

Body Systems

Purpose

Students will describe that human beings have body systems for obtaining energy, providing defense, circulating oxygen, obtaining oxygen, and coordinating body functions.

Materials

For the teacher: chalk, chalkboard, copy of Black Line Master (BLM) *Body Systems*, transparency of BLM *Body Systems*, transparency marker, overhead projector

For each student: each of the five human body models from the BLM, scissors, colored pencils

Activity

A. Pre-Activity Preparation

Enlarge each body system model on the BLM *Body Systems* to fit an 8½" × 11" or half sheet of paper. Make enough copies so each student has all five models.

B. Pre-Activity Discussion

1. Ask students: "What is a system?"
2. Discuss with students how a *system* is a group of interrelated, interacting, or interdependent parts forming a complex whole.
3. Ask students: "How does the human body act as a system?"
4. Discuss students' answers and explain that the human body has many parts that interact and are interdependent (e.g., arm and hand, circulatory and respiratory systems).

C. Activity

1. Write the following phrases on the chalkboard: "obtain energy," "provide defense," "coordinate body functions," "obtain oxygen and release carbon dioxide," "transport blood and chemicals in body."
2. Ask students: "Based on what you know about human body systems, which system might do each job listed on the board?"
3. Discuss students' answers and distribute the five body system models, scissors, and colored pencils to each student.
4. Instruct students to try to identify each human body system.
5. Show the overhead of the BLM *Body Systems* and have students identify each human body system. Have students cut out each model and write the name of the body system on the back of each.
6. Direct students to look at the phrases listed on the chalkboard.

(continued)

MEETING INDIVIDUAL



NEEDS

Have students who are having difficulties understanding the systems of the human body investigate *The Amazing Pull-Out Pop-Up Body in a Book* by David Hawcock. This book includes an almost life-sized model and interesting facts about the human body.

EXTENDING THE



ACTIVITY

Have students research other major human body systems such as: the skeletal system, immune system, endocrine system, reproductive system, and muscular system. Instruct them to create paper models for each system and add the new models to their booklets.

Standards Link 6.7.1






Activity (continued)

7. Instruct students to decide which phrase corresponds to each human body model. Monitor and guide students as they decide.
8. Have students hold up the corresponding model as you discuss each system in this order:
 - The digestive system is responsible for digesting food, which provides energy for all body functions.
 - The respiratory system is composed of organs, which obtain oxygen. The blood picks up oxygen, and carbon dioxide is exhaled.
 - The circulatory system is composed of organs, such as the heart and arteries, which are responsible for blood and related chemical circulation.
 - The nervous system, composed of organs such as the brain, controls the flow of information in the body.
 - The integumentary (skin) system is an excellent protector from exposure to foreign elements. The nervous system and immune system also provide protection from foreign elements and danger (e.g., nervous system provides sensory input, which keeps us alert to small and large dangers).
9. Direct students to color each model and write the corresponding function on the back of each.
10. Ask students: “Are there other systems of the human body?”
11. Discuss with students how there are equally large systems and thousands of smaller systems working together constantly to keep the human body working properly.
12. Ask students: “Could one system survive on its own without the others?”
13. Discuss with students how each system is interconnected in some way (e.g., the respiratory system obtains oxygen and the circulatory system transports oxygen to other systems, such as the muscular system).
14. Direct students to staple their models to make a booklet, using the integumentary system as the first page.

