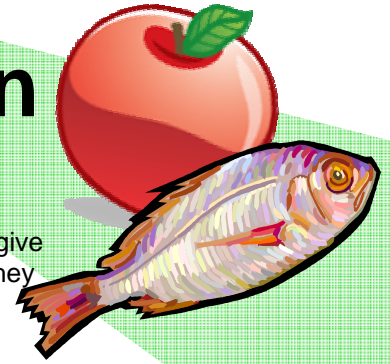


# Model It - Neuron



In this lab you will create three different models of a neuron. For each model, be sure to clearly label all the parts. Use pictures from the internet or books to give you an idea of where the components of a neuron should go and what shape they should be. Use different colors to indicate different structures. Make a neural circuit with a few of the neurons. Create sensory or motor systems.

**QUESTION:** What are the parts of a neuron and what is their function?

**MATERIALS:** See the list of materials needed for each model that accompanies the directions for making the model.

## PROCEDURE:

### 1. Bead Neuron

Get out those beads and make a neuron! This neuron with seven dendrites requires a total of 65 beads: 42 for the dendrites, 10 for the cell body, 12 for the axon and 1 bead for the synaptic terminal. String the beads using the pattern provided. The string can be yarn, rope, or for the best result use flexible wire. You can also create your own pattern or use a different colored bead for a nucleus in the cell body.

### 2. Pipestem Cleaner Neuron

Get out those pipe cleaners and make a neuron! This neuron uses pipe cleaners in 5 different colors: one color each for the dendrites, cell body, axon, myelin sheath and synaptic terminal. Any colors will do.

- a. Take one pipe cleaner and roll it into a ball. This will be the cell body.
- b. Take another pipe cleaner and attach it to the new "cell body" by pushing it through the ball so there are two halves sticking out. Take the two halves and twist them together into a single extension. This will be the axon.
- c. Take other pipe cleaners and push them through the "cell body" on the side opposite the axon. These are dendrites. These can be shorter than your axon. You can twist more pipe cleaners to make more dendrites.
- d. Wrap small, individual pipe cleaners along the length of the axon. These will represent the myelin sheath.

### 3. CD Neuron

What can you do with those free CDs you receive in the mail? Make a neuron!

- a. Drill several holes in one side of the CD.
- b. Tie lengths of wire or string through these holes. These wires or string become the dendrites of your neuron.
- c. Attach a long wire or string to the center hole of the CD. This long wire or string becomes the axon.
- d. Make a hole in the center of a plastic container (small yogurt container works well for this) and thread the end of the axon through it. The container becomes the synaptic terminal.



# BEAD NEURON

