

5.5 How do we make sure we are healthy for our journey?

Story Extension for This Lesson:

Before Sam, Alex, and their class head off for their Arctic adventure, they must make sure that they are all healthy for the journey. John Rae was a medical doctor, which was definitely a handy skill on the long, harsh journey. In this activity, students will build on the skills they developed when researching the digestive system. They will choose a body system, identify the main organs and their function, and describe ways to optimize the health of this system. Finally, students will build some type of model or do a simulation to show how the system, or major component of the system, works (similar to the demonstration that started the research on the digestive system).

Grade: 5

Strand: Human Organ Systems

Big Ideas:

- Organ structures are linked to their functions. (Overall expectations 2 and 3)
- Systems in the human body work together to meet our basic needs. (Overall expectations 2 and 3)

Overall Expectations:

1. analyze the impact of human activities and technological innovations on human health
2. investigate the structure and function of the major organs of various human body systems
3. demonstrate an understanding of the structure and function of human body systems and interactions within and between systems

Specific Expectations:

- 1.1 assess the effects of social and environmental factors on human health, and propose ways in which individuals can reduce the harmful effects of these factors and take advantage of those that are beneficial

2.3 design and build a model to demonstrate how organs or components of body systems in the human body work and interact with other components

2.4 use appropriate science and technology vocabulary

2.5 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes

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

3.3 identify interrelationships between body systems

3.4 identify common diseases and the organs and/or body systems that they affect

Inquiry Skills:

Searching, Designing, Outlining, Reporting Instructions:

Instructions

Part 1:

Review the previous work done on the digestive system. Remind the class that the digestive system is just one essential system among many in our body. If any system is not healthy, then suffering and ill health are a result.

Part 2:

This activity sets up nicely for a Jigsaw instructional strategy.

- <http://edtech2.boisestate.edu/reilleyd/502/jigsaw.html>

Arrange the class into “Home Groups” of five to seven students, depending on how many organ systems you wish to focus on. Assign each member of each group to become an expert on one of the body's main systems: Nervous System, Circulatory System, Respiratory System, Immune System, Muscular System, Skeletal System, and Excretory System.

Use the following questions to help guide students' research:

- What is the system you are investigating? Why is it important?
- What are the key organs in this system, and what are their specific functions?
- What are some ways in which you can optimize the health of this system?

NOTE: Research on maintaining the health of bodily systems will most likely include one or more of diet, adequate sleep, exercise, and stress reduction. All of these factors are within each individual's control, and this Health connection is one of the big ideas in this unit.

A good overview of the main systems of the human body, and their components can be found at:

- A Kid's Guide to the Human Body: <http://www.accuterm.com/life-sciences.html>

There are also countless other sources available. One of the key skills involved in research is getting students to accurately search for information at an appropriate level of complexity. One tool that can be of use is the website [kiddle.co](http://www.kiddle.co), which is a visual search engine for kids.

Part 3:

Once the Experts have finished their research, have the Home Group reassemble, and each Expert shares their research with the other members of the Home Group. This ensures that each student gets some exposure to the different systems of the body.

Materials List:

- (optional) computers or tablets for research
- (optional) books for research

Connections:

Language: Reading and Writing,
Research Skills

Subject Area:

English, Physical Education, Health

Connects to:

Grade 5

Assessment Strategy:

The Expert presentations for the Home Group can be assessed, including a mark for Oral Language. Emphasize to students that their presentation should be sure to include the three key questions that guided their research.