

5.8 Alex and Sam Write New Entries into John Rae's Lost Journal: How Did He Survive?

Story Extension for This Lesson:

Alex, Sam, and their class have finally embarked on their journey North to retrace some of the route that John Rae and his explorers took. The class has warm clothing, lots of healthy food, cookstoves, tents, small heaters, and other supplies to ensure that they keep their bodies in peak condition.

Grade: 5

Strand: Human Organ Systems

Specific Expectations:

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)
- 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)
- Choices we make affect our organ systems and, in turn, our overall health. (Overall expectations 1 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

Inquiry Skills:

Hypothesizing, Demonstrating

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

1.2 evaluate the effects, both beneficial and harmful, of various technologies on human body systems, taking different perspectives into account

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

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

Instructions:

Part 1:

Discuss with the class what a "journal" is and the text features, if they are not familiar. You may wish to read to them a historical journal entry, or there are many children's books written in the form of a journal.

- Example: <http://www.goodreads.com/list/show/3717.DiariesandJournalsinChildrensLiterature>

Part 2:

John Rae was a medical doctor. In his journal that was presented to Alex, Sam and their class, he outlines some of the physical and environmental challenges that his team had, and how they overcame them. In this assignment, students will use what they have learned in the previous inquiries about the human body to write five to seven fictional journal entries, pretending to be John Rae describing the hardships and physical challenges. Here are some writing prompts to assist students in developing their ideas:

- What are some of the technologies and materials they used to help them survive (clothing to keep them warm, transportation methods, materials they carried for survival)?
- Explain the diet that they subsisted on.
- Give some details of the physical toll that the journey took on the explorers, including their muscular and skeletal systems, their skin, their respiratory system, nervous system, and digestion.

Materials List:

- computers or tablets for research

Connections:

Language: This activity combines the use of scientific concepts and knowledge with creative writing. You may want to go over the features of a journal or diary in Language class before students write their fictitious science journal.

Subject Area:

English

Connects to:

Grade 5

Assessment Strategy:

See attached for potential science success criteria (teacher should generate list with the class, but attached list can serve as a guide). Teachers may also choose to assess this assignment for writing.

Handouts/Assessments:

- Grade 5 potential success criteria

Grade 5 Human Organ Systems Success Criteria for Summative Project

Teachers: Below are possible success criteria for the final project. The final list of criteria is best generated by you with your class.

Knowledge and Understanding

I have:

- ☐ identified several human body systems
- ☐ listed food options for an Arctic journey and how they would impact human health over a long journey
- ☐ listed some of the technologies used to help maintain human health on the long journey

Thinking & Investigation

I have:

- ☐ gathered information from various sources to help in my research
- ☐ summarised key information in my own words
- ☐ hypothesised the effects of a long Arctic journey on human organs and systems

Communication

I have:

- ☐ used correct science and technology vocabulary that we have learned during our unit
- ☐ developed 5-7 journal entries to share my information and ideas
- ☐ included details about human health, including specific organs and systems, in my journal entries

Application

I have:

- ☐ applied my understanding of human digestion and nutrition to the Arctic expedition
- ☐ shown how different choices people make can impact their health
- ☐ shown how the environment can have a positive or negative impact on human health