

UNIT 1			
Digestive System/Nutrition			
Text Resource	Skills/ Objectives / Core Understanding	Assignments	Score
January			
OVERVIEW of the DIGESTIVE SYSTEM			
Human Body Detectives Lesson 1a <i>+ lectures, articles and various texts</i> <i>Daily assignments see:</i> http://freehomeschoollessons.weebly.com/biology-nutrition-high-school.html	<ul style="list-style-type: none"> Distinguish the difference between mechanical digestion and chemical digestion Identify the organs of the digestive system and what takes place in each <p>A. Digestion refers to the mechanical and chemical breakdown of foods so that nutrients can be absorbed by cells. B. The digestive system carries out the process of digestion. C. The digestive system consists of the alimentary canal, leading from mouth to anus, and several accessory organs whose secretions aid the processes of digestion.</p>	<ul style="list-style-type: none"> Identify the organs of the digestive system and what takes place in each 	
Human Body Detectives Lesson 1b <i>+ lectures, articles and various texts</i>	<ul style="list-style-type: none"> Chemical digestion involves breaking down food with enzymes into molecules (nutrients, salts, water) that can be absorbed Absorption involves moving those molecules through the GI epithelium and into the blood (most molecules) or lymph (lipids) 	Write a summary of each step of chemical digestion (organs) in your own words	
		<i>Extra credit:</i> draw an almost life sized diagram of the digestive system	
February			
NUTRITION FOOD ABSORPTION			
Human Body Detectives Lesson 2 Vitamins and Minerals <i>+ lectures, articles and various texts</i>	Nutrition is the process by which the body takes in and uses nutrients Essential nutrients are those that cannot be synthesized by human cells	Make a Chart: Water Soluble and Fat Soluble add the vitamin names according	

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	<p>Nutrients include carbohydrates, fats, proteins, vitamins, minerals, water and oxygen. An essential nutrient is one that needs to be obtained from an external source.</p> <ul style="list-style-type: none"> • Nutrient deficiencies (from either not ingesting enough nutrients or the body requiring more due to an illness or the body not properly absorbing) may include the following: • Beri beri (thiamine or B1 deficiency) • Scurvy (vitamin C deficiency) • Anemia (iron deficiency) • Bone loss (calcium, magnesium, phosphorus and /or vitamin D) 	<p>to the video</p> <p>Define nutrient deficiencies and their affect on the human body</p>	
		<p>Create a rainbow chart that identifies phytonutrients</p>	
Human Body Detectives Lesson 2 B Free Radicals	Basic understanding of ANTIOXIDANTS, free radicals		
Human Body Detectives Lesson 3 Bozeman Science Lectures	Proteins, Carbohydrates & Fats	Nutrition Label Worksheet	
		<p>Illustrate Starch, Protein and Carbohydrates</p> <p>Describe where each are begins in the digestive process</p>	
		Nutrient Review Worksheet	
MARCH CULPRITS of HUMAN DISEASES and DIGESTIVE PROBLEMS			
Human Body Detectives Lesson 4 <i>+ lectures, articles and various texts</i>	<p>Sugar • Carbohydrates and Sugar • Pancreas</p> <ul style="list-style-type: none"> • Body • Insulin • Glucose 	Identify Sugars and their sources	
	<p><i>Life Application:</i></p> <p><i>Research the history of sugar and learn about how it is processed.</i></p> <p><i>2. Learn about different types (with options below*) of sugar alternatives available (saccharin, xlitol, aspartame etc), learn how they are processed and affect the body.</i></p>		

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	<p><i>* Technological (iPad App) Activity: Using a free technological app such as iBrainstorm and the information below about sugar, students will brainstorm all of the "sweet" tasting foods that they currently eat in their lives. They will then research this food and why it tastes "sweet." They will label each brainstorm post it note with the type of sweetener that the food contains. Is it good or bad?</i></p>		
	<p>Sugar substitute chemicals Sugar substitutes natural</p>	<p>Name the 4 affects of sugar on your body What are 4 diagnoses that could occur due to sugar imbalances what effect does it have on the body</p>	
<p>Human Body Detectives Lesson 5-6 Chapter 17 Glencoe Life Science Digestive Problems</p>	<p>Examine processed and whole foods, as well as acute and chronic diseases</p> <ul style="list-style-type: none"> • Examine how diseases have changed over the last 100 years • Examine the difference between quality versus quantity of life 	<p>Define and Identify: DIFFERENCES BETWEEN ACUTE AND CHRONIC DISEASE ACUTE DISEASE</p>	
<p>UNIT FINAL PROJECT</p>	<p>Whole Food Presentation INSTRUCTIONAL OBJECTIVES Students will research chosen food and present to the class how this food is grown, where it is grown, how this food benefits our bodies. They will also bring in a recipe of their chosen food for the class. STUDENT-FRIENDLY OBJECTIVES Using a free technological app such as Fotobabble and/or Educreations, I will choose, research and present a Whole Food plus recipe and create an audiovisual and/or written report of my research.</p>		