

Course: Anatomy & Physiology	Teacher: Girard				Draft made: September 2, 2009
Month	September	October	November	December	January
Essential Questions	<p>*How is the human body organized?</p> <p>*How is homeostasis maintained?</p> <p>*How does structure determine function?</p>	<p>How is the human body organized?</p> <p>How is homeostasis maintained?</p> <p>How does structure determine function?</p> <p>How does disease affect the human body?</p>	<p>How is the human body organized?</p> <p>How is homeostasis maintained?</p> <p>How does structure determine function?</p> <p>How does disease affect the human body?</p>	<p>How is the human body organized?</p> <p>How is homeostasis maintained?</p> <p>How does structure determine function?</p> <p>How does disease affect the human body?</p>	<p>How is the human body organized?</p> <p>How is homeostasis maintained?</p> <p>How does structure determine function?</p> <p>How does disease affect the human body?</p>
Objectives	<p>*Compare/contrast anatomic position directional terms</p> <p>*Identify sectional planes</p> <p>*Define Latin &amp; Greek prefixes, suffixes, and roots</p> <p>*Describe how chemical reactions affect the body</p> <p>*Differentiate cellular organelle functions</p> <p>*Differentiate intercellular and intracellular transport mechanisms</p>	<p>*Identify human tissue types</p> <p>*Diagram human tissues</p> <p>*Differentiate human tissue functions</p> <p>*Identify integumentary structures</p> <p>*Differentiate integumentary anatomical functions</p> <p>*Differentiate skin pathologies</p> <p>*Differentiate fingerprint patterns</p> <p>*Research and diagnose clinical patients</p>	<p>*Differentiate skeletal, smooth, and cardiac muscle anatomy and function</p> <p>*Describe and create a diagram of the sliding filament theory</p> <p>*Describe muscular structural organization</p> <p>*Classify skeletal muscle organization</p> <p>*Identify and label skeletal muscles</p> <p>*Differentiate muscular pathologies</p> <p>*Research and diagnose clinical patients</p>	<p>*Identify digestive and accessory organs</p> <p>*Differentiate enzymes involved in chemical digestion and the substrates acted on</p> <p>*Assess role of the pancreas in maintaining homeostasis</p> <p>*Justify/debate the diet of an uncontrolled diabetic</p> <p>*Differentiate digestive pathologies</p>	<p>*Identify excretory system anatomy</p> <p>*Describe nephron function</p> <p>*Differentiate filtration, reabsorption, and secretion in a nephron</p> <p>*Describe clinical significance of a urinalysis</p> <p>*Describe role of kidney in maintaining water, electrolyte, and pH homeostasis</p> <p>*Experimentally determine disease by performing a urinalysis</p>

		<p>Pathophysiology</p> <ul style="list-style-type: none"><li>*Identify and label human skeletal bones and landmarks on each bone</li><li>*Describe the osteon system</li><li>*Describe bone elongation process and bone remodeling</li><li>*Differentiate skeletal pathologies</li><li>*Compare/contrast axial and appendicular skeletons</li><li>*Describe skeletal system functions</li><li>*Classify and differentiate fibrous, synovial, cartilaginous, and joints</li><li>*Describe joint homeostatic imbalances</li><li>*Outline chapter 8</li></ul>	<p>pathophysiology</p>		<p>*Dissect sheep kidney</p>
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<p>Reading</p> <p>Anatomy &amp; Physiology by Elaine Marieb 2002 edition</p>	<p>Chapter 1 Chapter 2 Chapter 3</p>	<p>Chapter 4 Chapter 5 Chapter 6 Chapter 7 Chapter 8</p>	<p>Chapter 9 Chapter 10</p>	<p>Chapter 22 Primary literature article</p>	<p>Chapter 24 Chapter 25 Primary literature article</p>
<p>Writing</p>	<p>Chapter 1 essay test Chapter 2 essay test</p>	<p>Outline chapter 8</p>	<p>Research paper on careers that focus on the muscular system</p>	<p>Primary literature summary (Leptin article)</p>	<p>Primary literature summary (Clinical Urinalysis article)</p>
<p>Assessments</p>	<ul style="list-style-type: none"> <li>*Latin roots quizzes 1-15</li> <li>*Latin roots tests (2)</li> <li>*Chapter 1 Test</li> <li>*Chapter 2 Test</li> <li>*Chapter 3 Test</li> <li>*Study Guides</li> <li>*Colorplates</li> </ul>	<ul style="list-style-type: none"> <li>*Tissues identification quiz</li> <li>*Integumentary system test</li> <li>*Fingerprint lab</li> <li>*Skeletal system test</li> <li>*Bone landmarks identification quizzes</li> <li>*Study guides</li> <li>*Colorplates</li> <li>*Chapter 8 outline</li> </ul>	<ul style="list-style-type: none"> <li>*Muscle identification quizzes</li> <li>*Muscular system test</li> <li>*Study guides</li> <li>*Colorplates</li> <li>*Career research paper</li> </ul>	<ul style="list-style-type: none"> <li>*Digestive system project</li> <li>*Digestive system test</li> <li>*Digestive organs identification quiz</li> <li>*Debate diet of an uncontrolled diabetic</li> <li>*Primary literature summary</li> </ul>	<ul style="list-style-type: none"> <li>*Excretory system test</li> <li>*Kidney anatomy identification quiz</li> <li>*Primary literature summary</li> <li>*Urinalysis lab</li> <li>*Kidney dissection</li> </ul>

