Seattle Children's Research Institute
SCIENCE EDUCATION DEPARTMENT

Virtual Science Adventure Lab (VSAL)
Neuroscience Lesson Summary

Grade Levels: This virtual lesson is appropriate for students in grades K-6

Time Required: 20 minutes

Outcomes and Objectives

Learning Targets

- To introduce students to the brain.
- To expose students to authentic equipment and methodologies in the field of neuroscience.

Assumptions of Prior Student Knowledge

- Students will have a basic understanding of what the brain is.

Description

In this virtual lesson, students will learn about the brain and its role in helping us move. They will also view a demonstration of an electromyograph to measure electrical activity of cells and learn about the anatomy of the brain using cow brains.

Vocabulary

- **System**: A group of organs that work together.
- **Nervous System**: The group of organs that work together to send, receive, and interpret information from all parts of the body.
- **Brain**: The organ that is the control center for the body.
- **Electromyograph (EMG)**: A piece of equipment that measures the electricity produced by muscles when they contract (or squeeze).
- **Brain Stem**: The part of the brain that controls basic body functions, such as heart rate, breathing, and sleep.
- **Cerebellum**: The part of the brain that controls balance and muscular coordination.
- **Cerebrum**: The part of the brain that controls higher brain functions, such as thinking and moving.
- **Frontal Lobes**: The part of the cerebrum that controls problem solving, reasoning, and motor function.
- **Parietal Lobes**: The part of the cerebrum that controls perception of touch, pressure, temperature, and pain.
- **Temporal Lobes**: The part of the cerebrum that controls hearing and memory.
- **Occipital Lobes**: The part of the cerebrum that controls visual processing.