

**Argenta-Oreana High School
Anatomy and Physiology**

Date Semester	IL Learning Standards	Unit and/or Essential Question Content and/or Skills	Assessments and/or Products
1.5 weeks	12.A.5a	Chapter 1 Introduction to Anatomy and Physiology <ol style="list-style-type: none"> 1. Define anatomy and physiology. 2. List and describe the characteristics of life. 3. Describe homeostasis and how it controls the body. 4. List and describe the levels of organization. 5. Identify the major cavities of the human body. 6. Identify the major organ systems. 7. Define anatomical terms. 8. Identify planes of the body 	<ol style="list-style-type: none"> 1. label diagrams 2. written assignments 3. written test
2 weeks	11.A.5a 11.A.5b 11.A.5c	Chapter 2 Chemical Basis of Life <ol style="list-style-type: none"> 1. Define and describe terms of basic chemistry. 2. Identify and describe the role of major chemicals in the body. 3. Describe the structure and functions of: <ol style="list-style-type: none"> a. carbohydrates b. lipids c. proteins Labs: <ol style="list-style-type: none"> 1. Acids and Bases 2. Enzymes 3. Models of the biological compounds 	<ol style="list-style-type: none"> 1. Written assignments 2. lab reports 3. written test
2.5 weeks	12.A.4b 12.A.5a	Chapter 3 Cells <ol style="list-style-type: none"> 1. Identify and describe the function of the organelles in human cells. 2. Describe the structure and functions of the cell membrane 3. Distinguish the types of intercellular junctions 	<ol style="list-style-type: none"> 1. written assignments 2. lab reports 3. written test 4. lab test

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	11.A.5a 11.A.5b 11.A.5c	4. Identify the types of transport into and out of cells <ol style="list-style-type: none"> a. diffusion b. facilitated diffusion c. active transport d. osmosis e. endocytosis/exocytosis f. transcytosis 5. Identify and describe the stages of the cell cycle. 6. Define cell differentiation Labs: <ol style="list-style-type: none"> 1. Care and use of the compound microscope 2. Differences and similarities in cell structure 3. Physical processes of biological importance 	
1.5 weeks	12.A.4b 12.A.5a	Chapter 5 Tissues <ol style="list-style-type: none"> 1. Identify and briefly describe the four types of tissues <ol style="list-style-type: none"> a. epithelial b. connective c. muscular d. nervous 2. Identify the two major criteria for distinguishing types of epithelial tissue 3. Describe the major types of epithelial tissue 4. Identify the major features of connective tissue 5. Identify the major types of connective tissue 6. Distinguish the major types of connective tissue 7. Muscular and nervous tissues will be discussed along with the corresponding organ systems 	<ol style="list-style-type: none"> 1. written assignments 2. lab reports 3. written test 4. lab slide test

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		Labs: 1. Epithelial tissue slides 2. Connective tissue slides	
2 weeks	12.A.4b 12.A.5a 13.B.5b	Chapter 7 Skeletal System 1. classify bone types 2. label parts of a long bone 3. distinguish compact bone tissue from spongy bone tissue 4. Describe intramembranous growth 5. Describe endochondral growth Chapter 8 Classification of joints (p.257-263) 1. Identify and distinguish the three major types of joints 2. Identify and distinguish the types of synovial joints 3. label a diagram of a generalized synovial joint Labs: 1. Identify bones by name 2. slides of compact bone	1. written assignments 2. lab reports 3. written test 4. lab test-identify bones on a skeleton
2 weeks	12.A.4b 12.A.5a 13.B.5b	Chapter 8 Muscular system (p. 281-300) 1. Identify the three types of muscle tissue 2. Identify the parts of a skeletal muscle 3. Identify parts of a neuromuscular junction 4. Define: motor unit, oxygen debt, fatigue, fast muscles, slow muscles, threshold stimulus, all or none response, muscle twitch, recruitment, tetany, muscle tone, 5. Describe the sliding filament theory of contraction 6. Describe the energy sources for contraction Labs: 1. dissection: identify some superficial muscles on the cat	1. written assignments 2. lab reports 3. written test 4. lab test – identify muscles on the cat

