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.
Human Body Systems Project

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?
Human Body Systems Project
Presentation Planner
What will you include on each slide?
Use this page to help you organize your presentation!

Slide 1: Title Slide

Slide 2________________________

Slide 3________________________

Slide 4________________________

Slide 5________________________

Slide 6________________________

Slide 7________________________

Slide 8________________________
Human Body Systems Project

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.
Human Body Systems Project

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.
# Human Body Systems Project
## Body Systems Presentation Rubric

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

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>EXCELLENT (4)</th>
<th>GOOD (3)</th>
<th>FAIR (2)</th>
<th>Poor (1)</th>
</tr>
</thead>
<tbody>
<tr>
<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>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORGANIZATION</th>
<th>Presentation is well organized and easy to follow. Transition between topics is smooth.</th>
<th>Presentation is organized and easy to follow but transition between topics is not smooth.</th>
<th>Presentation is somewhat organized but hard to follow.</th>
<th>Presentation is very unorganized and difficult to follow.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>EYE CONTACT</th>
<th>Eye contact is made throughout the entire presentation. Most of the presentation is not read.</th>
<th>Eye contact is made throughout most of the presentation. Some of the presentation is read.</th>
<th>Eye contact is made only during some of the presentation. Most of the presentation is read.</th>
<th>No eye contact is made throughout the entire presentation and all of it is read.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>DIAGRAM</th>
<th>Diagram is creative, colorful, easy to read, and used effectively.</th>
<th>Diagram is colorful, readable and used somewhat effectively.</th>
<th>Diagram is lacking color, difficult to read, and not used effectively.</th>
<th>Diagram is not used at all in the presentation.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>VOICE</th>
<th>Presentation is loud and given at a slow pace that’s easy to follow.</th>
<th>Presentation is audible and given at a good pace.</th>
<th>Presentation is barely audible and given at a fast pace.</th>
<th>Presentation is inaudible and given at a pace too fast to follow.</th>
</tr>
</thead>
</table>

TOTAL POINTS = _____________ X 4 = ______________

Teammates Grade = ___________

Total = ___________/100

Comments:
### Human Body Systems Project
#### 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>
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</tbody>
</table>

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</tbody>
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Human Body Systems Project

Body Systems Chart

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
<th>Major Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletal System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscular System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circulatory System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digestive System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excretory System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Function</td>
<td>Major Parts</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Skeletal System</td>
<td>gives shape and support to the body, protects the body, and helps in movement</td>
<td>bones</td>
</tr>
<tr>
<td>Muscular System</td>
<td>helps us move</td>
<td>muscles</td>
</tr>
<tr>
<td>Circulatory System</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>Respiratory System</td>
<td>brings oxygen into the body and takes carbon dioxide out</td>
<td>nose, trachea (windpipe), lungs, diaphragm</td>
</tr>
<tr>
<td>Digestive System</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>Excretory System</td>
<td>removes wastes from the blood</td>
<td>kidneys, ureters, bladder, and urethra</td>
</tr>
<tr>
<td>Nervous System</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>
</tbody>
</table>
# Human Body Systems Project

**Lesson Topic:** INTERDEPENDENCY

**ESSENTIAL QUESTION:** How do the body systems work together?

AP#1: Word Map-Interdependence  
AP#2: Body Systems Interaction Chart  
AP#3: Learning Frame

**ACTIVATING STRATEGY:** Three Legged Race

1. With a partner, tie legs together for a three legged race.  
2. In the first race, only 1’s may move.  
3. In the second race, only 2’s may move.  
4. In the third race, both may move.  
5. Think-pair-share: Why was only the last race successful?

**ACCELERATION/PREVIEWING (KEY VOCABULARY):**

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.  
1. interdependent

**TEACHING STRATEGIES:**

**Graphic Organizer:** Word Map: Interdependence and Learning Frame

**Instruction:**

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.

AP#1: Word Map-Interdependence: Students add one more “what is it like?” and one more “example” to the word map.

2. Think-Ink-Share: What body systems work together?  
   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.

AP#2: Body Systems Interaction Chart

**SUMMARIZING STRATEGY:**

AP#3: Learning Frame
The Definition
When two or more things need each other to accomplish a task.

What is it like?
TEAMWORK
COUNTING ON EACH OTHER

Body System Examples

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 Word INTERDEPENDENCE

Examples
Three-legged race
Post Office
<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>the brain controls contraction of muscles and spinal cord delivers the message to the body</td>
<td>the brain controls the rate of breathing and the spinal cord delivers the message to the body</td>
<td>the brain controls movement and the spinal cord delivers the message to the body</td>
<td>the brain controls muscle contraction and how fast food moves and the spinal cord delivers the message to the body</td>
<td>the brain controls urination and the spinal cord delivers the message to the body</td>
<td>takes oxygen throughout the body and picks up carbon dioxide</td>
</tr>
<tr>
<td>takes oxygen throughout the body and picks up carbon dioxide</td>
<td>pumping of the heart &amp; blood</td>
<td>movement of the diaphragm in breathing</td>
<td>muscles pull on bones to make them move</td>
<td>chewing, swallowing and movement of food through the digestive tract</td>
<td>bladder</td>
<td>provides protection for impulses sent down through the body from the brain</td>
</tr>
<tr>
<td>provides oxygen so the brain can think and control all the other systems of the body; removes carbon dioxide and water</td>
<td>bringing in oxygen and pushing out carbon dioxide</td>
<td>provides oxygen so muscles can go and do work Removes carbon dioxide and water</td>
<td>provides oxygen to digest food; removes carbon dioxide and water</td>
<td>provides oxygen to clean the blood of waste product; removes carbon dioxide and water</td>
<td>protects the kidneys</td>
<td>protects the brain and spinal cord</td>
</tr>
<tr>
<td>protects heart; bone marrow produces red blood cells</td>
<td>gives support to the body</td>
<td>protects trachea, vocal cords and diaphragm</td>
<td>protects the mouth, esophagus, stomach, and liver</td>
<td>provides nutrients so the kidneys can clean your blood of wastes</td>
<td>protects the kidneys</td>
<td>cleans the blood of waste products produced by the nervous system</td>
</tr>
<tr>
<td>provides energy for the brain to all the thinking and controlling of all the other systems</td>
<td>provides the heart with nutrients so the heart can keep beating</td>
<td>provides nutrients for muscles to do work</td>
<td>provides nutrients for bone growth and repair</td>
<td>provides nutrients so the kidneys can clean your blood of wastes</td>
<td>provides nutrients so the kidneys can clean your blood of wastes</td>
<td>cleans the blood of waste products produced by the circulatory system</td>
</tr>
<tr>
<td>cleans the blood of waste products produced by the muscular system</td>
<td>cleans the blood of waste products produced by the respiratory system</td>
<td>cleans the blood of waste products produced by the skeletal system</td>
<td>cleans the blood of waste products produced by the digestive system</td>
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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 ________________________________