







**5th Grade Body Systems Unit**  
**(Bones and Skeleton & Body Systems Modules)**  
**Unit Blueprint**


<b>Learning Experience</b>	<b>Essential Questions*</b> (for conceptual benchmarks)	<b>Benchmarks</b> ( <b>Bolded</b> sections indicate portion of benchmark addressed. IAF stands for <i>Illinois Assessment Framework</i> . NSES stands for National Science Education Standards.)	<b>Formative and Summative Assessments</b> (Unless noted as a Summative Assessment, the assessments are formative and should be used to guide teaching and learning.)	<b>Using Assessments to Monitor and Facilitate Student Learning</b>
<p><b>Pre-Assessment</b></p> <p><b>Pacing Suggestions:</b> 1 to 2 days</p> <p><b>Teacher Resources:</b></p> 	<p>How do the parts of an animal relate to its needs and habitat?</p> <p>How do the skeletal and muscular systems work together to create movement?</p>	<p>IAF(12.7.02): <b>Understand that animals have parts well suited to the places they live in and to their needs.</b> For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal, which lives in that environment.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><b>Formal Pre-assessment:</b> Use teacher-generated pre-assessment available under “Teacher Resources” on electronic blueprint in place of one in Teacher’s Guide</p>	<p>See teacher-generated answer key available under “Teacher Resources” on electronic blueprint</p>


\*Essential questions are major questions driving the unit of study. They are directly aligned with the benchmarks. Generally, no one lesson addresses a question in its entirety. By the end of the unit, students should be able to answer these core questions.


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<p><b>#1: The Mysterious Object</b></p> <p><b>Pacing Suggestions:</b> 1 day</p> <p><b>Teacher Resources:</b></p> 	<p>What are “scientific investigations”?</p>	<p>1B(3-5)#1: Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments. Investigations can focus on physical, biological, and social questions.</p>	<p>During the introduction of lesson or end of lesson, ask students if the activity is a “scientific investigation.”</p> <p><i>Note: This benchmark is not addressed in the lesson as written in the Teacher’s Guide. The teacher must deliberately address the benchmark. Throughout the unit, the teacher may need to reinforce the idea that the work the students are doing in the unit are considered scientific investigations.</i></p>	<p>Listen to students’ responses to determine their conceptions of scientific investigations. Do they recognize observational work of specimens constitutes scientific investigations? Do they believe a controlled experiment is the only type of scientific investigation?</p>
		<p>12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later.</p> <p>12D(3-5)#3: Use numerical data in describing and comparing objects and events.</p> <p>1B(3-5)#3: Scientists’ explanations about what happens in the world come partly from what they observe, partly from what they think. Sometimes scientists have different explanations for the same set of observations. That usually leads to their making more observations to resolve the differences.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	<p>Students’ observations of the “mystery object” (owl pellet) and inferences about the identify of the “mystery object” (See <i>Exploring and Discovering</i> on page 18 in Teacher’s Guide. Also, see <i>Student Science Notebooks</i> on page 15 in Teacher’s Guide for background information on keeping student science notebooks.)</p> <p>Class discussion and completion of <i>The Mystery Object</i> chart (See <i>Processing for Meaning</i> on page 18 in Teacher’s Guide)</p>	<p>Student Observations</p> <ul style="list-style-type: none"> <li>• Do students make clear, understandable observations?</li> <li>• Do the students organize the notebook entry so it is understandable at a later date? For example, do they title and date the entry?</li> <li>• Do students clearly identify their inferences as a guesses and keep them separate from their observations?</li> </ul> <p>Class Discussion and Chart</p> <ul style="list-style-type: none"> <li>• Do students support their inferences with observations made of the mystery object?</li> </ul>


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<p><b>#2: The Clues</b></p> <p><b>Pacing Suggestions:</b>  <b>Days 1 and 2</b>– <i>Getting Started and Exploring and Discovering</i> (pages 28 &amp; 29)  <b>Days 3 and 4</b>– <i>Processing for Meaning</i> (pages 29 &amp; 30)</p> <p><b>Teacher Resources:</b></p> 		<p>12D(3-5)#2: Make sketches to aid in [describing observations and] explaining procedures or ideas.</p> <p>12D(3-5)#3: Use numerical data in describing and comparing objects and events.</p> <p>12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	<p>Student notebooks containing sketches, observations, and inferences for each bone group they establish.</p> <p>Student notebook entry about the mystery object, “<i>Thoughts about Our Bones</i>” (See <i>Processing for Meaning</i> on page 29 in Teacher’s Guide)</p>	<p>Bone Groups</p> <ul style="list-style-type: none"> <li>• Do they make a sketch that accurately portrays the features of the object?</li> <li>• Do they make clear and understandable observations?</li> <li>• Do students include quantitative observations?</li> <li>• Do they make inferences supported by observations and prior knowledge?</li> <li>• Suggestion: Have students use the <i>Lab Observations and Inferences</i> rubric available under “Teacher Resources” on the electronic blueprint to self-assess their work. The same rubric will be used in Lesson 3 to formally assess the students’ work. An extra day has been added to the lesson pacing to allow for thorough reflection and discussion</li> </ul> <p>“<i>Thoughts about Our Bones</i>” notebook entry</p> <ul style="list-style-type: none"> <li>• Are students developing logical explanations about where the bones came from?</li> <li>• Can they use the evidence from the activity to make inferences?</li> </ul>

