

Science - Grade 6 - 1-25 Weeks

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NYS Performance Indicators	Objectives	Text Resources	Resources (Suggested Activities)	Cross-Curriculum Connections	Assessment Items
	<p><i>Scientific Process and Inquiry Skills</i></p>				
	Teach Scientific method referring to the Scientific Inquiry Skills matrix				
	<p>General Skills: To be implemented throughout the year where appropriate.</p> <p>1. follow safety procedures in the classroom and laboratory</p> <p>2. safely and accurately use the following measurement tools:</p> <p>metric ruler</p> <p>3. use appropriate units for</p>	<p>In Labs and Activities throughout the text book: Human Body Systems</p> <p><i>One Lab is required and will count as 20 points on Part 2 of the 25-Week Assessment</i></p>	<p>http://www.teachersdomain.org/</p> <p>- BrainPop: Scientific Method(Video)</p>		

		<p>measured or calculated values</p> <p>4. recognize and analyze patterns and trends</p> <p>5. sequence events</p> <p>6. identify cause-and-effect relationships</p>			
	<p>Essential Question / Focus 1.2a and 1.2b:</p> <p>1. What is the function of the cell?</p> <p>2. What are the biological levels of organization (cells, tissues, organs, organ systems, and organism)?</p>	<p>Supplement: From Cells to Tissues, To Organs, To Systems</p> <p>Teacher Edition: Life Structure and Function</p> <p>Cell Websites provided by Glencoe</p>	<p>Cell PowerPoint</p> <p>http://www.mysciencebox.org/seeingcells</p>	<p>ELA – compare and contrast</p> <p>Social Studies – Scientific Revolution</p>	
<p>MST4.I.</p> <p>LE1B</p>	<p>Students explain the functioning of the major human organ systems and their interactions.</p>	<p>1.2a Each system is composed of organs and tissues which perform specific functions and interact with each other, e. g., digestion, gas exchange, excretion, circulation, locomotion, control, coordination, reproduction, and protection from disease.</p> <p>Living Environment Skill #9. identify</p>	<p>Overview of text : Human Body Systems</p>	<p>Webquests</p> <p>Smartboard Activities</p> <p>virtual microscope</p>	<p>40, 41</p> <p>1,2.3.4</p>

	structure and function relationships in organisms			
MST4.1. LE1B	Students explain the functioning of the major human organ systems and their interactions.	1.2b Tissues, organs, and organ systems help to provide all cells with nutrients, oxygen, and waste removal.		1,2,3,4
	Essential Question / Focus 1.2c–1.2j:		inner body - human anatomy	
	1. What role/function do the organs of the digestive, respiratory, excretory, circulatory, nervous, endocrine, reproductive, and immune system have?			
	2. How do the systems work together to maintain homeostasis? (skeletal/muscular, digestive/respiratory/circulatory, nervous/endocrine)			
	3. What are the causes of disease? How can the body defend itself?			

<p>MST4.I. LE1B</p> <p>Students explain the functioning of the major human organ systems and their interactions.</p>	<p>1.2g Locomotion, necessary to escape danger, obtain food and shelter, and reproduce, is accomplished by the interaction of the skeletal and muscular systems, and coordinated by the nervous system</p>	<p>Chapter 1: Structure and Movement pp. 6-19</p>	<p>Lab: Similar Skeleton pp. 26-27</p> <p>BrainPop: How Joints Work(VIDEO)</p> <p>BrainPop: Bone Structure(VIDEO)</p>	<p>ELA – comparing and contrasting</p>	<p>5, 6, 7 41, f,g 45b</p>
<p>MST4.I. LE1B</p> <p>Students explain the functioning of the major human organ systems and their interactions.</p>	<p>1.2c The digestive system consists of organs that are responsible for the mechanical and chemical breakdown of food. The breakdown process results in molecules that can be absorbed and transported to cells.</p>	<p>Chapter 2: Nutrients and Digestion p. 47-53</p>	<p>BrainPop: Digestive System(VIDEO)</p> <p>Smart board Activity</p> <p>Digestive System</p> <p>Power Point</p> <p>Lab: Particle Size and Absorption pp. 54-55</p> <p>Gr. 6 25-Week Lab</p> <p>Assess.pdf</p>	<p>ELA – Narrative Procedure</p> <p>Digestive System Story Rubric.doc</p>	<p>8, 9, 10, 11, 12, 13, 41a</p>
<p>MST4.I. LE1B</p> <p>Students explain the functioning of the major human organ systems and their interactions.</p>	<p>1.2f The circulatory system moves substances to and from cells, where they are needed or produced, responding to changing demands.</p> <p>Living Environment Skill #8. Identify pulse points and pulse rates.</p>	<p>Chapter 3: Circulation pp. 64-76</p>	<p>BrainPop: Circulatory System(VIDEO)</p> <p>Smart board Activity</p> <p>Heart rate and exercise</p>	<p>Math - Calculation</p>	<p>14, 15, 16, 17, 27, 41c, 42, 43, 46</p>

