

5.1 What are the Major Systems of the Human Body?

Story Extension for This Lesson:

The early explorers in North America showed incredible courage to overcome a forbidding and challenging landscape, and climate to map out the landforms and waterways. Some, like those on the Franklin expedition, did not survive. Human beings and other animals have certain survival boundaries—for air, food, water, temperature, and even rest—that they are required to maintain to optimize their health. Explorers often were at the edge of these boundaries. Our bodies are very complex and adaptable, and our systems work well together to try to maintain homeostasis (where systems work together to maintain a certain equilibrium). This introductory/diagnostic activity will elicit background knowledge concerning the human body and its systems and organs.

Grade: 5

Strand: Human Organ Systems

Big Ideas:

- Organ systems are components of a larger system (the body) and, as such, work together and affect one another. (Overall expectations 2 and 3)
- Systems in the human body work together to meet our basic needs. (Overall expectations 2 and 3)

Overall Expectations:

3. demonstrate an understanding of the structure and function of human body systems and interactions within and between systems

Specific Expectations:

2.4 use appropriate science and technology vocabulary, including circulation, respiration, digestion, organs, and nutrients, in oral and written communication

3.1 identify major systems in the human body (e.g., musculoskeletal system, digestive system, nervous system, circulatory system) and describe their roles and interrelationships

3.2 describe the basic structure and function of major organs in the respiratory, circulatory, and digestive systems

Inquiry Skills:

Recording, Gathering Data, Outlining

Instructions:

Part 1:

Use the story about John Rae and the story hook above to set the context for learning about the human body.

Part 2:

After reading the story about John Rae, divide the class into five or six groups. This activity will employ the graffiti strategy to elicit information from the students.

Display the question "What are the major systems and organs in the human body? What functions do these parts play to maintain our health?" Each group starts with one piece of large chart paper, and they record all the information they currently know about the human body systems and organs. They may use a mind map, tree diagram, word web, or any other organizational tool of their choice. As groups begin to run out of ideas (~10 minutes), have each group rotate clockwise so that they are looking at another group's paper. They can analyze the information there, and add any information that they see is missing. Continue rotating groups until they have seen everyone else's sheet. Once that is done, most of the sheets should have similar information as groups fill in gaps and missing pieces.

Part 3:

As a class, review one or two of the sheets. If there are disagreements about any of the information, that can be a great launching point for further inquiry to ascertain current information regarding that topic.

Materials List:

- chart paper
- markers
- copy of the story of John Rae

Connections:

The story of John Rae is an excellent fit with the **grade five Social Studies unit: First Nations and Europeans in New France and Early Canada.**

John Rae was unusual for his time because of his willingness to adopt Inuit ways of survival, unlike fellow explorers like Franklin. This fact can open up many lines of inquiry related to European and Aboriginal ways of life.

Subject Area:

Social Studies

Assessment Strategy:

This activity is a diagnostic assessment to indicate the students' levels of background knowledge, and to assist in more detailed planning based on students' current levels of knowledge.

Connects to:

Grade 5