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<p><b>#3: Mystery Bones</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1</b> – <i>Getting Started and Exploring and Discovering</i> (pages 39 &amp; 40)  <b>Day 2 and 3</b> – <i>Processing for Meaning</i> (page 40)</p> <p><b>Teacher Resources:</b></p> 	<p>How do the parts of an animal relate to its needs and habitat?</p>	<p>12D(3-5)#2: Make sketches to aid in [describing observations] and explaining procedures or ideas.</p> <p>12D(3-5)#3: Use numerical data in describing and comparing objects and events.</p> <p>IAF (12.7.02): <b>Understand that animals have parts well suited to the places they live in and to their needs.</b> For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal that lives in that environment.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p> <p>12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later.</p>	<p><b>Formal Assessment:</b> Student sketches, observations, and inferences of mystery bone (<i>Mystery Bones</i> Student Notebook Page on page 43 in Teacher’s Guide)</p>	<p>Use the <i>Lab Observations and Inferences</i> rubric available under “Teacher Resources” on the electronic blueprint</p>


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<p><b>#4: Human Bones</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1</b> – <i>Getting Started</i> and <i>Exploring and Discovering</i> (pages 47 &amp; 48)  <b>Days 2 &amp; 3</b> – <i>Processing for Meaning</i> (pages 49 &amp; 50)  <b>Day 4</b> – Read <i>The Search for the Missing Bones</i> (The book is contained in the book bag provided with the kit.)</p> <p><b>Teacher Resources:</b>  </p>	<p>How do the parts of an animal relate to its needs and habitat?</p>	<p>IAF (12.7.02): <b>Understand that animals have parts well suited</b> to the places they live in and <b>to their needs</b>. For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal that lives in that environment.</p>	<p>Teacher observations of student discussions while they are making their drawings and student comments during whole class discussion (See <i>Exploring and Discovering</i> on page 48.)</p>	<p>As students are trying to determine where bones exist and their shape, do they discuss and relate the function with the location and shape of the bones? (Example: When discussing the foot, do they discuss movement of the foot, which requires multiple bones rather than one large, flat one across the entire foot.)</p>


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<p><b>#5: Major Bone Groups</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1</b> –  <i>Session 1</i> (pages 61 &amp; 62)  <b>Days 2 &amp; 3</b> –  <i>Session 2</i> (pages 63 &amp; 64)  <b>Day 4</b> –            Use <i>Eyewitness</i> book and discuss/correct misconceptions on class chart</p> <p><b>Teacher Resources:</b></p> 	<p>How do the parts of an animal relate to its needs and habitat?</p>	<p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another. IAF (12.7.02): <b>Understand that animals have parts well suited to the places they live in and to their needs.</b> For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal that lives in that environment.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	<p><b>Formal Assessment:</b> <i>Science Notebook Page Major Bone Groups</i> sheet (page 65) and teacher-generated <i>Bone Groups &amp; Functions</i> sheet (Use <i>Bone Groups &amp; Functions</i> sheet available under “Teacher Resources” on electronic blueprint in place of student sheet on page 67.)</p>	<ul style="list-style-type: none"> <li>• Can students locate the six major bone groups in the outline of the human body?</li> <li>• Do students have accurate ideas about the functions of the six major bone groups?</li> <li>• Are student ideas supported by observations?</li> </ul>


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<p><b>Major Bone Groups Assessment</b></p> <p><b>Pacing Suggestions:</b> 1 day plus time to go over assessment with class</p> <p><b>Teacher Resources:</b></p> 	<p>How do the parts of an animal relate to its needs?</p>	<p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p> <p>IAF (12.7.02): <b>Understand that animals have parts well suited to the places they live in and to their needs.</b> For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal that lives in that environment.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	<p><b>Formal Assessment:</b> Use teacher-generated <i>Major Bone Groups Assessment</i>, which is available under “Teacher Resources” on the electronic blueprint</p>	<p>Use rubric available under “Teacher Resources” on electronic blueprint</p>