			Lab: The Heart as a Pump p. 73	
MST4.I. LE1B	Students explain the functioning of the major human organ systems and their interactions.	1.2d During respiration, cells use oxygen to release the energy stored in food. The respiratory system supplies oxygen and removes carbon dioxide (gas exchange). Living Environment Skill #8. Identify pulse points and pulse rates.	Chapter 4: Respiration and Excretion pp. 92-100 BrainPop: Respiratory System(VIDEO) Smart board Activity Body systems and energy webquest Lab: Effect of Activity on Breathing p. 91	18, 19, 44 41e
MST4.I. LE1B	Students explain the functioning of the major human organ systems and their interactions.	1.2e The excretory system functions in the disposal of dissolved waste molecules, the elimination of liquid and gaseous wastes, and the removal of excess heat energy.	Chapter 4: Respiration and Excretion pp. 101-106 Lab: Modeling Kidney Function p. 103 Lab: Kidney Structure p. 107	24, 25, 26, 27, 41b
MST4.I. LE1B	Students explain the functioning of the major human organ systems and their interactions.	1.2h The nervous and endocrine systems interact to control and coordinate the body's responses to changes in the environment, and to regulate growth, development, and reproduction. Hormones are chemicals produced by the endocrine system; hormones regulate	Chapter 5: Control and Coordination pp. 118–126 Chapter 6: Regulation and Reproduction pp. 146-150 nervous system activity Lab: How Quick are your Responses p. 117	20, 21, 22, 23, 31, 32, 33

		many body functions.				
MST4.1. LE5A	Students compare the way a variety of living specimens carry out basic life functions and maintain dynamic equilibrium.	5.1f Regulation of an organism's internal environment involves sensing the internal environment and changing physiological activities to keep conditions within the range required for survival. Regulation includes a variety of nervous and hormonal feedback systems.	Chapters 5 and 6: Control and Coordination, Regulation and Reproduction (feedback p. 150)	Lab: Improving Reaction Time p. 127 Lab: Comparing Sense of Smell p. 134 Lab: skin Sensitivity pp. 136-137	27, 38, 39, 40	
MST4.1. LE5A	Students compare the way a variety of living specimens carry out basic life functions and maintain dynamic equilibrium.	5.1g The survival of an organism depends on its ability to sense and respond to its external environment. Living Environment Skill #9. identify structure and function relationships in organisms	Chapter 5: Control and Coordination pp. 128-135	http://www.studyzone.org/ Lab: Model a Chemical Message p. 145	Applying Math p. 133	23, 38, 39, 40
MST4.1. LE1B	Students explain the functioning of the major human organ systems and their interactions.	1.2i The male and female reproductive systems are responsible for producing sex cells necessary for the production of offspring.	Chapter 6: Regulation and Reproduction pp. 151-157			34, 35, 36, 37, 41d

<p>MST4.I. LE1B</p> <p>Students explain the functioning of the major human organ systems and their interactions.</p>	<p>1.2j Disease breaks down the structures or functions of an organism. Some diseases are the result of failures of the system. Other diseases are the result of damage by infection from other organisms (germ theory). Specialized cells protect the body from infectious disease. The chemicals they produce identify and destroy microbes that enter the body.</p> <p>Living Environment Skill #9. identify structure and function relationships in organisms</p>	<p>Chapter 7: Immunity and Disease pp. 176-188</p>	<p>BrainPop: Immune System(VIDEO)</p> <p>Lab: Determining Reproduction Rates (of bacteria) p. 179</p> <p>Lab: Microorganisms and Disease p. 189</p>		<p>28, 29, 30</p>
					<p>Gr. 6 Report Card Objectives.pdf</p>

<u>Biological</u>	<u>Digestive</u>	<u>Respiratory</u>	<u>Circulatory</u>	<u>Excretory</u>	<u>Nervous</u>	<u>Endocrine</u>	<u>Muscular-</u>	<u>Reproductive</u>	<u>Immune</u>
<u>Levels of</u>	<u>System</u>	<u>System</u>	<u>System</u>	<u>System</u>	<u>System</u>	<u>System</u>	<u>Skeletal</u>	<u>System</u>	<u>System</u>
<u>Organization</u>							<u>System</u>		
- Tissue	Saliva Mouth	- Lungs	- Heart	- Kidney	- Interact	- Pituitary	Muscles	- Sex Cells	- Germ Theory
Organ	Tongue	Exhalation	Valves	Bladder	Brain	Thyroid	Bones	Egg	Infection
Organ System	Tongue Esophagus	Bronchial Tubes	Arteries	Urethra	Spinal Cord	Adrenal	Tendons	Sperm	Disease
		Air Sacs	Veins	Waste	Nerves	Gland		Ovary	Microbes

Organism	Stomach	Nasal Passage	Capillaries	Skin	Sensory Organs	Hormone	Joints	Testes	White-blood
Multi-cellular	Small Intestines	Pharynx	Red Blood	Secretion	Regulation	Pancreas	Cartilage	Reproduce	Cells
Organism	Large Intestines	Larynx	Cells	Elimination	Skin	Feedback	Marrow	Offspring	Antibodies
Cellular Level	Rectum	Trachea	Transport	Homeostasis	Neurons	Mechanism	Ligaments	Fertilization	Antigen
Homeostasis	Anus	Gas Exchange	Lymph Nodes	Urine	Stimulus	Homeostasis	Involuntary	Semen	Skin
	Mechanical -	Diaphragm	Pulse rate	Urinary System	Reflex	Regulation	Voluntary	Birth	
	Digestion	Oxygen	Cardio-vascular	Functions of	Coordinate	Thymus	Cardiac Muscle	Production	
	Chemical -	Carbon Dioxide	System	Skin		Lymph Nodes	Smooth Muscle		
	Digestion	Diffusion				Spleen	Skeletal Muscle		
	Liver	Glucose				Tonsils	Locomotion		
	Gall Bladder	Respiration					Protection		
	Metabolism								
	Pancreas								
	Nutrient								
	Absorption								
	Blood								
	Peristalsis								
	Enzymes								

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