

Title:	Life Science Part 2 – Body Systems
Grade(s):	5 th
Subject(s):	Science, English Language Arts, Technology Education
Author:	ICAC Team
Overview:	After the teacher explains major body systems and their functions, students will create Part Two of their own series on the life sciences (Parts One and Three are found in adjoining lesson plans). Students will use Internet Explorer to gather information and will use Microsoft Word to type a synthesis of their understanding of the major body systems and their functions.
Content Standards:	<p>SC (5) 8. Identify major body systems and their functions, including the circulatory system, respiratory system, excretory system, and reproductive system.</p> <p>TC (3-5) 1. Use input and output devices of technology systems.</p> <p>TC (3-5) 2. Use various technology applications, including word processing and multimedia software.</p> <p>TC (3-5) 5. Practice safe use of technology systems and applications.</p> <p>TC (3-5) 6. Describe social and ethical behaviors related to technology use.</p> <p>TC (3-5) 8. Collect information from a variety of digital sources.</p> <p>TC (3-5) 12. Create a product using digital tools.</p> <p>ELA (5) 4. Use a wide range of strategies and skills, including using text features to gain meaning, summarizing passages, and drawing conclusions, to comprehend fifth-grade informational and functional reading materials.</p> <p>ELA(5) 9. Apply mechanics in writing, including capitalization of first word in a direct quotation and use of punctuation, including quotation marks and comma with direct quotations, colon to introduce a list, and commas after introductory words, with a noun of direct address, and in a compound sentence.</p> <p>ELA (5) 11. Use search strategies in the research process to identify reliable current resources and computer technology to locate information.</p>
Local/National Standards:	
Primary Learning Objectives:	<p>The student will:</p> <ul style="list-style-type: none"> • use word processing software to create a document that (1) contains two labeled pictures of two different organs or body

parts within the body system being studied, (2) contains a written description of each of the two part's functions in their respective body system, (3) contains a written description of diseases/conditions that affect the two parts and how to keep them healthy;

- demonstrate appropriate internet use by (1) applying search strategies to locate information, (2) citing sources used.

Additional Learning Objectives:

The student will produce a document that demonstrates his or her ability to synthesize information; this document will be Part 2 in a series of life sciences (Parts 1 and 3 are created in adjoining lesson plans).

Approximate Duration of Lesson:

60 minutes

Materials and Equipment: Technology Resources Needed:

Textbooks, other reference materials on body systems (books, handouts, etc.)
Computer, Internet access, **Microsoft Word, Internet Explorer**, (for remediation: **Paint**)

Background/Preparation:

Proper instruction on internet safety and use of search engines is required prior to this lesson. Be sure to review school and classroom rules for proper internet use and safety.

Because of the nature of this lesson, you are strongly advised to restrict web browsing only to websites provided by the teacher (a list of kid-friendly websites are included in Step 3 of this lesson). The teacher should provide a lecture covering the major body systems and their functions (**circulatory system, respiratory system, skeletal system, muscular system, nervous system, excretory system**).

Procedures/Activities:

Step 1 *Review of body systems and their functions*

- The **circulatory system** circulates blood throughout the body. **Arteries** carry the blood away from the heart, and **veins** carry the blood back to the heart. Oxygen is transported by **red blood cells**; **white blood cells** are infection-fighters.
- The **respiratory system** includes the **lungs**, which receive oxygen from the air when you breathe in, and release gases not needed when you breathe out.
- The **excretory system** removes waste from the body and includes **kidneys** and **bladder**.

- The **skeletal system** is made up of **bones** that give shape to the body, protect the body's organs, and allow the body to move. **Ligaments** and **cartilage** are part of the skeletal system.
- The **muscular system** includes **voluntary** and **involuntary** muscles. **Voluntary muscles** are ones that we can move as we choose; **involuntary muscles** include those that pump blood or move food through our bodies.
- The **nervous system** includes the **central nervous system** and the **peripheral nervous system**.

Step 2

Instructions for the Activity

Explain that students will be completing the following project for their selected/assigned body system.

Use **Microsoft Word** to create a document containing:

1. Two labeled pictures, one each of two different organs or body parts within two systems being studied.
2. A written description of the function of each selected body part within its respective system.
3. A written description of diseases/conditions that affect the body part and how to keep that part healthy.

Go over the following research points with students before they begin the project:

- Students may use books and/or the Internet to gather information.
- All photos from the Internet must be cited.
- Direct quotations need to have quotation marks. Other information is to be written in the student's own words.
- Keep track of sources used, as those need to be listed at the end of the document.
- Review classroom/school rules about Internet use. Remind students never to give any personal information and to only visit sites approved by the teacher.
- Enter key terms into a search box to find information (i.e., "**respiratory system**," "function of lungs").

