

<b>Course: Anatomy &amp; Physiology</b>	<b>Teacher: Girard</b>				<b>Draft made: September 4, 2012</b>
<b>Month</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>January</b>
<b>Essential Questions</b>	<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>
<b>Objectives</b>	<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><b>Reading</b></p> <p><b>Anatomy &amp; Physiology by Elaine Marieb 2002 edition</b></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><b>Writing</b></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><b>Assessments</b></p>	<ul style="list-style-type: none"> <li>*Latin roots quizzes 1-13</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>

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<b>Objectives</b>	<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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<b>Reading</b>	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
<b>Writing</b>	Primary literature articles (Sildenafil article and homocysteine article)	Respiratory volumes lab report	Create an endocrine hormone paper	Kamikaze sperm article analysis	
<b>Assessments</b>	*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