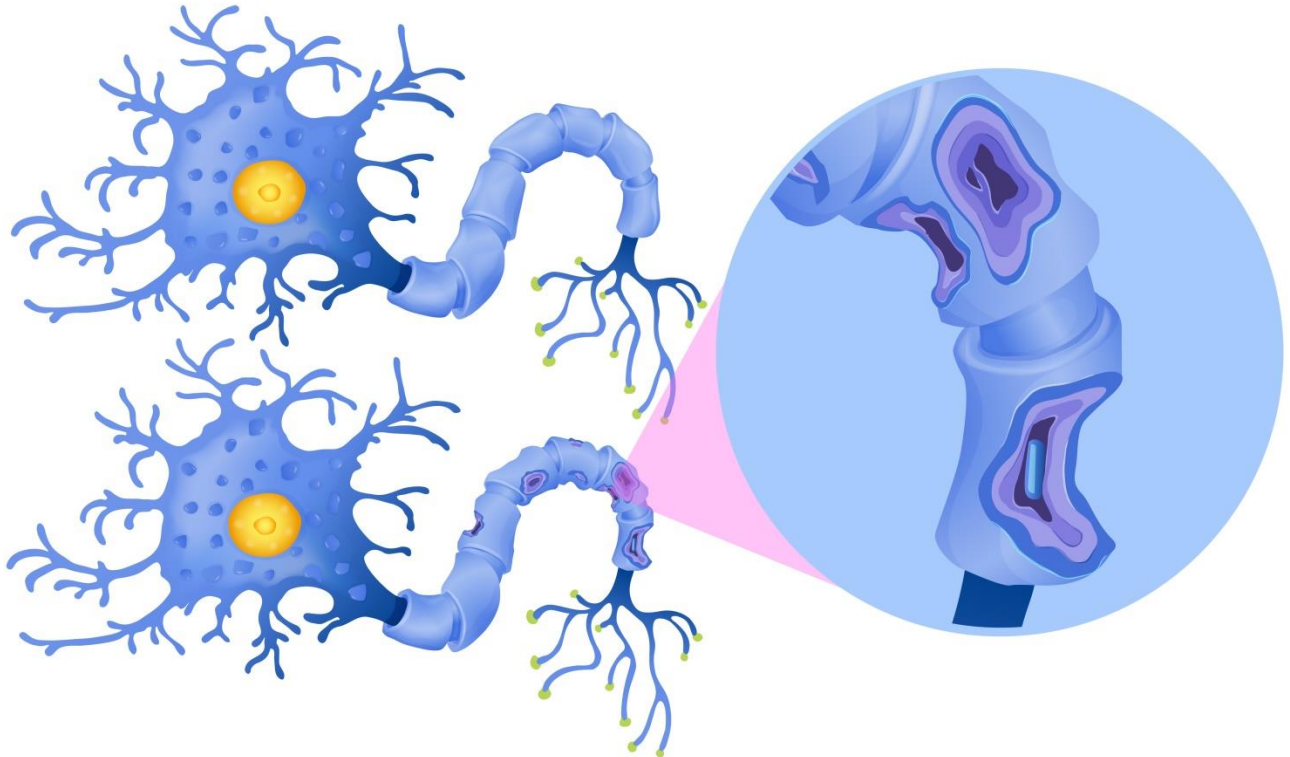


Inquiry Question

What does a neuron look like?

Name: _____

Date: _____



The survival of organisms depends on their ability to sense and respond to stimuli in their environment. Sensory organs of the body take in information from an organism's surroundings and send them to the brain. This network of cells that make up the nervous system are called nerve cells or neurons. There are several hundred billion nerve cells in the human body. The brain itself contains over 100 billion nerve cells.

Each neuron is made up of a cell body with a nucleus which contains the genetic material. Dendrites extend from the cell body, acting like antennas to receive signals from other nerve cells. Each neuron has a single axon that shoots out from its cell body and sends signals to another neuron, muscle or gland.

In this project you will learn about the structure of a neuron by constructing a model.

General Instructions

The goal of this project is to better visualize the structure of a neuron by constructing a model.

Materials you'll need:

- Computer with internet access
- Pictures or photographs of neurons are available at [Neuroscience for Kids](#)
- Playdough or modeling clay (about a golf ball-sized amount of each of 4 different colours)

Ideas and Hints:

- The brain is made up of about 100 billion nerve cells (also called "neurons"). A neuron has 4 basic parts: the dendrites, the cell body (also called the "soma"), the axon and the axon terminal.
 - Dendrites - Extensions from the neuron cell body that take information to the cell body. Dendrites usually branch close to the cell body.
 - Cell body (soma) - the part of the cell that contains the nucleus.
 - Axon - the extension from the neuron cell body that takes information away from the cell body. A single axon projects out of the cell body.
 - Axon terminal - end part of an axon that makes a synaptic contact with another cell.

Procedure/Methods:

- Using the 4 different colours of modeling clay or playdough, build a model of a neuron using different coloured clay for the different parts of the neuron.
- Take pictures of your models making sure to label and draw arrows to the dendrites, soma, axon and axon terminal of your neuron.

Project submission:

Assemble your pictures into one file and upload your final project to the Biology projects drop box.