Step 3 *Accessing the Internet*

To access the internet click on **Internet Explorer** icon



This page will appear:



Students should insert keywords in the search box and click on "Search" to find the required information or use specific websites as directed by the teacher.

The Alabama Virtual Library and the Harcourt School Publishers Science website are kid-friendly places to start.

www.avl.lib.al.us

(Go to: Student Resources-Elementary School)

www.hspscience.com (interactive information related to that in textbook)

If needed, review with students how to save an image from the Internet:

Right-click the mouse over the picture and select "Save Picture As...."

(In order to retrieve the information saved, be aware of where the document has been saved.)

Designate where to save the picture from the options to the left. (Desktop or My Documents is usually best).

Be sure to record citation information for the image.

To retrieve the saved pictures:

- On the desktop: Look for the file on the Desktop and double click.
- In My Documents: Go to the Start menu and

select My Documents.

Step 4

Creating the Project

After obtaining necessary information, students should be ready to begin their project. Students will use **Microsoft Word** to type the report.

If needed, review how to access and use the basic functions of **Word**.

Encourage students to be creative in putting their projects together; they may change font sizes, colors, etc. to add variety to their project.

Inserting a saved image:

To insert an image saved on the Computer, recall where the image (file) was designated to be saved. (Most likely, on the Desktop or in My Documents).

To open a saved Picture in **Microsoft Word**:

Click on the *Insert* tab. (The second tab beside *Home*.)

Under the *Insert* tab, click on Picture. A window will appear where you can find your file.

Click on Desktop or My Documents. Locate the place where you saved the image. Click on the file (image) you want to open and click Insert.

The picture will now appear in the **Word** Document.

Now you use the mouse to move and resize the picture. *Important for typing text around image:* click on the image, then click on “Format” under the red “Picture Tools” tab. Click on “Text Wrapping” and then select “Behind Text.”

To save the **Word** Document :

- Click on the **Microsoft** symbol at the top left of the page.
- From this menu click *Save As*.
- Click the first option; *Microsoft Word Document*.
- A window will appear. Designate where to save the file. (Desktop, My documents, etc.)

- Give the file a name and click save.

Step 5

Wrap-up

Have students display their projects by either using a Promethean Board or ELMO to project the XO screen to the class or by having classmates visit each other and observe various projects.

Discuss the projects. How are these projects the same? How are they different?

Attachments:
Assessment
Strategies:
Extension:

Rubric

Rubric

Create a flyer using either **Word** or **Paint** (see below for directions on using **Paint**) that illustrates ways people can keep their body healthy.

The flyer should include:

- Description of healthy habits;
- Indication of which body system is affected;
- Description of how the healthy habits affect the body (i.e., what does exercising do for the cardiovascular system?).

Remediation:

*Drawing Body Systems in **Paint***

To help students become more familiar with a body system, have them use **Paint** to draw a diagram of the body system.

Paint can be accessed by clicking on the paintbrush icon. Go to the Start menu, click All Programs, Click Accessories,



Click **Paint**. The icon looks like this:

Information for this lesson gathered from:

Bell, M. J., DiSpezio, M. A., Frank, M., Krockover, G. H., McLeod, J. C., ten Brink, B., et al. (2006). Cells to body systems. In Bryant, N.A., Jr., Jones, R.M., Lang, M.P (Eds.), *Science* (pp. 28-63). Orlando, FL: Harcourt School Publishers.

Rubric for Science of Life: Part 2 Body Systems

	1	2	3	4
Pictures of organs or body parts.	Contains one picture, no labels, and no citations.	Contains two pictures with missing labels or missing citations.	Contains two pictures with adequate labels and citations.	Contains two pictures with complete labels and accurate citations.
Written description of organ/body part.	Description is missing one organ/body part; content is incorrect; multiple grammar or mechanics mistakes.	Description needs work/ does not relate organ/body part to its system; several grammar or mechanics mistakes.	Good description of 2 organ's/ body part's functions in relation to their system; mostly accurate grammar & mechanics.	Excellent description of 2 organ's/ body part's functions in relation to their system; accurate grammar & mechanics.
Written description of (1) diseases for both body parts; (2) ways to keep both body parts healthy.	Description is missing an element; content is incorrect; multiple grammar or mechanics mistakes.	Description is missing an element; content mostly correct; several grammar or mechanics mistakes.	Good description containing all elements, but needs more content; accurate grammar & mechanics.	Excellent description containing all elements; correct content; accurate grammar & mechanics.
Student internet use.	Student did not follow school/classroom internet rules; did not search appropriately; did not include citations.	Student followed school/classroom internet rules; needs improvement in search strategies; missed some citations.	Student followed school/classroom internet rules; used adequate search strategies; cited sources.	Student followed school/classroom internet rules; used good search strategies; cited sources correctly.