Grade 5 Life Science Unit (5.L.1)

Decision 1: What will students learn in this unit?

Standards Addressed:
1. Science: 5.L.1 Understand how structures and systems of organisms (to include the human body) perform functions necessary for life.
2. Reading Informational Text: RI.5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
3. Math
4. Writing 5.W.7
5. Technology
6. Other

What do I want my students to KNOW, UNDERSTAND and be able to DO at the end of this unit?

<table>
<thead>
<tr>
<th>Know</th>
<th>Understand</th>
<th>Do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Essential Vocabulary:</strong> single cell multi-cellular organisms</td>
<td>Why some organisms are capable of surviving as a single cell, while others require many cells that are specialized to survive. The major systems of the human body (i.e., digestive, respiratory, circulatory, muscular, skeletal, and cardiovascular) in terms of their functions necessary for life.</td>
<td>Explain why some organisms are capable of surviving as a single cell while others require many cells that are specialized to survive. Compare the major systems of the human body (i.e., digestive, respiratory, circulatory, muscular, skeletal, and cardiovascular) in terms of their functions necessary for life.</td>
</tr>
<tr>
<td>Circulatory System heart, blood, vessels</td>
<td></td>
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<tr>
<td>Respiratory System nose, trachea, lungs</td>
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<td></td>
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<tr>
<td>Skeletal System bones</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscular System muscles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digestive System mouth, esophagus, stomach, intestines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous System brain, spinal cord, nerves</td>
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</tbody>
</table>
Decision 2: Assessment

Plan for how students will indicate learning and understanding of the concepts in the unit. How will you assess learning?

Possibilities/options:
- Pre-assessment
- Short answer tests or quizzes
- Student logs, journals and informal writing
- Lab activities
- Formal writing assignments
- Informal or formal student Interviews, conferences, observations etc.

Pre-assessment using ClassScape, science notebooks/journals as a formative assessment, informal discussion, quizzes, culminating activity including rubric __________________________
______________________________________________________________
______________________________________________________________

Describe the performance, product, or project that will be the culminating activity for the unit.

The student’s assignment for the Culminating Activity includes:

- **Unit** essential question or “I Can” statement for the culminating activity.
- A thorough description of the activity including steps or task analysis in completing the culminating activity.
- A copy(ies) of the rubric(s) you will use to assess the culminating activity or any other aspects of the unit.

**Task:**

**Rubric:**
Decision 2: Assessments – Rubric Reminders:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>1</th>
<th>2</th>
<th>3 (Proficient)</th>
<th>4</th>
</tr>
</thead>
</table>

What does each number or adjective in your scale mean?
**Decision 3: Student Learning Map**

**Key Learning Targets:**

<table>
<thead>
<tr>
<th>Concept:</th>
<th>Concept:</th>
<th>Concept:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Cell and Multi-cellular Organisms 5.L.1.1</td>
<td>Specialized Functions of Multi-cell Organisms 5.L.1.1</td>
<td>Body Systems 5.L.1.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lesson EQ(s):</th>
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</tr>
</thead>
<tbody>
<tr>
<td>How do I distinguish between single-cell and multi-cellular organisms?</td>
<td>How do I describe the specialized functions of multi-cellular organisms?</td>
<td>What are the major body systems, their major parts, and their functions?</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Vocabulary:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>single cell multi-cellular organisms complex organisms specialized algae bacteria amoeba</td>
<td>blood cells</td>
<td>circulatory system cardiac muscles oxygen carbon dioxide arteries capillaries veins heart blood respiratory system trachea lungs diaphragm digestive system esophagus stomach intestines bone marrow red blood cells white blood cells joints</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Concept:</th>
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<th>Concept:</th>
</tr>
</thead>
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<tr>
<td>Interdependency L.5.1.2</td>
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<th>Lesson EQ(s):</th>
</tr>
</thead>
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<td>How do the body systems work together?</td>
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<tr>
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<tr>
<td>interdependent</td>
<td></td>
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</tbody>
</table>
**Decision 4: Launch Activities**

**Hooks and Links**

Develops student **interest** and links **prior knowledge**. Provides the Student Learning Map and the key vocabulary to students.

**Guiding Questions:**

1. How are you going to get students engaged?
2. How are you going to develop student interest and link their prior knowledge?
3. How are you going to start the Student Learning Map of the unit with students?
4. How are you going to preview key vocabulary with students?

*Inside Your Outside*, by Tish Rabe (Part of the Cat in the Hat library)

Vocabulary introduction: Guessing word meanings.

K-W-L chart

CLIMB videos: NeoK12
Decision 5: Acquisition Lesson One

Language Objective(s), where appropriate:

RI.5.3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Lesson Essential Question(s) or “I Can” Statement(s):

How do I distinguish between single-cell and multi-cellular organisms?

Activating Strategies: (Learners Mentally Active)

- **What is Life?** In small groups, have the students respond to the following questions: What is Life? What does it mean to be living? What do all living things have in common? See what students know about what it means to be a living thing and what all living things have in common.
- **Moving to Sides of the Room:** Designate one side of the room as “Agree” and the other as “Disagree.” Have students read their beliefs to the class, and have the other students move to a side of the room to indicate their agreement.
- **Student Learning Map:** Hand out the student learning map. Preview the concepts and vocabulary.

<table>
<thead>
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<th>Acceleration/Previewing: (Key Vocabulary)</th>
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</thead>
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<td>single cell organisms complex organisms bacteria</td>
</tr>
<tr>
<td>multi-cellular specialized algae amoeba</td>
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</tbody>
</table>

Teaching Strategies: (Explain and Model; Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)

**Assessment Prompt #1:** I can identify the parts of a cell.

**Instructional Strategy #1:** Teach about parts of a cell, and how those parts are enough to sustain life.

Cello Activity: [http://wikieducator.org/Cell-O](http://wikieducator.org/Cell-O)


**AP #2:** I can identify single and multi-cellular organisms.

**IS #2:** Provide and show examples of both single cell and multi-cellular organisms.


**AP#3:** I can distinguish between single cell and multi-cellular organisms.

**IS#3:** Using a Venn diagram, have students identify similarities and differences between single and multi cell organisms. This can be done as a “human Venn diagram,” using tape on floor. Give students a trait and have them decide where to stand in the diagram.

**Summarizing Strategies: Learners Summarize and Answer Essential Questions**

On a Post-it note, list three single-cell organisms, and three multi-cellular organisms.

**Lesson Resources**

Cello Activity - [http://wikieducator.org/Cell-O](http://wikieducator.org/Cell-O)

Decision 5: Acquisition Lesson Two

Language Objective(s), where appropriate:

Lesson Essential Question(s) or “I Can” Statement(s):
How do I describe the specialized functions of multi-cellular organisms?

Activating Strategies: (Learners Mentally Active)
Think about the various jobs/roles within a school. Brainstorm a list of at least five different jobs, and discuss how each job is different, yet important to the operation of the school.

Acceleration/Previewing: (Key Vocabulary)
blood cells complex organisms
specialized jobs function

Teaching Strategies: (Explain and Model; Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)

AP#1: I can identify different jobs cells perform in the body.
IS#1: Use non-fiction reading passages/videos to teach about cell specialization.
englishforeveryone.org – Non-fiction passage about “Cells”
http://www.brainpop.com/science/cellularlifeandgenetics/cellspecialization/

Distributed Guided Practice/Summarizing Prompts: Refer to Classscape for question stems/writing prompt ideas

Summarizing Strategies: Learners Summarize and Answer Essential Questions
Using a Bubble Map, students identify the types of cells, and list their jobs.

Lesson Resources
www.englishforeveryone.org Non-fiction passage about “Cells.”
http://www.brainpop.com/science/cellularlifeandgenetics/cellspecialization/
Decision 5: Acquisition Lesson Three

Language Objective(s), where appropriate:

Lesson Essential Question(s) or “I Can” Statement(s):
What are the major body systems, their major parts, and their functions?

Activating Strategies: (Learners Mentally Active)

1. Do a KWL chart for body systems and share with your group.
2. Ask students to take their pulse for a particular amount of time (1 minute – or can do 10 seconds multiplied by 6). Multiply to find how many times their heart beats in one minute, ten minutes, one hour. For differentiation/enrichment, do longer amounts of time such as one day, and even up to one year if the class wants to find that information.

Acceleration/Previewing: (Key Vocabulary)
Show the “Body Systems” video from Discovery Education (saved on flash drive).

circulatory system (cardiovascular system)  
heart  
arteries  
veins  
blood  
cardiac muscles  
ox oxygen  
carbon dioxide  
arteries  
capillaries  
veins  
heart  
blood  
excretory system  
liver  
kidneys  
ureters  
urethra  
muscular system  
muscles  
respiratory system  
trachea  
lungs  
diaphragm  
digestive system  
esophagus  
stomach  
intestines  
bladder  
skeletal system  
tendons  
ligaments  
bone marrow  
red blood cells  
white blood cells  
nervous system  
brain  
spinal cord  
nerves  
neuron  
receptors  
cardiac muscles  
liver  
kidneys  
ureters  
urethra  
muscles  
respiratory system  
trachea  
lungs  
diaphragm  
ligaments  
red blood cells  
white blood cells

Teaching Strategies: (Explain and Model; Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)

Graphic Organizer: Body Systems Chart

Instruction:
1. **AP#1: Body Systems Project**-Pass out the packet and go over it answering any questions they may have.
2. Explain to the students how to access websites to help them. Also show them the book resources available.
3. On the day the students present, after they are finished, show a video of that body system.

Summarizing Strategies: Learners Summarize and Answer Essential Questions

**AP#2: Body Systems Chart**-Students fill in as students present their power point and then go over together as a class to make sure everyone has all of the correct answers.

Lesson Resources
Human Body Systems Project (see below)
Differentiation: Provide cloze chart with some information already provided.
Human Body Systems Project

Objectives:
- To be able to name the major body systems and their functions
- To be able to identify organs and structural parts of each system.
- To be able to enhance research and presentation skills.

Requirements:
- Work in groups to research an assigned body system, provide a diagram, and present information to the class. Information presented will be used to fill in a chart that will be used to help study for the test.
  - **Part 1: Introduction**
    - Tell the name of your body system and describe its major functions.
  - **Part 2: Diagram**
    - Provide a diagram of your body system with the major parts or organs labeled with their name and functions.
  - **Part 3: Fun Facts**
    - Find five facts about your body system or its parts.

Each team will also be provided with a Body System Checklist of important terms or items that must be included in the presentation. Teams may use their health textbooks, science textbooks, reference materials, or online resources to research their organ system.

Teams will be allowed five to seven class periods to create a Power Point presentation and fill-in-the-blank worksheet with a diagram of your system. The presentation must be made using the Power Point program. The presentation must consist of at least five to six slides and no more than eight slides including the title slide.

The project is due on _____________________.

Teams will not be allowed to continue working on their projects after this date.
Project Checklist

✓ Information
  ❑ Introduction
    o Did you provide the name of your organ system?
    o Did you give descriptions of the major functions of your system?
  ❑ Diagram
    o Did you provide a diagram of your body system with the major parts or organs labeled?
    o Did you give descriptions of the functions of each organ?
  ❑ Fun Facts
    o Did you provide five facts (or more) about your body system or its parts?
  ❑ Other Information
    o Did you include all the information listed on your Body System Checklist?

✓ Worksheet
  ❑ Did the worksheet include a diagram and the functions of each part of the body system?

✓ Presentation
  ❑ Did you have at least 5-6 slides (counting the title slide) and no more than 8?
  ❑ Did the slides enhance the presentation? Don’t put in too much fancy stuff or use too many words on each slide. Keep it simple! You must talk during the presentation, so use that time to share the details.
  ❑ Was the information presented in an organized manner?
  ❑ Did you “know” the information? You should know the information well enough that you do not need to read it word-for-word off note cards or the slides.
  ❑ Did you present to the class? Don’t talk to the screen!
  ❑ Did you practice? Be sure to run through your presentation a few times before you present to the class!

✓ Group Involvement (Everyone will have a chance to “grade” their teammates!)
  ❑ Did everyone share responsibilities for preparing the presentation?
  ❑ Did everyone participate in giving the presentation?
  ❑ Did you work together and resolve problems peacefully?
**Presentation Planner**
What will you include on each slide?  
Use this page to help you organize your presentation!

<table>
<thead>
<tr>
<th>Slide 1: Title Slide</th>
<th>Slide 2</th>
<th>Slide 3</th>
<th>Slide 4</th>
</tr>
</thead>
<tbody>
<tr>
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<table>
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<tr>
<th>Slide 5</th>
<th>Slide 6</th>
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<table>
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<tr>
<th>Slide 7</th>
<th>Slide 8</th>
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</tbody>
</table>
Body System Checklist - Circulatory System (Cardiovascular System)
✓ Major functions of circulatory system.
✓ Diagram that includes the major parts: heart, artery, vein, capillary. List the function(s) of each.
✓ Describe each of the components of blood: red blood cells, white blood cells, platelets, and plasma.
✓ Describe the path blood travels through your body.
✓ Find five facts about your body system. You may list the facts as sentences or use them to create trivia questions.

Body System Checklist - Respiratory System
✓ Major functions of respiratory system.
✓ Diagram that includes the major parts: nose, trachea, lungs, diaphragm. List the function(s) of each.
✓ Describe the “breathing” process.
✓ Find five facts about your body system. You may list the facts as sentences or use them to create trivia questions.

Body System Checklist - Nervous System
✓ Description and major functions of the central nervous system and peripheral nervous system.
✓ Diagram that includes the major parts: brain, spinal cord, and sensory organs. List the function(s) of each.
✓ Describe the path a nerve impulse travels throughout your body from stimulus to response.
✓ Find five facts about your body system. You may list the facts as sentences or use them to create trivia questions.

Body System Checklist - Skeletal System
✓ Major functions of skeletal system.
✓ Diagram that includes the major parts: bones. List the function(s) of each.
✓ NOTE: Your diagram needs to show the majors bones.
✓ Describe each of the following joints and where they are located: hinge, pivot, and ball-and-socket. You may include other joints as well.
✓ Find five facts about your body system. You may list the facts as sentences or use them to create trivia questions.

Body System Checklist - Muscular System
✓ Major functions of muscular system.
✓ Describe the function and locations of each type of muscle: skeletal muscle, smooth muscle, and cardiac muscle.
✓ Diagram that includes the major muscles in the body.
✓ Describe how muscles work in pairs to make parts of the body move using the biceps and triceps as an example.
✓ Find five facts about your body system. You may list the facts as sentences or use them to create trivia questions.

Body System Checklist - Excretory System
✓ Major functions of excretory system.
✓ Diagram that includes the major parts: lungs, kidneys, bladder, ureter, and urethra. List the function(s) of each.
✓ Find five facts about your body system. You may list the facts as sentences or use them to create trivia questions.

Body System Checklist - Digestive System
✓ Major functions of digestive system.
✓ Diagram that includes the major parts: mouth, esophagus, stomach, small intestine, and large intestines. List the function(s) of each.
✓ Describe the path food travels throughout the digestive system.
✓ Find five facts about your body system. You may list the facts as sentences or use them to create trivia questions.
# Body Systems Presentation Rubric

<table>
<thead>
<tr>
<th>Name ______________________________</th>
<th>Body System ______________________</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>EXCELLENT (4)</th>
<th>GOOD (3)</th>
<th>FAIR (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTENT</td>
<td>All required information is presented.</td>
<td>Most of the required information is presented.</td>
<td>Some of the required information is presented.</td>
<td>Hardly any required information is presented.</td>
</tr>
<tr>
<td>ORGANIZATION</td>
<td>Presentation is well organized and easy to follow. Transition between topics is smooth.</td>
<td>Presentation is organized and easy to follow but transition between topics is not smooth.</td>
<td>Presentation is somewhat organized but hard to follow.</td>
<td>Presentation is very unorganized and difficult to follow.</td>
</tr>
<tr>
<td>EYE CONTACT</td>
<td>Eye contact is made throughout the entire presentation. Most of the presentation is not read.</td>
<td>Eye contact is made throughout most of the presentation. Some of the presentation is read.</td>
<td>Eye contact is made only during some of the presentation. Most of the presentation is read.</td>
<td>No eye contact is made throughout the entire presentation and all of it is read.</td>
</tr>
<tr>
<td>DIAGRAM</td>
<td>Diagram is creative, colorful, easy to read, and used effectively.</td>
<td>Diagram is colorful, readable and used somewhat effectively.</td>
<td>Diagram is lacking color, difficult to read, and not used effectively.</td>
<td>Diagram is not used at all in the presentation.</td>
</tr>
<tr>
<td>VOICE</td>
<td>Presentation is loud and given at a slow pace that’s easy to follow.</td>
<td>Presentation is audible and given at a good pace.</td>
<td>Presentation is barely audible and given at a fast pace.</td>
<td>Presentation is inaudible and given at a pace too fast to follow.</td>
</tr>
</tbody>
</table>

**TOTAL POINTS = _____________ X 4 = ______________**

Teammates Grade = ____________

**Total = ____________/100**

Comments:
### Teammate “Grade”

<table>
<thead>
<tr>
<th>EXCELLENT  (20)</th>
<th>GOOD  (10)</th>
<th>FAIR  (5)</th>
<th>POOR  (0)</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual participated and worked well in his/her group.</td>
<td>Individual participated but did not work well in the group.</td>
<td>Individual did not present information on topic, but did work well in group.</td>
<td>Individual did not participate and did not work well in the group.</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
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<td></td>
</tr>
<tr>
<td>Name</td>
<td>Function</td>
<td>Major Parts</td>
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<tr>
<td>--------------------</td>
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</tr>
<tr>
<td>Skeletal System</td>
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<tr>
<td>Muscular System</td>
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<tr>
<td>Circulatory System</td>
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<tr>
<td>Respiratory System</td>
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<td>Nervous System</td>
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</tbody>
</table>
# Body Systems Chart

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
<th>Major Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skeletal System</strong></td>
<td>gives shape and support to the body, protects the body, and helps in movement</td>
<td>bones</td>
</tr>
<tr>
<td><strong>Muscular System</strong></td>
<td>helps us move</td>
<td>muscles</td>
</tr>
<tr>
<td><strong>Circulatory System</strong></td>
<td>carries blood, nutrients and oxygen to all parts of the body</td>
<td>heart, cardiac muscles, oxygen, carbon dioxide, arteries, capillaries, veins, blood, red blood cells, white blood cells</td>
</tr>
<tr>
<td><strong>Respiratory System</strong></td>
<td>brings oxygen into the body and takes carbon dioxide out</td>
<td>nose, trachea (windpipe), lungs, diaphragm</td>
</tr>
<tr>
<td><strong>Digestive System</strong></td>
<td>breaks down the food we eat into energy for our body and gets the nutrients into our blood</td>
<td>mouth, esophagus, stomach, intestines (large and small)</td>
</tr>
<tr>
<td><strong>Excretory System</strong></td>
<td>removes wastes from the blood</td>
<td>kidneys, ureters, bladder, and urethra</td>
</tr>
<tr>
<td><strong>Nervous System</strong></td>
<td>allows you to experience things and to react to your environment and it connects all the tissues and organs of your body to your brain</td>
<td>brain, spinal cord, and sensory organs</td>
</tr>
<tr>
<td>Lesson Topic: INTERDEPENDENCY</td>
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<tr>
<td>--------------------------------</td>
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</tr>
<tr>
<td>ESSENTIAL QUESTION: How do the body systems work together?</td>
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<tr>
<td>AP#1: Word Map-Interdependence</td>
<td></td>
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</tr>
<tr>
<td>AP#2: Body Systems Interaction Chart</td>
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<tr>
<td>AP#3: Learning Frame</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTIVATING STRATEGY: Three Legged Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. With a partner, tie legs together for a three legged race.</td>
</tr>
<tr>
<td>2. In the first race, only 1’s may move.</td>
</tr>
<tr>
<td>3. In the second race, only 2’s may move.</td>
</tr>
<tr>
<td>4. In the third race, both may move.</td>
</tr>
<tr>
<td>5. Think-pair-share: Why was only the last race successful?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACCELERATION/PREVIEWING (KEY VOCABULARY):</th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s already in my head: Write a short answer to “What do I think of when I hear the word interdependence?” Choose several students to share.</td>
</tr>
<tr>
<td>1. interdependent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEACHING STRATEGIES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Organizer: Word Map: Interdependence and Learning Frame</td>
</tr>
<tr>
<td>Instruction:</td>
</tr>
<tr>
<td>1. With the students, talk about why they needed their partner in the three legged race. Guide them to the definition of interdependent: When two or more things need each other to accomplish a task. Discuss with students what interdependence is like and record two responses on the graphic organizer. (Examples: teamwork, count on each other, depend, need each other, rely on each other.) Ask students for examples of things that are interdependent (not body systems). (Examples: sea-sawing, three-legged race, playing tag, kickball, tic-tac-toe, run a school, post office.) Record two responses on graphic organizer.</td>
</tr>
<tr>
<td>AP#1: Word Map-Interdependence: Students add one more “what is it like?” and one more “example” to the word map.</td>
</tr>
<tr>
<td>2. Think-Ink-Share: What body systems work together?</td>
</tr>
<tr>
<td>a. Give the students the question, three minutes to write, and then lead a discussion on which systems work together and how they do so.</td>
</tr>
</tbody>
</table>

