

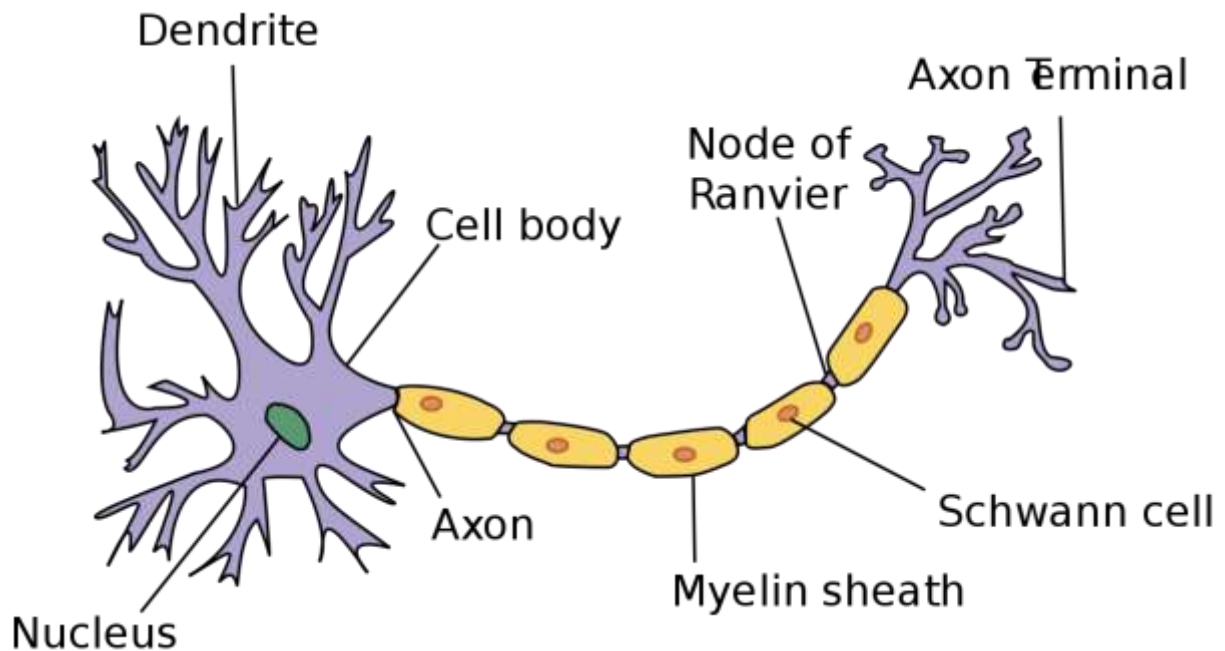
How to make a model of a Neuron

Neurons are really specialised cells in the body so in order to understand them the best way is to make a model of them. There are a couple different ways you can make a model of the neuron. You can use clay, playdough, styroform, recyclables , food or anything else you can get your hands on. I have included a few different ways you can do it below. Just use whatever you have at home. If you can't, feel free to draw a picture of a neuron and label all the important bits. Remember to take a picture when you are done and email it to me at niamh.kerslake.staff@ctyi.org

You may need the help of an adult or someone at home!

After you have made your model, try to explain how the neuron works to somehow at home!

This is what a neuron looks like, so try to recreate something like this however you can



Pipe cleaner Neuron



1. Take one pipe cleaner and roll it into a ball. This is will be the cell body.

2. 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.



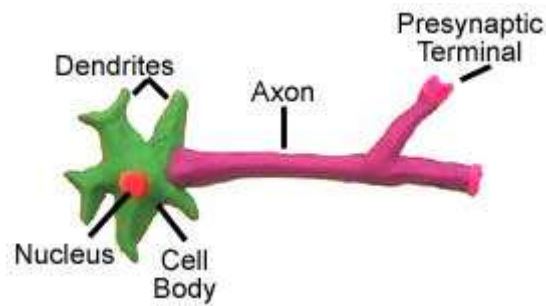
3. