HUMAN BODY INQUIRY PROJECT - PRESENTING INFORMATION IN DIFFERENT WAYS

CATHY CLARKE (/USERS/CATHY-CLARKE), BRIDGETTE HASTINGS (/USERS/BRIDGETTE-HASTINGS)

Classroom Catalyst - by Cathy Clarke and Bridgette Hastings

Purpose: To help students develop an understanding of how the different human organ systems function and work together, using an inquiry approach.

Curriculum Expectations:

Science - Understanding Life Systems (Human Organ Systems)

- analyse the impact of human activities and technological innovations on human health;

- investigate the structure and function of the major organs of various human body systems;
- demonstrate an understanding of the structure and function of human body systems and interactions within and between systems.

Language

Oral Communication:

- communicate orally in a clear, coherent manner, presenting ideas, opinions, and information in a readily understandable form

Writing:

- determine whether the ideas and information they have gathered are relevant, appropriate, and adequate for the purpose, and do more research if necessary
- gather information to support ideas for writing, using a variety of strategies and a range of print and electronic resources
- Produce pieces of published work to meet identified criteria based on the expectations related to content, organization, style, use of conventions, and use of presentation strategies

Reading:

- demonstrate understanding of a variety of texts by summarizing important ideas and citing supporting details

Arts

- produce a variety of two and three dimensional works of art

What We Did

Throughout the year, we conducted a variety of lessons on how to research and take jot notes. We scaffolded student learning, starting with a great deal of intensive modelling, followed by gradual release of responsibility of students' learning. Once students were proficient at note taking, we started the above inquiry project.

In order to develop students' background knowledge of the different organ systems, we started with some explicit teaching and videos. Some of the videos we watched and discussed with our classes were:

https://kidshealth.org/en/kids/bodymovies.html (https://kidshealth.org/en/kids/bodymovies.html)

This website contains engaging and informative videos that got the students thinking about how the different organ systems function, as well as the important organs involved in each system.

The following videos were found on the Thames Valley District School Board media site:

Respiratory System: Intake and Exhaust (L120329)

Systems of the Human Body (L11119)

Mechanics of Life: Bones and Joints (L16485)

The students formed groups based on their interest in a particular organ systems (e.g., respiratory system, digestive system, circulatory system, etc.). The groups discussed what they already knew about their chosen organ system and came up with questions they had. Students had an organizer (see attached) that they used to research. Some of the questions they had to research were provided by us, whereas others were questions they had to come up with on their own. We made anecdotal observations while the students were working with their groups and conferenced with groups regularly to ensure they were on task and completing the required expectations.

Upon completion of their research, students prepared a presentation to share with the class what they had learned about their chosen organ system. Each class allowed the students to present in different ways. See below for a synopsis of what each teacher did.

Mrs. Clarke

I had recently attended a workshop on creating Google sites so I demonstrated and modelled this for my students and encouraged them to try it. Some of the groups did and others chose to use Google slides. The students were required to create an interesting and engaging presentation of their findings, including a 3D model to demonstrate some aspect of their system. Students presented to a group that included our class and a visiting Grade 4 class.

The models the students used to demonstrate their systems were very diverse. The students completed all the work at school and looked for ideas online. Some of them attempted one model and did not have success and had to come up with a different idea.

One group purchased a cake and decorated it with candy to demonstrate the parts of the digestive system. Another group demonstrated how mucus assists the immune system by placing slime and a marble in rubber tubing to demonstrate how it prevents foreign objects from entering. The students were highly engaged in their projects and were excited to demonstrate and share their learning with their classmates. Rather than students completing handouts about each system and developing a surface understanding of each they dug deep into one system and shared their learning.

Students were evaluated based on anecdotal observations of the process of working together, their understanding of the information they presented and questions asked by the audience and teacher.

Mrs. Hastings

I knew when beginning this project that I wanted to try out some of the coding I had been learning about. I had spoken with a colleague who had used Makey Makey in conjunction with scratch to create an interactive final project for this human organ system unit.

Prior to beginning completion of the final product, I modelled and scaffolded how to use Scratch. Throughout the year, students also received multiple opportunities to practice and become more comfortable with coding. After completing the research on their graphic organizers and finding the answers for their inquiry questions (outlined above) students wrote a number of paragraphs to demonstrate their learning - one was an overview of their chosen organ system, as well as a paragraph describing the purpose and function of each important organ involved. Students then used Scratch to record themselves reading their paragraphs.

Once students had completed their paragraphs, they drew a picture of their organ system on a large piece of butcher block paper inside a body outline, labelling the important organs involved and colouring them in, finally adding a small brass fastener that went through each organ (this functioned as the button on the final product). The alligator clips from the Makey Makey system were attached onto the back of each brass fastener. Once all paragraphs were recorded and their organ system was drawn and labelled, students used Scratch to code the Makey Makey systems so when each brass fastener was touched, the computer played their description of the corresponding organ/overview.

Students were evaluated on their research of their chosen organ system, as well as the paragraphs they wrote (see rubric on the graphic organizer/outline). Their knowledge was assessed through their ability to answer questions when provided the opportunity to share their final projects with others

RESOURCES

- Videos on Human Organ Systems (https://kidshealth.org/en/kids/bodymovies.html)
- Page to Write Student Paragraphs (https://connex.stao.ca/sites/default/files/organ_system_research_writing_paragraphs-2.pdf)
- Graphic Organizer for Inquiry Questions and Research Notes (https://connex.stao.ca/sites/default/files/human_organ_systems_-_research-6.pdf)
- Makey Makey Projects (https://connex.stao.ca/sites/default/files/img_1196.jpg?width=1800px&height=1800px&iframe=true)
- Students Coding With Scratch (https://connex.stao.ca/sites/default/files/img_1200_0.jpg?width=1800px&height=1800px&iframe=true)
- Students Choosing How to Present Their Information (https://connex.stao.ca/sites/default/files/collage_0.png?width=1800px&height=1800px&iframe=true)

ELEMENT

- Inquiry (/expert-elements/inquiry)

(/classroom-catalysts) RETURN TO CATALYSTS (/classroom-catalysts)