| AP#2: Body Systems Interaction Chart |

<table>
<thead>
<tr>
<th>SUMMARIZING STRATEGY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP#3: Learning Frame</td>
</tr>
</tbody>
</table>
**Skeletal/Muscular Systems**
Muscles pull on bones to make them move.

**Circulatory/Respiratory Systems**
Respiratory system brings in oxygen and the circulatory system takes oxygen throughout the body and picks up carbon dioxide. The respiratory system pushes out carbon dioxide.

**The Definition**
When two or more things need each other to accomplish a task.

**The Word**
INTERDEPENDENCE

**Examples**
- Three-legged race
- Post Office
- Teamwork
- Counting on each other

**What is it like?**

*Decision 5 - Acquisition Lesson Planning*
## BODY SYSTEMS INTERACTION CHART

<table>
<thead>
<tr>
<th>Nervous System</th>
<th>Circulatory System</th>
<th>Muscular System</th>
<th>Respiratory System</th>
<th>Skeletal System</th>
<th>Digestive System</th>
<th>Excretory System</th>
</tr>
</thead>
<tbody>
<tr>
<td>the brain controls heart beat and spinal cord delivers the message to the rest of the body</td>
<td>takes oxygen throughout the body and picks up carbon dioxide</td>
<td>provides protection for impulses sent down through the body from the brain</td>
<td>provides oxygen so the brain can think and control all the other systems of the body; removes carbon dioxide and water</td>
<td>protects the brain and spinal cord</td>
<td>provides energy for the brain to all the thinking and controlling of all the other systems</td>
<td>cleans the blood of waste products produced by the nervous system</td>
</tr>
<tr>
<td>Nervous System</td>
<td>the brain controls contraction of muscles and spinal cord delivers the message to the body</td>
<td>takes oxygen throughout the body and picks up carbon dioxide</td>
<td>takes oxygen so muscles can go and do work</td>
<td>protects heart; bone marrow produces red blood cells</td>
<td>provides the heart with nutrients so the heart can keep beating</td>
<td>cleans the blood of waste products produced by the circulatory system</td>
</tr>
<tr>
<td></td>
<td>the brain controls the rate of breathing and the spinal cord delivers the message to the body</td>
<td>takes oxygen throughout the body and picks up carbon dioxide</td>
<td>provides oxygen so muscles can go and do work; removes carbon dioxide and water</td>
<td>gives support to the body</td>
<td>provides nutrients for muscles to do work</td>
<td>cleans the blood of waste products produced by the muscular system</td>
</tr>
<tr>
<td></td>
<td>the brain controls movement and the spinal cord delivers the message to the body</td>
<td>production of blood cells in bone marrow</td>
<td>provides oxygen so bones can go and do work; removes carbon dioxide and water</td>
<td>protects trachea, vocal cords and diaphragm</td>
<td>provides the diaphragm nutrients in order facilitate breathing</td>
<td>cleans the blood of waste products produced by the respiratory system</td>
</tr>
<tr>
<td></td>
<td>the brain controls urination and the spinal cord delivers the message to the body</td>
<td>soaks up and takes nutrients throughout the body</td>
<td>provides oxygen to digest food; removes carbon dioxide and water</td>
<td>protects the mouth, esophagus, stomach, and liver</td>
<td>provides nutrients for bone growth and repair</td>
<td>cleans the blood of waste products produced by the skeletal system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>takes oxygen throughout the body and picks up carbon dioxide</td>
<td>provides oxygen to clean the blood of waste product; removes carbon dioxide and water</td>
<td></td>
<td></td>
<td>cleans the blood of waste products produced by the digestive system</td>
</tr>
</tbody>
</table>
| | | | | | | | **Bladder**
Learning Frame

Today, I learned about ________________________________ with my class.