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<p><b>#6: Mystery Bone Groups</b></p> <p><b>Pacing Suggestions:</b> <b>Day 1</b> – <i>Getting Started</i> (page 83) and discussion on classification (see Tips &amp; first section of <i>Exploring and Discovering</i> on page 84) <b>Day 2</b> – <i>Exploring and Discovering</i> (pages 84 &amp; 84)</p> <p><b>Teacher Resources:</b> </p>	<p>How are systems within a human like systems in an animal?</p>	<p>6A(6-8)#1: <b>Like other animals, human beings have body systems</b> for obtaining and providing energy, defense, reproduction, and the coordination of body functions. 5A(3-5)#2 Features used for grouping depend on the purpose of the grouping.</p>	<p>Student notebook entry “Comparing Bones” and class discussion. (See page 83 in teacher’s guide.)</p> <p>Completion of groupings of mystery object bones according to bone groups.</p> <p><i>Possible Journal Prompt: In Lesson 2 you divided your bones up into groups. If you are trying to put a skeleton together, are the groupings you made in Lesson 2 or today better? Why?</i></p>	<p>Can they compare and contrast human bones with other animal bones?</p> <ul style="list-style-type: none"> <li>• Can students apply knowledge from the study of human bones to classify bones from their mystery object?</li> <li>• Do students recognize the benefit of grouping the bones by “bone groups” rather than size or shape?</li> </ul>






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<p><b>#7: Teeth and Jaws</b></p> <p><b>Pacing Suggestions:</b> <b>Day 1</b> – Session 1 (pages 89-91) <b>Days 2 &amp; 3</b> – Session 2 (pages 91 -93)</p> <p><b>Teacher Resources:</b></p> 	<p>How do the parts of an animal relate to its needs and habitat?</p>	<p>IAF(12.7.02): <b>Understand that animals have parts well suited</b> to the places they live in and <b>to their needs</b>. For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal that lives in that environment.</p> <p>5A(3-5)#2 Features used for grouping depend on the purpose of the grouping</p>	<p>Student Venn Diagrams and class construction of Venn Diagram (See <i>Exploring and Discovering</i> on page 91 and <i>Processing for Meaning</i> on page 92.)</p>	<ul style="list-style-type: none"> <li>• Are students able to use the features of the teeth (size and placement) to make reasonable inferences about whether the animal is an omnivore, herbivore, or carnivore?</li> <li>• When discussing types of teeth and <i>Science Notebook Page—Teeth and Jaws</i>, do students understand the teeth are grouped according to structure and function?</li> </ul>


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<p><b>#8: Mystery Teeth</b></p> <p><b>Pacing Suggestions:</b> 1 to 2 days</p> <p><b>Teacher Resources:</b></p> 	<p>How do the parts of an animal relate to its needs and habitat?</p>	<p>IAF(12.7.02): <b>Understand that animals have parts well suited</b> to the places they live in and <b>to their needs</b>. For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal that lives in that environment.</p> <p>12D(3-5)#2: Make sketches to aid in [describing observations] and explaining procedures or ideas.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	<p><b>Formal Assessment:</b> <i>Science Notebook Page—Mystery Teeth</i> (See page 109 in Teacher’s Guide. Use teacher-generated “Lab Observations and Inferences Rubric” available under “Teacher Resources” on the electronic blueprint.)</p>	<ul style="list-style-type: none"> <li>• Can students identify and classify the teeth in their mystery bones?</li> <li>• Do students draw sketches with enough detail so one can reasonably identify the type of teeth found in the owl pellet?</li> <li>• Can students make inferences based on evidence about whether the mystery bones belonged to a carnivore, omnivore, or herbivore?</li> </ul>


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<p><b>#9: Comparing Animal Skeletons</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1</b> – <i>Getting Started and Exploring and Discovering</i> on pages 113 and 114 in Teacher’s Guide  <b>Day 2</b> – <i>Processing for Meaning</i> on pages 114 and 115 in Teacher’s Guide  <b>Day 3</b> – Session Two on pages 115 and 116 in Teacher’s Guide</p> <p><b>Teacher Resources:</b>  </p>	<p>How do the parts of an animal relate to its needs and habitat?</p>	<p>IAF(12.7.02): <b>Understand that animals have parts well suited to the places they live in and to their needs.</b> For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal, which lives in that environment.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p> <p>12C(3-5)#3: Keep a notebook that describes observations made, <b>carefully distinguishes actual observations from ideas and speculations about what was observed</b>, and is understandable weeks or months later.</p>	<p><b>Formal Assessment:</b> <i>Group Recording Sheet—Comparing Animal Skeletons</i> sheet and group sharing/reporting out to whole class about individual skeletons (Use teacher-generated “Lab Observations and Inferences Rubric” available under “Teacher Resources” on the electronic blueprint. See <i>Processing for Meaning</i> on page 116 and page 119 for copy of recording sheet.)</p>	<ul style="list-style-type: none"> <li>• Do students make only observations for the first question on the sheet? (The special features of this skeleton are...)</li> <li>• Do students make reasonable inferences about the way an animal moves, the kind of food it eats, and how it behaves in its habitat based on prior knowledge and observations of the skeleton cards? <ul style="list-style-type: none"> <li>○ Do students use evidence to support their inferences?</li> <li>○ Do students connect the structure of the animal to its needs (what it eats and how it moves)?</li> </ul> </li> </ul>