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		2. look at slides of the three types of muscle tissues 3. Muscle function	
2 weeks	12.A.4b 12.A.5a 13.B.5b 11.A.5a 11.A.5b 11.A.5c	Chapter 10 Nervous system 1. Identify the major characteristics of the nervous system 2. Label the parts of a neuron 3. Distinguish the types of neurons based on function and on structure 4. Describe the resting potential and what is responsible for it 5. Describe how the potential changes to form an action potential and an impulse 6. Describe the following characteristics of an impulse: 7. Identify the parts of a synapse 8. Describe the events that occur at a synapse to transmit an impulse from one neuron to another Labs: 1. Reaction times	1. written assignments 2. lab report 3. written test 4. lab test
2 weeks	12.A.4b 12.A.5a 13.B.5b 11.A.5a 11.A.5b 11.A.5c	Chapter 11 Spinal Cord and Brain 1. Spinal cord a. structure b. reflexes 2. Brain a. general characteristics b. parts c. functions of cerebrum, cerebellum, medulla, midbrain d. right and left cerebral hemispheres	1. written assignments 2. lab report 3. written test 4. lab test

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		Labs: 1. reflexes 2. sheep brain dissection 3. neuronal responses	
2 weeks	12.A.4b 12.A.5a 13.B.5b	Chapter 12 Special Senses 1. Cutaneous senses 2. Auditory a. parts of ear b. functions of the parts c. hearing and equilibrium 3. Vision a. parts of eyeball b. functions of the parts c. characteristics of vision Labs: 1. dissection of eyeball 2. characteristics of vision	1. written assignments 2. lab report 3. written test 4. lab test
1 week	12.A.4b 12.A.5a	Chapter 13 Endocrine System 1. Steroid and non-steroid hormones 2. Function and source of various hormones	1. written assignments 2. lab report 3. written test 4. lab test
2 weeks	12.A.4b 12.A.5a	Chapter 17 Digestive System 1. Anatomy 2. Source and function of enzymes 3. Control of secretions from stomach, pancreas, liver, and	1. written assignments 2. lab report 3. written test 4. lab test

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	11.A.5a 11.A.5b 11.A.5c	small intestine Labs: 1. dissection of cat's digestive system 2. digestive enzymes	
2 weeks	12.A.4b 12.A.5a 13.B.5b 11.A.5a 11.A.5b 11.A.5c	Chapter 14 Blood 1. Plasma and blood solids 2. Functions of plasma components 3. Functions of blood cells/fragments Labs: 1. simulated blood typing 2. examine blood smears	1. written assignments 2. lab report 3. written test 4. lab test
2 weeks	12.A.4b 12.A.5a 13.B.5b	Chapter 15 Cardiovascular System 1. Blood vessels 2. Characteristics of circulation 2. Heart 3. Characteristics of the heart contraction Labs: 1. dissection of cat blood vessels 2. dissection of heart	1. written assignments 2. lab report 3. written test 4. lab test
2 weeks	12.A.4b 12.A.5a	Chapter 16 Immunity and Lymphatic System 1. Immunity a. Non-specific immunity b. Specific immunity	1. written assignments 2. lab report 3. written test 4. lab test

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	13.B.5b	1. T-lymphocytes and B-lymphocytes 2. Antibodies 2. Lymphatic system a. anatomy b. physiology	
2 weeks	12.A.4b 12.A.5a 13.B.5b	Chapter 19 Respiratory System 1. Anatomy 2. Physiology Labs: 1. dissection of cat's respiratory system	1. written assignments 2. lab report 3. written test 4. lab test
1.5 weeks	12.A.4b 12.A.5a 13.B.5b 11.A.5a 11.A.5b 11.A.5c	Chapter 20 Urinary System 1. Anatomy 2. Physiology Labs: 1. dissection of kidney 2. simulated urinalysis	1. written assignments 2. lab report 3. written test 4. lab test
1-2 weeks	12.A.4b 12.A.5a	Chapter 22 Reproductive Systems	1. written assignments 2. written test