The first thing we learned was ________________________________

__________________________________________________________.

Next, ______________________________________________________

__________________________________________________________.

Then, ______________________________________________________

__________________________________________________________.

After that, ________________________________________________

__________________________________________________________.

I also learned that _________________________________________

__________________________________________________________.

I want to learn more about ________________________________

__________________________________________________________.
Unit Wrap-Up (Suggested time: three 45-minute class periods.)

**ESSENTIAL QUESTION:** How do our body systems work together to keep us alive?

**TEACHING STRATEGIES:**

**Instruction:**
Explain to students that their final project for the body systems unit is to write a “thank you” letter from the perspective of your body to your body systems. Students must be sure to tell each system how it has helped them live and what each system helped the students in their everyday life.

**Include:**
- The function of each system.
- The major parts of each system.
- How at least two of the systems work together.

They will also create one Illustration of all the body systems.

**Include:**
- Labels of the body systems.
- Labels for the major parts of each system

Explain that we will work on this project in class. However, students will also take their cell test in a few days. Distribute study guide.

**SUMMARIZING STRATEGY:**

Body Systems Test
Body Systems Project
Culminating Activity

- Write a thank you letter from the perspective of your body to your body systems. Be sure to tell each system how they have helped you live and what they helped you do in your everyday life.

  Include:
  o the function of each system.
  o the major parts of each system.
  o how at least two of the systems work together.

- Create one Illustration of all the body systems.

  Include:
  o Labels of the body systems.
  o Labels for the major parts of each system

### Rubric for Letter

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function</strong></td>
<td>Includes the function of all 7 body systems.</td>
<td>Includes the function of 5-6 body systems.</td>
<td>Includes the function of 3-4 body systems.</td>
<td>Includes the function of 2 or fewer body systems.</td>
</tr>
<tr>
<td><strong>Parts</strong></td>
<td>Includes all parts for the 7 body systems.</td>
<td>Includes all parts for 5-6 body systems.</td>
<td>Includes all parts for 3-4 body systems.</td>
<td>Includes all parts for 2 or fewer body systems.</td>
</tr>
<tr>
<td><strong>Letter Format</strong></td>
<td>Uses all 5 parts of the friendly letter.</td>
<td>Uses 3-4 parts of the friendly letter.</td>
<td>Uses 0-2 parts of the friendly letter.</td>
<td></td>
</tr>
<tr>
<td><strong>Mechanics</strong></td>
<td>0-2 errors in spelling and punctuation</td>
<td>3-4 errors in spelling and punctuation.</td>
<td>5 or more errors in spelling and punctuation.</td>
<td></td>
</tr>
<tr>
<td><strong>Illustration</strong></td>
<td>Includes all the body systems and they are labeled. All of the major parts are included and labeled.</td>
<td>Includes 5-6 body systems and most are labeled. Includes most of the major parts of the body systems illustrated and most are labeled.</td>
<td>Includes 3-4 body systems and most are labeled. Includes most of the major parts of the body systems illustrated and most are labeled.</td>
<td>Includes 2 or fewer body systems and some are labeled. Includes some of the major parts of the body systems illustrated and some are labeled.</td>
</tr>
</tbody>
</table>

Total Points_________ x 5 = ________________

Comments:
BODY SYSTEMS STUDY GUIDE

1. Study all vocabulary words.
2. Know the body systems and their functions.
3. Know the major parts of each body system and their functions.
4. Know how the body systems work together.
Body Systems Unit Test

Define the word system.

1. A system is __________________________________________

Put an S in front of the examples that are systems. Put an N in front of the examples that are not systems.

________ 2. teacher, student, principal, nurse
________ 3. apple, orange, pear, grape, banana
________ 4. roots, stem, leaves, flower
________ 5. bed, flower, pillow, brush, sheets

Write the letter of the correct system job beside the system.

________ 6. Brings oxygen into the body and gets rid of carbon dioxide and other gasses. A. Skeletal System
________ 7. Supports and protects the body. B. Muscular System
________ 8. Allows you to experience things and to react to your environment. C. Digestive System
________ 9. Breaks down food for your body to use. D. Circulatory System
________ 10. Allows the body to move. E. Respiratory System
________ 11. Removes wastes from the blood. F. Nervous System
________ 12. Moves blood throughout the body. G. Excretory System
Write the name of the system that has this part.