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<p><b>Animal Skeletons Assessment</b></p> <p><b>Pacing Suggestions:</b> 1 day plus time to discuss completed assessment once graded</p> <p><b>Teacher Resources:</b> </p>	<p>How do the parts of an animal relate to its needs and habitat?</p>	<p>IAF(12.7.02): <b>Understand that animals have parts well suited to the places they live in and to their needs.</b> For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal, which lives in that environment.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	<p><b>Summative Assessment:</b> Use teacher-generated pre-assessment available under “Teacher Resources” on electronic blueprint in place of one in Teacher’s Guide</p> <p>Note: The assessment is the first question on the pre-assessment.</p>	<p>See teacher-generated answer key available under “Teacher Resources” on electronic blueprint</p>
<p><b>#10: Types of Joints</b></p> <p><b>Pacing Suggestions:</b> <b>Days 1/2</b> – Session 1 <b>Days 2/3</b> – Session 2</p> <p><b>Teacher Resources:</b> </p>	/	<p>No benchmarks—lesson is foundational to subsequent lessons.</p>	/	/


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<p><b>#11: Human Bones Revisited</b></p> <p><b>Pacing Suggestions:</b> Day 1 – Entire lesson</p> <p><b>Teacher Resources:</b></p> 	<p>How do the skeletal and muscular systems work together to create movement?</p>	<p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><i>Science Notebook Page—Human Bones Revised</i> (See page 151 for copy of sheet.)</p> <p>Student self-reflection about learning thus far in this module (See <i>Processing for Meaning</i> on pages 149 &amp; 150.)</p>	<ul style="list-style-type: none"> <li>• Do students’ drawings include the major bone groups?</li> <li>• Do students place the bones in appropriate positions?</li> <li>• Do students’ drawings include some type of notation for joints? (Do the drawings show bones connected or are the bones all “floating” with the body?) <i>Note: This last bullet is critical because students should be building their understanding that the bones are part of a system that works together for movement. This point should be revealed in the students’ reflection.</i></li> </ul>
<p><b>#12: Movement</b></p> <p><b>Pacing Suggestions:</b> 1 to 2 days</p> <p><b>Teacher Resources:</b></p> 	<p>How do the skeletal and muscular systems work together to create movement?</p>	<p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><i>Science Notebook Page—Movement</i> (See page 161 for copy of sheet.)</p>	<p>Do students’ drawings show evidence of a beginning understanding of how the muscles (and tendons and ligaments) work with bones to facilitate movement at joints?</p>

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<p><b>#13: Chicken Wing Dissection</b></p> <p><b>Pacing Suggestions:</b> <b>Day 1</b> – Entire lesson (plan extended time)</p> <p><b>Teacher Resources:</b></p> 	<p>How do the skeletal and muscular systems work together to create movement?</p>	<p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p>Teacher observation/questioning during chicken wing dissection</p> <p>Class discussion of dissection activity (See <i>Processing for Meaning</i> on page 167.)</p>	<p>Are students able to find bones, muscles, and joints (and tendons and ligaments) in the chicken wing?</p> <p>Can students explain how the bones and muscles (and tendons and ligaments) work as a system to facilitate movement of the chicken wing?</p>
<p><b>#14: Living Bone</b></p> <p><b>SKIP LESSON</b></p>	/	<p>Lesson does not align to the benchmarks and addresses the complex topic of living and non-living things.</p>	/	/


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<p><b>#15: Amateur Zoologist</b></p> <p><b>Pacing Suggestions:</b> ~ 2 days — Recreating skeleton <b>1 day</b> – <i>Processing for Meaning</i></p> <p><b>Teacher Resources:</b> </p>		<p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p> <p>12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later.</p>	<p>Group/pair presentations of inferences about their skeleton (See <i>Processing for Meaning</i> on page 188.)</p> <p><i>Note: Assembling skeletons from owl pellet bones provides some closure to the students' work with the owl pellets. It also provides them authentic reasons for keeping an organized binder, which they should refer back to as they try to piece the bones together. Group presentations provide students an opportunity to share their inferences and offer reasons for their thoughts. However, the lesson does not contain any content benchmarks and can become very long if allowed to do so. Student can become very elaborate in their construction of skeletons. We are not trying to have experts in reconstruction of skeletons.</i></p>	<p>Do students provide reasonable inferences that can be backed-up by prior knowledge and physical evidence?</p>


