

**Cobb County School District 2018-2019**

**Anatomy and Physiology Teaching & Learning Framework**

<b>Unit 1</b> 2 weeks BL/4 weeks YR	<b>Unit 2</b> 3 wks BL/6 wks YR	<b>Unit 3</b> 2 weeks BL/4 weeks YR	<b>Unit 4</b> 2 weeks BL/4 weeks YR	<b>Unit 5</b> 2 weeks BL/4 weeks YR	<b>Unit 6</b> 2 weeks BL/4 weeks YR	<b>SLO Exam</b>	<b>Unit 7:</b> 3 wks BL/6 wks YR
<b>Unit 1: Body Organization and Tissues</b> <b>SAP1</b>	<b>Unit 2: Protection, Support, Movement</b> <b>SAP2, SAP4</b>	<b>Unit 3: Nervous &amp; Endocrine System</b> <b>SAP3</b>	<b>Unit 4: Cardiovascular &amp; Respiratory System</b> <b>SAP4</b>	<b>Unit 5: Immune System</b> <b>SAP4</b>	<b>Unit 6: Digestive and Urinary Systems</b> <b>SAP4</b>		<b>Unit 7: Reproductive System</b> <b>SAP5</b>
<p><b>SAP1. Students will analyze anatomical structures in relationship to their physiological functions.</b></p> <p>a. Apply correct terminology when explaining the orientation of body parts and regions.</p> <p>b. Investigate the interdependence of the various body systems to each other and to the body as a whole.</p> <p>c. Explain the role of homeostasis and its mechanisms as these relate to the body as a whole and predict the consequences of the failure to maintain homeostasis.</p> <p>d. Relate cellular metabolism and transport to homeostasis and cellular reproduction.</p> <p>e. Describe how structure and function are related in terms of cell and tissue types.</p>	<p><b>SAP2. Students will analyze the interdependence of the integumentary, skeletal, and muscular systems as these relate to the protection, support and movement of the human body.</b></p> <p>a. Relate the structure of the integumentary system to its functional role in protecting the body and maintaining homeostasis.</p> <p>b. Explain how the skeletal structures provide support and protection for tissues, and function together with the muscular system to make movements possible.</p> <p><b>SAP4e-Describe the effects of aging on body systems.</b></p>	<p><b>SAP3. Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.</b></p> <p>a. Interpret interactions among hormones, senses, and nerves which make possible the coordination of functions of the body.</p> <p>b. Investigate the physiology of electrochemical impulses and neural integration and trace the pathway of an impulse, relating biochemical changes involved in the conduction of the impulse.</p> <p>c. Describe how the body perceives internal and external stimuli and responds to maintain a stable internal environment, as it relates to biofeedback.</p>	<p><b>SAP4. Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.</b></p> <p>b. Analyze, and explain the relationships between the respiratory and cardiovascular systems as they obtain oxygen needed for the oxidation of nutrients and removal of carbon dioxide.</p> <p>d. Examine various conditions that change normal body functions (e.g. tissue rejection, allergies, injury, diseases and disorders) and how the body responds.</p> <p>e. Describe the effects of aging on body systems.</p>	<p><b>SAP4. Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.</b></p> <p><b>Essential Questions:</b></p> <p>What is immunity?</p> <p>How do barriers function in defending the body?</p> <p>What are the three lines of defense against infection? What are antigens and antibodies?</p> <p>What happens when the immune system is not functioning properly?</p> <p>How do vaccines work?</p> <p>How does HIV cause AIDS?</p> <p>d. Examine various conditions that change normal body functions (e.g. tissue rejection, allergies, injury, diseases and disorders) and how the body responds.</p> <p>e. Describe the effects of aging on body systems.</p>	<p><b>SAP4. Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.</b></p> <p><b>Essential Questions:</b></p> <p>What is the overall function of the digestive system?</p> <p>What is the composition and function of saliva?</p> <p>How is food mixed and moved along the digestive tract?</p> <p>What hormones are involved in the digestive process?</p> <p>What role does metabolism play in digestion? What is the function of the kidneys? What is urine composed of? What is the structure and function of the bladder, ureters, and urethra?</p>		<p><b>SAP5. Students will analyze the role of the reproductive system as it pertains to the growth and development of humans.</b></p> <p>a. Explain how the functions of the reproductive organs are regulated by hormonal interactions.</p> <p>b. Describe the stages of human embryology and gestation including investigation of gestational and congenital disorders, miscarriage, cleft palate, hydrocephaly, fetal alcohol syndrome).</p> <p>c. Describe the stages of development from birth to adulthood (i.e. neonatal period, infancy, childhood, adolescence and puberty, &amp; maturity).</p>

These units were written to build upon concepts from prior units, so later units contain tasks that depend upon the concepts addressed in earlier units.

All units will include the co-requisite **Characteristics of Science Standards** including the **Nature of Science** and **Habits of Mind** elements of the Georgia Performance Stan.