Month	February	March	April	May	June
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Objectives	<ul style="list-style-type: none"> <li>*Identify cardiac anatomy</li> <li>*Dissect a cow heart</li> <li>*Diagnose patients using E.K.G. strips</li> <li>*Experimentally determine cardiac output</li> <li>*Measure blood pressure</li> <li>*Describe the cardiac cycle</li> <li>*Experimentally determine blood type and rH factor of synthetic blood</li> <li>*Differentiate leukocyte % by performing a WBC Differential</li> <li>*Compare/contrast blood flow, pressure, and resistance in</li> </ul>	<ul style="list-style-type: none"> <li>*Describe arrangement of lymphatic vessels in the human body</li> <li>*Describe the role of interstitial and lymphatic fluids in the human body</li> <li>*Describe the location and function of lymph nodes</li> <li>*Differentiate innate and adaptive Immune defenses</li> <li>*Differentiate humoral and cell mediated immune response</li> <li>*Differentiate types and functions of immune cells</li> <li>*Describe the roles of antigens,</li> </ul>	<ul style="list-style-type: none"> <li>*Identify Endocrine glands</li> <li>*Compare/contrast exocrine and endocrine glands</li> <li>*Compare/contrast amino acid and steroid hormones</li> <li>*Describe hormonal effects on cells</li> <li>*Describe how a second messenger causes cellular changes</li> <li>*Identify hormones made by each endocrine organ</li> <li>*Identify target cells for each endocrine hormone</li> <li>*Identify effects of hormone on the body</li> <li>* Research and</li> </ul>	<ul style="list-style-type: none"> <li>*Identify male and female reproductive anatomy</li> <li>*Describe the process of spermatogenesis and oogenesis</li> <li>*Describe events of the menstrual cycle</li> <li>*Graph hormone levels throughout the menstrual cycle</li> <li>*Describe events of fertilization and implantation</li> </ul>	<ul style="list-style-type: none"> <li>*Describe the events of nerve transmission including a synapse</li> <li>*Describe how human vision &amp; hearing functions</li> <li>*Describe functions of the brain</li> <li>*Differentiate membrane potentials</li> <li>*Dissect a sheep brain</li> <li>*Dissect a cow eye</li> <li>*Differentiate structures and functions of the C.N.S. and P.N.S.</li> <li>*Describe neurophysiology and the electrical signal</li> <li>*Compare/contrast the autonomic and</li> </ul>

	<p>arteries, capillaries, and veins  *Identify major blood vessels  *Describe the rennin-angiotensin mechanism in maintaining blood pressure  *Describe cardiac conduction events during a PQRST wave  *Identify and differentiate Pathophysiology of the circulatory system  *Describe the process of hemostasis  *Differentiate cellular and non-cellular components of blood  *Describe how capillary perfusion Occurs</p>	<p>antibodies, and complements in the immune response  *Identify respiratory system anatomy  *Differentiate respiratory volumes  *Describe the mechanics of breathing  *Describe location and transport method for gas exchange  *Differentiate homeostatic imbalances of the respiratory system</p>	<p>diagnose clinical patients pathophysiology  *Differentiate negative and positive feedback mechanisms involving hormonal control</p>		<p>somatic divisions of the nervous system  *Compare/contrast the sympathetic and parasympathetic divisions of the nervous system  * Research and diagnose clinical patients  Pathophysiology  *Identify anatomy of the nerve, brain, eye, and ear</p>
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Reading	Chapter 16 Chapter 17 Chapter 18 Primary literature article	Chapter 19 Chapter 20 Chapter 21	Chapter 15	Chapter 26 Chapter 11 Chapter 12	Chapter 13 Chapter 14
Writing	Primary literature articles (Sildenafil article and homocysteine article)	Respiratory volumes lab report	Create an endocrine hormone paper	Kamikaze sperm article analysis	
Assessments	*Blood test *Heart diagram quiz *Heart dissection *Primary literature summaries *Study guides *Colorplates *Leukocyte differential *Blood typing lab *Cardiac conduction quiz *Cardiac output lab *Capillary dynamics quiz	*Immune system test *Respiratory system test *Respiratory volumes lab *Study guides *Colorplates	*Endocrine organ identification quiz *Endocrine system test *Create an Endocrine hormone paper *Study guides *Colorplates	*Male reproductive anatomy identification quiz *Female reproductive anatomy identification quiz *Menstrual cycle graph *Reproductive system test *Study guides *Colorplates	*Brain anatomy identification quiz *Neuron anatomy identification quiz *Eye anatomy identification quiz *Ear anatomy identification quiz *Nervous system Test *Brain dissection *Eye dissection