

Trimble High School

Grade: 11-12 Subject: Anatomy Revised: May 7, 2019

1 st Nine Weeks	2 nd Nine Weeks	3 rd Nine Weeks	4 th Nine Weeks
<p><u>Introduction Material</u> Standards met:</p> <ul style="list-style-type: none"> - AP.LO: LEVELS OF ORGANIZATION <ul style="list-style-type: none"> - AP.LO.1: Hierarchy of Organization - AP.LO.2: Types of Tissues AP.LO.3: Homeostasis AP.LO.4: Anatomical Terminology <p>For three weeks starting in the beginning of the school year, several topics are covered to start as introduction to A&P. In this section, the definition of A&P is discussed. Students are also introduced to the different body systems and students write a persuasive essay to the boss of the human body to keep their selected body system. Homeostasis is also discussed more in-depth in this unit as well as “Terms of Relative Position”, terms that are used to describe location of structures. Reviews from biology included are what proteins are and types of proteins, diffusion and osmosis, and transport mechanisms. All of this is assessed by various formative assessments to check for understanding and a summative assessment at the end</p>	<p><u>Skeletal System</u> - <u>AP.SM.2: Skeletal System</u></p> <p>The skeletal system is covered during a four week period. During this time, students are given a list of bones that they should be able to memorize what they look like and where they can be located. Students not only learn the gross anatomical structures of the skeletal system, they will look at the detailed anatomical structures of bone, and the types and shapes of bones. From this, they will conduct a lab putting together skeletal remains to estimate a victim’s height, their gender, and their age. The final assessment for knowledge is a written summative assessment as well as a practical portion. Students write another research paper on a musculoskeletal disease of their pick with the same format as the skin disorder paper from the previous nine weeks.</p> <p><u>Muscular System</u> - <u>AP.SM.3: Muscular System</u></p> <p>The second half of the nine weeks is spent covering the muscular system. This system is broken up differently in terms of assessments. The unit is divided into three sections. The first third of the unit is spent</p>	<p><u>Muscular System</u></p> <p>For the first two weeks of the quarter, we review the sliding filament theory, the theory on how a muscle contracts during activity. The unit is wrapped up with a test on contraction of a muscle.</p> <p><u>Nervous System</u> <u>AP.IC: INTEGRATION AND COORDINATION</u></p> <ul style="list-style-type: none"> - <u>AP.IC.1: Nervous System</u> - <u>AP.IC.2: Special Senses • Sense of Sight • Senses of Hearing and Balance • Senses of Taste and Smell</u> <p>We spend the rest of the quarter covering the nervous system. The nervous system is a large unit so I divide it into smaller units. The topics we cover are neurological diseases, the divisions of the nervous system, the types of neurons and neuroglia, the anatomy of a neuron, reflexes and reactions, action potentials, the cranial nerves, and the lobes of the brain. The first mini unit covers the divisions of the nervous system and the anatomy of a neuron, as well as types of nerve cells. In this unit, we have an end of unit test and students write a papers about a neurological disorder of their choice. The</p>	<p><u>Cardiovascular system</u></p> <ul style="list-style-type: none"> - <u>AP.T.1: Blood</u> - <u>AP.T.2: Cardiovascular System</u> - <u>AP.T.3: Lymphatic and Immune Systems</u> <p>The first four weeks of the quarter are spent covering the cardiovascular system. In this unit, we cover the basic structure of the heart and its vessels, the five types of blood vessels, blood pressure and the conduction system. Throughout the unit, students write a paper on a cardiovascular disease of their choice. At the end of the unit, a test is given to assess knowledge with scattered “pop” quizzes throughout the unit to check for understanding. The final week, students hone their dissection skills by dissecting a sheep heart.</p> <p><u>Respiratory System</u> <u>AP.AE.2: Respiratory System</u></p> <p>The next week and a half to two weeks are spent covering the respiratory system. Students learn the basic pathway of air, learning the structures as air enters and then exits the lungs. Students will also learn the physiology of respiration, discussing pressure differences and diffusion. The unit</p>

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<p><u>Tissues</u></p> <p>Studying the types of tissues in the body are the next unit covered. There are four types of tissue but we discuss two in this unit and discuss the other two at a later time. For two weeks, students learn the basics of what defines a tissue and what classifies as epithelial tissue and what classifies as connective tissue. Students also learn what histology is (the study of tissues). Mini-quizzes are given over each type of tissue and then a final summative assessment is given at the end, wrapping up the unit.</p> <p><u>Integumentary</u> <u>AP.SM.1: Integumentary System</u></p> <p>The final three weeks are used to discuss what the integumentary system is. Students learn what the integumentary system is, what comprises it, and the functions. One formal assessment is given at the end but it's not the primary assessment of the chapter. Students write a research paper on a skin disorder of their choice, discussing the history, the pathophysiology, symptoms, and treatments/cures of the disease. In this unit, students also learn basics of skin cancer and incidence rates as well as the types of burns and how doctors diagnose the percent of a body that is burned.</p>	<p>reviewing the types of muscles as well the muscles that students are responsible for learning. They will also learn what origin and insertion means for muscle attachments. Finally this third of the unit will cover types of muscle contractions.</p> <p>The second third of this unit is spent learning about the neuromuscular junction. Students will learn where the NMJ is located and the ions that are important for the workings of the NMJ. Students will learn how a nerve innervates a muscle and what the mechanism of action is.</p> <p>The final third of the unit is spent talking about the actual mechanism of a muscle contracting. Students will learn what the sliding filament theory is and why it's the most accurate theory about a muscle contract. Students will learn about excitation, coupling, and contracting. Students will also learn how to read an EMG and understand what tetanus and summation is.</p>	<p>second unit covers action potentials, graded potentials and the lobes of the brain, as well as the brain's nerves. In this unit we have a summative assessment and a recitation quiz of the cranial nerves. The unit also covers the reflex arc and different reflexes</p>	<p>is assessed with a respiratory system quiz as well students with a partner will design an anti-smoking campaign poster.</p> <p><u>Digestive, Endocrine/Reproductive, Excretory System</u></p> <ul style="list-style-type: none"> - <u>AP.IC.3: Endocrine System</u> - <u>AP.AE.3: Urinary System</u> - <u>AP.AE.1: Digestive System</u> - <u>AP.R.1: Reproductive System</u> <p>The next three weeks are spent covering the basics of the digestive and the endocrine system. Students will learn the basic structures of how food passes from the mouth to excretion. In the endocrine system, students learn about the primary glands and hormones that are secreted in the body. The urinary system covers kidneys and how the body gets rid of waste. Because SLOs and the fetal pig dissection lab has not been completed, a quiz isn't given over the digestive or endocrine system.</p> <p><u>Dissection</u></p> <p>The last week is spent dissecting a fetal pig. Students will take the knowledge they've learned this year about all of the anatomical structures and see if they can identify these structures in real life. Students will partner up as one person will be a cutter and the other one will serve as a navigator.</p>
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