



Activity 1: Build-A-Neuron



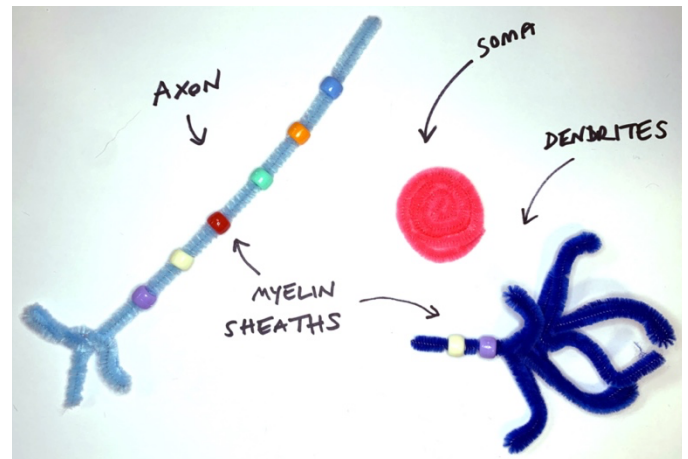
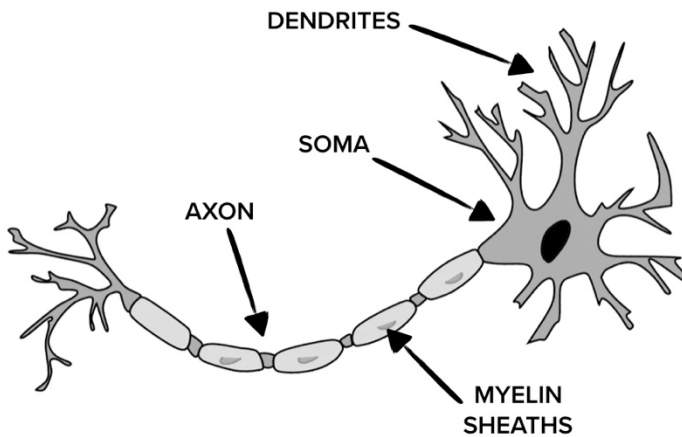
You have over 85 billion cells in your brain. Put them to work by making a 3D model of one of them!

Materials:

- Pipe cleaners
- Plastic beads

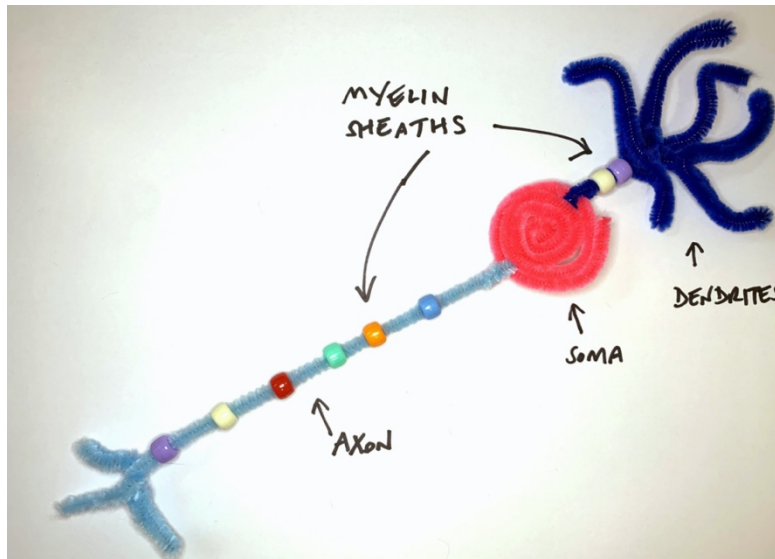
Join us on **Nov. 7** at **3pm** to do this activity together! bit.ly/satsci20

1. Brain cells, or *neurons*, have multiple different parts, like in the pictures below. To build one, start by making a small ball out of one pipe cleaner. This ball is your *soma*, or cell body. It contains all the DNA of the cell and keeps it alive.



2. Give the cell a way to sense signals from other cells with arms called *dendrites*. Use another pipe cleaner to make a set of little branches for these. Don't connect them to the soma yet—we'll do that at the end!
3. Next, our cell needs to send signals. Use a third pipe cleaner to make a long arm and twist together a few little branches at its end. This is called the *axon*, and it can connect to lots of other cells.

4. We can't forget the beads! See those ovals along the axon in the diagram above? Those are *myelin sheaths*, and they help a neuron's signal travel faster. String beads along the axon and on some dendrites if you'd like.
5. Lastly, attach all these pieces to the soma. Now you've made a neuron!



Further fun: Neurons that sense things (*sensory neurons*) have to take in lots of signals. Neurons that help move muscles (*motor neurons*) have to send out lots of signals. Which type of neuron below do you think each of these might be? Would they have longer dendrites (on top) or axons (on bottom)?

