK 1) <ul style="list-style-type: none"> • Four types of neurological cells and the functions of each • Conduction of a nerve impulse • Structures and functions of the brain and spinal cord • Divisions of the nervous system (e.g., central nervous system, peripheral nervous system, sympathetic and parasympathetic) 	3g
20	Describe functions of the various sense organs and identify environmental factors that affect their responses	3h
21	Distinguish the location, structure, and functions of the endocrine glands	3i
22	Distinguish the location, structure, and functions of the endocrine glands	3j
23	. Identify and discuss the structures and functions of the organs of the digestive system and discuss their relationships to the interaction among the human body systems. (DOK 2) <ul style="list-style-type: none"> • Major organs of the digestive system (e.g., alimentary canal and accessory structures) • Roles of organs in the mechanical and chemical digestion of food and nutrient absorption • Contents of the alimentary canal and how they are mixed and moved • Enzymes and gland secretions as related to the absorption of 	3k

	digestion products	
24	Research common disorders or diseases of the digestive system and identify a diagnosis, based upon a given set of symptoms, for a specific disorder	3l
25	Describe the primary functions of the respiratory organs and the relationships between structure and function. (DOK 1) <ul style="list-style-type: none"> • Breathing versus respiration • Gaseous exchange between air and blood and mechanisms of gaseous transport by the blood 	3m
26	Research to describe various diseases commonly affecting normal respiratory function and assert environmental and social factors which may contribute to the incidence of disease	3n
27	Demonstrate an understanding of the structures and functions of the circulatory system and their role in maintaining homeostasis. (DOK 2) <ul style="list-style-type: none"> • Blood types and the four parts of blood in terms of morphology, function and origin • Pulmonary and systemic circulation • Systolic and diastolic pressures in relationship to cardiovascular health 	3o
Fourth Nine Weeks		
Week(s)	Topics & Objectives	Standards
28	Investigate and describe the social and economic impact of technological advances in medical treatment on cardiovascular disorders.	3p
29	Describe and discuss the structures and functions of the lymphatic system and the relationships to the circulatory system and immunity. (DOK 1) <ul style="list-style-type: none"> • Major lymphatic organs and pathways • Functions of lymph nodes, lymphocytes, immunoglobulins, thymus, and spleen • Types of immunity and immune responses Research and describe common lymphatic disorders and present conclusions about the effectiveness of available treatment options	3q, 3r
30	Explain the role of the structures and functions of the urinary system as they relate to the formation, composition and elimination of urine.	3s
	Research and describe the treatments of common urinary system disorders.	3t

31	Identify and discuss the locations, structures, and functions of the major components of the male and female reproductive systems. (DOK 1) <ul style="list-style-type: none">• Role of hormones in maturation and reproduction• Development of a fetus	3u
32	Research common reproductive diseases and disorders and justify the need for continued research in the diagnosis and treatment of reproductive system diseases	3v
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34		
35		
36		