Human Body, Human Health
Discussion Guide

Overview

The human body is an amazing machine. Its many parts and numerous systems work seamlessly together to allow us to move, think, heal, and experience the world. The first two video segments listed below provide overviews of the human body and its many systems. The others zero in on how diet and exercise can help us keep our bodies fit and working at peak performance.

Use this discussion guide and related videos in your classroom to deepen students' appreciation of the human body and the care it needs and deserves.

Student Glossaries

Explain to the class that mastering specialized vocabulary is a key part of learning science. Have students use index cards to create individual glossaries. The activities for each video segment will begin with a "Student Glossaries" assignment.

Using dictionaries, science books, and other classroom references, students should create glossary cards for each new scientific term. Each card should contain the term, phonetic spelling, part of speech, and definition. Encourage students to keep their cards in alphabetical order.

Classroom Activities

1. Show the segment "The Human Body" from the *Ultimate Guide: Human Body* video.
    - **Student Glossaries:** Give each student four index cards. Then write *carbon, hydrochloric acid, phosphorus,* and *protein* on the board. Direct students to research and write a glossary card for each term.
    - **Discussion:** The segment describes the human body as "the most complex structure on our planet." Do students agree with that characterization? Why or why not?

2. Show the segment "Introduction to Human Biology: The Human Body Systems" from the *Life Science: Human Biology* video. (Access to *unitedstreaming* is required.)

- **Student Glossaries:** Give each student nine index cards. Then write *circulatory system, digestive system, endocrine system, excretory system, muscular system, nervous system, reproductive system, respiratory system,* and *skeletal system* on the board. Direct students to research and write a glossary card for each term. (Note: Leave the terms on the board for the next activity.)
- **Science:** Read aloud the following body parts and ask students to identify the bodily system to which each belongs:
    - bicep (muscular system)
    - bone (skeletal system)
    - heart (circulatory system)
    - lung (respiratory system)
    - brain (nervous system)
    - stomach (digestive system)
- **Research:** Divide the class into groups. Direct each group to create a poster that illustrates one of the following bodily systems: circulatory, digestive, muscular, nervous, respiratory, or skeletal.

3. Show the segment "How Exercise Affects Metabolism" from the *Body Story: Metabolism* video. (Access to *unitedstreaming* is required.)
    - **Student Glossaries:** Give each student two index cards. Then write *metabolism* and *mitochondria* on the board. Direct students to research and write a glossary card for each term.
    - **Writing:** The segment jumps fairly quickly from the start of George's exercise program to his sense of triumph eight weeks later. In real life, though, novice exercisers often face fading enthusiasm or downright discouragement. Invite students to script a new scene during which George's friend encourages him during a rough patch. Challenge students to equip the friend with lines that offer real motivation rather than just guilt or bullying, which seldom prove effective for long-term change.
    - **Independent Activity:** Invite students to visit http://www.verbnow.com/. This site encourages kids to become more physically active. The site was developed by the U.S. Centers for Disease Control and Prevention (CDC).

4. Show the segment "Body Image: To Your Health" from the *Reality Matters: Body Image: Extreme Measures* video. (Access to *unitedstreaming* is required.)
    - **Student Glossaries:** Give each student three index cards. Then write *fat, vitamins,* and *minerals* on the board. Direct students to research and write a glossary card for each term.
    - **Discussion:** The segment states that "one out of every two teens doesn't eat a healthy diet." Do students agree with this assessment? Do they think it accurately describes their eating habits or the eating habits of their friends? Ask students how they decide what foods to eat.

- **Debate:** You can find soda and snack machines in many middle schools and high schools. However, many school districts have decided to remove these machines to help teens make healthier decisions about what they consume. Divide the class into small groups and have each group debate whether vending machines full of soda and candy should be allowed on school property.

Academic Standards

This discussion guide addresses the following national standards.

National Academy of Sciences
http://books.nap.edu/html/nses/overview.html#content

- Science as Inquiry: Understanding about scientific inquiry
- Life Science: Structure and function in living systems
- Science in Personal and Social Perspectives: Personal health

Mid-continent Research for Education and Learning
http://www.mcrel.org/compendium/browse.asp

Health
- Knows the availability and effective use of health services, products, and information
- Understands essential concepts about nutrition and diet
- Knows how to maintain and promote personal health

Language Arts
- Uses the general skills and strategies of the writing process
- Gathers and uses information for research purposes
- Uses viewing skills and strategies to understand and interpret visual media

Physical Education
- Understands the benefits and costs associated with participation in physical activity

Science
- Understands the structure and function of cells and organisms
- Understands the nature of scientific knowledge