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<p><b>End-of-Unit Assessment (Bones and Skeleton Module)</b></p> <p><b>Pacing Suggestions:</b> 1 day</p> <p><b>Teacher Resources:</b></p> 	<p>How do the parts of an animal relate to its needs and habitat?</p> <p>How do the skeletal and muscular systems work together to create movement?</p>	<p>IAF(12.7.02): <b>Understand that animals have parts well suited to the places they live in and to their needs.</b> For example, rabbits radiate heat through their ears, and those living in hotter climates have larger ears to radiate heat more efficiently. Thus, given a list of animals, one of which is clearly better adapted to a given environment, understand that that is the animal, which lives in that environment.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	<p><b>Summative End-of-Unit Assessment</b> (Use teacher-generated assessment. The assessment is the second question on the pre-assessment.)</p>	<p>See teacher-generated rubric available on the electronic blueprint</p>





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<p><b><u>HUMAN BODY SYSTEMS</u></b></p> <p><b>Pre-Unit Assessment</b></p> <p><b>Pacing Suggestions:</b> 1 day</p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>How do the respiratory and circulatory systems work together to get oxygen to the cells?</p>	<p>6C(3-5)#1: From food, people obtain energy and materials for body repair and growth. The undigestible parts of food are eliminated.</p> <p><b>6C(6-8)#3: To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</b></p> <p>Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p>Pre-Unit Assessment (See pages 5-11 in Teacher' Guide.)</p>	<p>See pages 2-4 in Teacher's Guide.</p>


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<b><u>Throughout the Unit</u></b>		<p>12D(3-5)#2: Make sketches to aid in explaining procedures or ideas.</p> <p>12D(3-5)#3: Use numerical data in describing and comparing objects and events.</p> <p>11B(3-5)#2: Geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories can be used to represent objects, events, and processes in the real world, although such representations can never be exact in every detail.</p> <p>12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later.</p> <p>12A(3-5)#2: Offer reasons for their findings and consider reasons suggested by others.</p>	The following skills are addressed throughout the unit. Evidence of learning should be observed through classroom conversations and students' science notebooks/binders.	<ul style="list-style-type: none"> <li>• Learning Experience 5 is the best place for examining students' ability to make reasonable sketches. Since this is a skill that has been addressed throughout the year (and previous years), students should be able to produce a detailed, understandable sketch.</li> <li>• Students specifically examine and analyze data in Lessons 4 and 8.</li> <li>• Similar to the Astronomy Unit, this unit utilizes many models. <u>Each time a model is used, students should carefully consider the strengths and limitations of the model.</u> Students should be able to reflect independently and share with the class.</li> <li>• Many lessons require students to think about the function or role of various organs and systems. Students should be consistently required to back-up their ideas.</li> </ul>


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<p><b>#1: What Does Your Body Do?</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1</b> – <i>Getting Started</i> (page 18) and <i>Exploring and Discovering</i> (Page 19)  <b>Day 2</b> – <i>Processing for Meaning</i> (Pages 20 to 22)</p> <p><b>Note advanced preparation page 14.</b></p> <p><b>Teacher Resources:</b></p> 		<p>The lesson is foundational to future lessons.</p>		

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<p><b>#2: What Do I Already Know?</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1-</b>  <i>Getting Started</i> (pages 32 &amp; 33) and <i>Exploring and Discovering</i> (Pages 33 to 35)  <b>Day 2 –</b>  <i>Processing for Meaning</i> (Pages 35 &amp; 36)            Omit <i>Session Two</i></p> <p><b>Note advanced preparation page 30.</b></p> <p><b>Teacher Resources:</b></p> 		<p>The lesson is foundational to future lessons.</p>		