<table>
<thead>
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<th>Respiratory</th>
<th>Digestive</th>
<th>Skeletal</th>
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<th>Excretory</th>
</tr>
</thead>
</table>

13. 

14. 

15. 

16. 

17. 

18. 

19. 

---

Decision 5 – Acquisition Lesson Planning
20. Choose two systems and explain how they work together. Use complete sentences.
Body Systems Unit Test (Answer Key)

1. Define the word system. (5 points)

A system is a group of things that work together and depend on each other to reach a common goal.

Put an S in front of the examples that are systems. Put an N in front of the examples that are not systems. (5 points)

S 2. teacher, student, principal, nurse
N 3. apple, orange, pear, grape, banana
S 4. roots, stem, leaves, flower
N 5. bed, flower, pillow, brush, sheets

Write the letter of the correct system job beside the system. (5 points)

E 6. Brings oxygen into the body and gets rid of carbon dioxide and other gases. A. Skeletal System
S 7. Supports and protects the body. B. Muscular System
F 8. Allows you to experience things and to react to your environment. C. Digestive System
C 9. Breaks down food for your body to use. D. Circulatory System
B 10. Allows the body to move. E. Respiratory System
G 11. Removes wastes from the blood. F. Nervous System
D 12. Moves blood throughout the body. G. Excretory System
Write the name of the system that has this part. (5 points)

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</tr>
</thead>
</table>

13. Circulatory

14. Skeletal

15. Respiratory

16. Digestive

17. Nervous

18. Excretory

19. Muscular

20. Choose two systems and explain how they work together. Use complete sentences. (5 points)

5 points = full understanding
3 points = partial understanding
1 point = vague or incomplete answer
0 points = incorrect or no answer
Decision 6: Extending Thinking Activities

Include extending activities for several lessons in the essential units.
Classifying, Compare/Contrast, Writing Prompt, Math Extension, Reading Extension

<table>
<thead>
<tr>
<th>Cause/Effect</th>
<th>Compare/Contrast</th>
<th>Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification</td>
<td>Induction</td>
<td>Analyzing Perspective</td>
</tr>
<tr>
<td>Error Analysis</td>
<td>Abstracting</td>
<td>Evaluation</td>
</tr>
<tr>
<td>Classifying</td>
<td>Constructing Support</td>
<td>Writing Prompt</td>
</tr>
</tbody>
</table>
Decision 7: Differentiating the Unit

What accommodations will you make in order to meet the varied interests, learning styles, and ability levels of all students?

real world meaning; visual, auditory, kinesthetic activities; grouping; differentiated expectations

<table>
<thead>
<tr>
<th>choice menus</th>
<th>compacting</th>
<th>grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>seating</td>
<td>visual, auditory, kinesthetic activities</td>
<td>scaffolding</td>
</tr>
<tr>
<td>real world meaning</td>
<td>interests</td>
<td></td>
</tr>
</tbody>
</table>
**Decision 8: Unit Calendar**

Determine the most viable sequence for the experiences, activities, and lesson and create a timeline.

Concept 1: Three class periods (45 min. each)

Concept 2: Two class periods

Concept 3: Fifteen class periods

Concept 4: Five class periods
Decision 9: Resources

Provide graphic organizers, links, book titles, websites, etc. that provide support for teaching this unit.

Unit Activator: *Inside Your Outside*, by Tish Fabe (Cat in the Hat library)

Cells Lesson 1:
Cell Activity: [http://wikieducator.org/Cell-O](http://wikieducator.org/Cell-O)


Cells Lesson 2:

**Human Body Systems:**

Resources are included with the lesson.

TrueFlix


# Unit Designers:

**Date:** January 22, 2013

<table>
<thead>
<tr>
<th>Name</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sherri McKelvin</td>
<td>Etowah Elem.</td>
</tr>
<tr>
<td>Beth Queen</td>
<td>Edneyville Elem.</td>
</tr>
<tr>
<td>Judy Koysza</td>
<td>Fletcher</td>
</tr>
<tr>
<td>Mike Ericksen</td>
<td>Edneyville</td>
</tr>
<tr>
<td>Frank Saccho</td>
<td>Edneyville</td>
</tr>
<tr>
<td>Kim Mericle</td>
<td>Hillandale</td>
</tr>
<tr>
<td>Jessica Hambley</td>
<td>Mills River</td>
</tr>
</tbody>
</table>