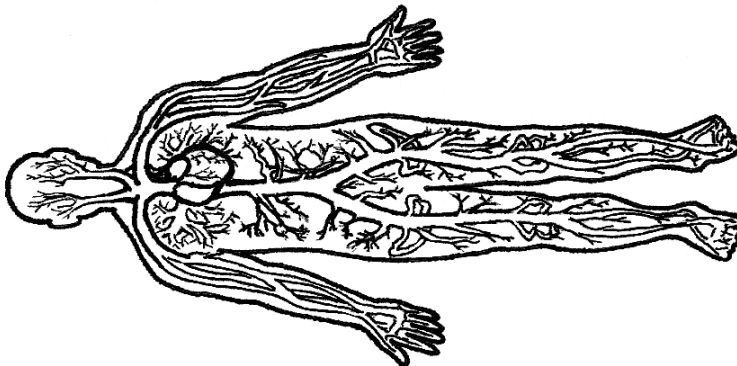
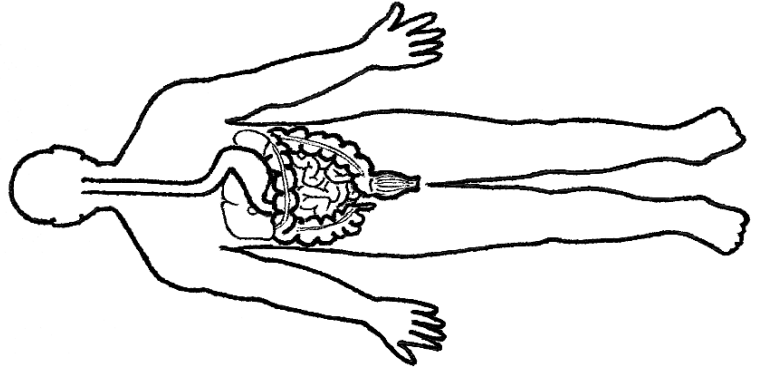
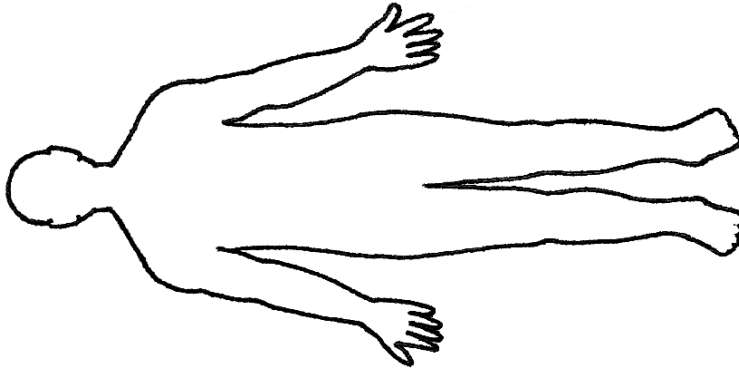
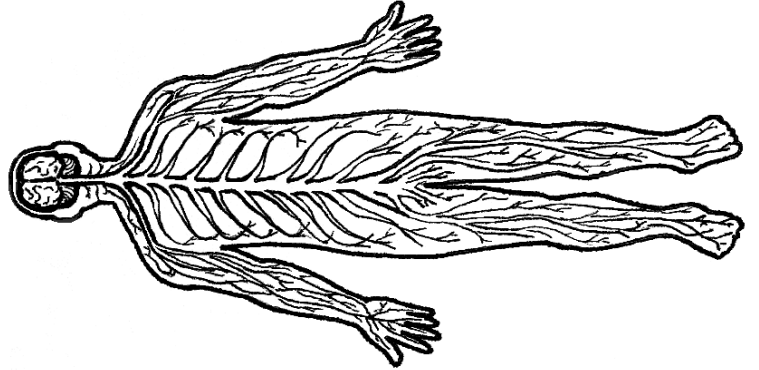
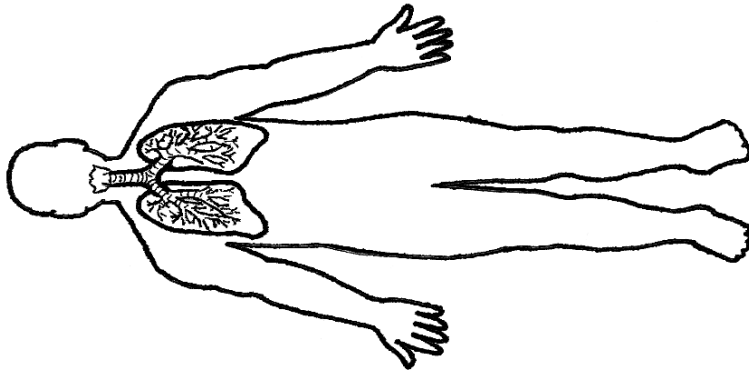
Classroom Assessment

Basic Concepts and Processes

At the end of this activity, ask questions such as:

-  How does the human body act as a system?
-  Can systems be made up of smaller systems?
-  How do you know?
-  How does each body system carry out its function?
-  How do you know?

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Teacher Directions

Enlarge each body system model on the BLM *Body Systems* to fit an 8½" × 11" or half sheet of paper. Make enough copies so each student has all five models.

Answer Key

Not applicable.