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<p><b>#3: What Are Cells?</b></p> <p><b>Pacing Suggestion:</b>  <b>Day 1</b> – <i>Getting Started</i> (Pages 54 to 56)  <b>Day 2</b> – View slides of cells and <i>Processing for Meaning</i> (Pages 61 and 62)</p> <p>*Note: You will be using a revised lesson. See “Teacher Tips” for additional information.</p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>How do the respiratory and circulatory systems work together to get oxygen to the cells?</p> <p>What is the smallest structure that carries on the functions (circulation, digestion and respiration) of life?</p>	<p>Introduces 5C(6-8)#1: All living things are composed of cells, from just one to many millions, whose details usually are visible only through a microscope. Different body tissues and organs are made up of different kinds of cells. The cells in similar tissues and organs in other animals are similar to those in human beings but differ somewhat from cells found in plants.</p> <p>Introduces 5C(6-8)#3: Within cells, many of the basic functions of organisms—such as extracting energy from food and getting rid of waste—are carried out. The way in which cells function is similar in all living organisms.</p>	<p><i>Getting Started</i> class discussion and creation of <i>Our Human Body</i> chart of <u>needs</u> (See pages 54 and 55 in Teacher’s Guide.)</p> <p><i>Processing for Meaning</i> discussion questions on page 62</p>	<ul style="list-style-type: none"> <li>• Do students show an understanding that all living things, including the human body, are made up of cells?</li> <li>• Do students understand that the cell is the smallest structure of life?</li> </ul>


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<p><b>#4: Blood and Heart</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1</b> – <i>Observation</i>            Sheep’s Heart  <b>Day 2</b> – <i>Learning Stations</i> (bullet 3 on page 76)  <b>Day 3</b> – <i>Processing for Meaning</i></p> <p><b>Note advanced preparation for stations page 76.</b></p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?            How do the respiratory and circulatory systems work together to get oxygen to the cells?</p> <p>What does the circulatory system do?            How does it work?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del>            Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> <b>The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</b></p> <p>12D(3-5)#3: Use numerical data in describing and comparing objects and events.</p>	<p><i>Getting Started</i> class discussion pages 78 to 79. You will return to “What we want to find out” column of the “How my body works” chart.</p> <p><i>Heart Outline</i>, described on page 81 as an individual assessment</p> <p>Class discussion of the what the students learned while moving through investigation stations (<i>Processing for Meaning</i> pages 81 to 83)</p>	<ul style="list-style-type: none"> <li>• Do students understand cells come together to form specialized tissues that work together to perform a certain function?</li> <li>• Are students beginning to understand that supplies needed by the cells are carried through the body by the blood?</li> <li>• Are students able to see that the structure of the heart allows is to pump blood throughout the body?</li> <li>• Are students able to use the numerical data collected to identify relationships between heart rate and pulse rate?</li> </ul>


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<p><b>#5: The Transportation System</b></p> <p><b>Pacing Suggestions:</b>  <b>Day 1</b> – Session 1: <i>Getting Started and Exploring and Discovering</i> (Pages 106 to 108)  <b>Day 2</b> – Session 2: <i>Processing for Meaning</i> (Pages 108 to 109)</p> <p><b>Note advanced preparation page 104.</b></p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>What does the circulatory system do? How does it work?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> <b>The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</b></p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p> <p>12D(3-5)#2: Make sketches to aid in [describing observations and] explaining procedures or ideas.</p>	<p>Guiding questions on page 106, <i>Getting Started</i>. Note that you will not discuss the research mentioned on pages 106 and 107, as the students did not complete this portion of learning experience two.</p> <p>Discussion of the <i>Science Notebook Pages, Transportation System</i> (pages 115 to 121) in Session 2: <i>Processing for Meaning</i> (pages 108 to 109). These will assess what the students know and do not know about the circulatory system. The initial emphasis does not focus on the <b>correct answer</b> necessarily, but the ideas the students have concerning the circulatory system. They will have the opportunity to check their ideas with resources.</p> <p>Reflection questions on page 112 will help to assess what the students have learned in this lesson.</p>	<ul style="list-style-type: none"> <li>• Do students understand the functions of the circulatory system?</li> <li>• Do students understand how the structures of the circulatory system (arteries, veins and capillaries) have different jobs, but that all the structures are required to carry out the functions of the circulatory system?</li> <li>• Do students understand that the supplies needed by the body are carried to body cells by the blood?</li> <li>• Are students' illustrations detailed and labeled?</li> </ul>


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<p><b>The Circulatory System Assessment</b></p> <p><b>Teacher Resources:</b></p> 	<p>What does the circulatory system do? How does it work?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> <b>The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</b></p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p>Use the teacher-generated assessment <i>The Circulatory System Assessment</i>, which is available on the electronic blueprint.</p>	<p>Use the rubric available on the electronic blueprint.</p>





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<p><b>#6: Food and Fuel</b></p> <p><b>Pacing Suggestions:</b> <b>Days 1 to 2</b> - <i>Getting Started</i> and <i>Exploring and Discovering</i> (Pages 131 to 135) <b>Day 3</b> - <i>Processing for Meaning</i> (Pages 135 and 136)</p> <p><b>Note advanced preparation on page 130.</b></p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>What does the digestive system do? How does it work?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p>Class discussion based on questions such as those outlined in <i>Getting Started</i> (page 131)</p> <p>Notebook entry that describes, in words or illustrations, what students understand about peristalsis (page 133)</p> <p><i>Processing for Meaning:</i> Detailed description of a pea's trip through the digestive system recorded in science notebook (page 136)</p>	<ul style="list-style-type: none"> <li>• Do students understand that food is moved through the digestive system rather than pulled down by gravity or that it does not just fall through the digestive tract?</li> <li>• Do students understand that peristalsis is the process that moves food through the digestive system?</li> <li>• Are students able to describe the path of food through the digestive system?</li> </ul>


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<p><b>#7: What Happens in Digestion?</b>  <b>Pacing:</b>            Day 1 – Session 1 (Pages 155 to 157).            Day 2 – Session 2 (Pages 157 to 158).            Day 3 – <i>Processing for Meaning</i> (Pages 158 to 159).</p> <p><b>Note advanced preparation page 154.</b></p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>How is food turned into substances that can be used by the cell?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen for the <del>combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>6C(6-8)#2: For the body to use food for energy and building materials, the food must first be digested into molecules that are absorbed and transported to cells.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><i>Getting Started</i> – Journal Prompt: How does food get small enough for the cells to use? This will give students the opportunity to share what they know or do not know about the breakdown of food.</p> <p><i>Science Notebook Page A – What happens in the Digestive System? Breaking Down the Food</i> (page 163)</p> <p><i>Science Notebook Page B</i> – Student conclusions about what happened to the starch (page 165)</p> <p>Refer back to <i>How My Body Works</i> chart to add any new questions or statements</p>	<ul style="list-style-type: none"> <li>• Are students able to identify that food is broken down chemically as well as mechanically?</li> <li>• Do students understand that both chemical and mechanical breakdown occur throughout the digestive system?</li> <li>• Do students understand the role of enzymes in chemical digestion?</li> </ul>


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<p><b>The Digestive System Assessment (Part 1)</b></p> <p><b>Teacher Resources:</b></p> 	<p>What does the digestive system do? How does it work?</p> <p>How is food turned into substances that can be used by the cell?</p>	<p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p> <p><b>6C(6-8)#2:</b> For the body to use food for energy and building materials, the food must first be digested into molecules that are absorbed and transported to cells.</p>	<p>Use the teacher-generated assessment <i>The Digestive System Assessment (Part 1)</i>, which is available on the electronic blueprint.</p>	<p>Use the rubric available on the electronic blueprint.</p>

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<p><b>#8: How Does Food Get Out? Pacing:</b> Day 1 – Session 1: *including experimental set up (Pages 179 to 182) Day 2 – Session 2: <i>Exploring and Discovering</i> (Page 182) Day 3 – Session 2: <i>Processing for Meaning</i> (Page 182 to 184)</p> <p><b>Note Advanced Preparation page 178.</b></p> <p><b>Teacher Resources:</b> </p>	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>How is food turned into substances that can be used by the cell?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>6C(6-8)#2: For the body to use food for energy and building materials, the food must first be digested into molecules that are absorbed and transported to cells.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><i>Getting Started</i> discussion based on questions outlined on page 179. This will help to assess what the students know about the process of digestion.</p> <p>Students can begin to make connections between the systems as they add to the <i>Body Outline</i> page 179 and 180.</p> <p><i>Science Notebook Page: How does the Food Get Out?</i> on page 191 of TE</p> <p><i>Processing for Meaning</i> discussion pages 182 to 184</p>	<ul style="list-style-type: none"> <li>• Can students explain the process by which substances move through a membrane?</li> <li>• Do students understand that the food needed by the body cells is transported in the circulatory system?</li> </ul>


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<p><b>The Digestive System Assessment (Part 2)</b></p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen for the <del>combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>6C(6-8)#2: For the body to use food for energy and building materials, the food must first be digested into molecules that are absorbed and transported to cells.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p>Use the teacher-generated assessment <i>The Digestive System Assessment</i>, which is available on the electronic blueprint.</p>	<p>Use the rubric available on the electronic blueprint.</p>


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<p><b>#9: Breathing Pacing:</b> Day 1 – Session 1: <i>Getting Started</i> and <i>Exploring and Discovering</i> (Pages 196 to 197) Day 2 – Session 2: <i>Processing for Meaning</i> (Pages 197 to 199) *Stop at <i>Mathematical Thinking</i> on page 199. Day 3 – Complete Session 2 (Pages 199 to 201) Begin with <i>Mathematical Thinking</i> on page 199.</p> <p><b>See advanced preparation on page 194.</b></p> <p><b>Teacher Resources:</b> </p>	<p>How do the respiratory and circulatory systems work together to get oxygen to the cells?</p> <p>How do cells throughout the body get oxygen needed for life?</p> <p>What does the respiratory system do? How does it work?</p>	<p>6A(6-8)#1: Like other animals, human beings have body systems for obtaining and providing energy, defense, reproduction, and the coordination of the body functions.</p> <p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>6C(3-5)#2: By breathing, people take in oxygen they need to live.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><i>Getting Started</i> discussion driven by questions on page 196 will help to identify what students know and don't know about the respiratory system.</p> <p>Journal Entry: <i>What might cause an individual to have a faster breathing rate? A slower one? What are some reasons a person might be able to breathe a large amount of air?</i></p>	<ul style="list-style-type: none"> <li>• Do students understand how the parts of the respiratory system work together to supply the body with oxygen?</li> <li>• Can students explain how air gets into the body?</li> <li>• Are students able to connect the respiratory system to the circulatory system?</li> </ul>

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<p><b>#10: Getting the Most Out of Your Air and Food</b></p> <p><b>Pacing:</b> Day 1 – Session 1: <i>Getting Started and Exploring and Discovering</i> (Pages 223 to 225) Day 2 – Session 2: <i>Processing for Meaning</i> (pages 225 to 227) Stop at <i>Science and Literacy</i> on page 227. Day 3 – Complete Session 2</p> <p>See advanced preparation on page 222.</p> <p><b>Teacher Resources:</b></p> 	<p>How do the respiratory and circulatory systems work together to get oxygen to the cells?</p> <p>How do cells throughout the body get food and oxygen needed for life?</p>	<p>6C(6-8)#2: For the body to use food for energy and building materials, the food must first be digested into molecules that are absorbed and transported by cells.</p> <p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><i>Getting Started</i> discussion can help to determine what the students do know and do not know about the body’s need for oxygen (pages 223 and 224).</p> <p><i>Processing for Meaning</i> questions on page 227 where students are required use their data from the investigation to support their answers to the questions</p> <p>“Challenge students . . . “ questions on page 228</p>	<ul style="list-style-type: none"> <li>• Do students understand the concept of surface area and its importance in the body’s systems?</li> <li>• Do students understand the role of the process of diffusion in obtaining food and oxygen?</li> </ul>

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<p><b>The Respiratory System Assessment</b></p> <p><b>Teacher Resources:</b></p> 	<p>How do the respiratory and circulatory systems work together to get oxygen to the cells?</p> <p>How do cells throughout the body get food and oxygen needed for life?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p>Use the teacher-generated assessment <i>The Circulatory System Assessment</i>, which is available on the electronic blueprint.</p>	<p>Use the rubric available on the electronic blueprint.</p>



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<p><b>#11: What Goes in Must Come Out</b></p> <p><b>Pacing:</b> Day 1 – <i>Getting Started</i> and <i>Exploring and Discovering</i> (Pages 235 to 238) Day 2 – <i>Processing for Meaning</i> (Pages 238 and 239)</p> <p>*Consider children’s book for writing class.</p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>How do the respiratory and circulatory systems work together to get oxygen to the cells?</p>	<p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen for the <del>combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p><i>Getting Started</i> discussion that returns to the <i>How My Body Works</i> chart (page 235)</p> <p><i>Processing Meaning</i> discussion (pages 238 and 239)</p>	<ul style="list-style-type: none"> <li>• Do students define a body system as a group of organs that work together?</li> <li>• Do students understand the interconnectedness of the circulatory, digestive and respiratory systems?</li> </ul>
<p><b>#12: SKIP LESSON</b></p>				
<p><b>#13: SKIP LESSON</b></p>				

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<p><b>End-of-Unit Assessment</b></p> <p><b>Teacher Resources:</b></p> 	<p>How do the digestive and circulatory systems work together to get nutrients (food) to the cells?</p> <p>How do the respiratory and circulatory systems work together to get oxygen to the cells?</p>	<p>6C(6-8)#2: For the body to use food for energy and building materials, the food must first be digested into molecules that are absorbed and transported by cells.</p> <p>6C(6-8)#3: <del>To burn food for the release of energy stored in it, oxygen must be supplied to the cells, and carbon dioxide removed.</del> Lungs take in oxygen <del>for the combustion of food</del> and they eliminate the carbon dioxide. <del>The urinary system disposes of dissolved waste molecules,</del> the intestinal tract removes solid wastes, <del>and the skin and lungs rid the body of heat energy.</del> The circulatory system moves all these substances to or from cells where they are needed or produced, responding to changing demands.</p> <p>NSES (5-8): The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease. The systems interact with one another.</p>	<p>Use teacher-generated assessment available on the electronic blueprint.</p>	<p>Use the rubric available on the electronic blueprint.</p>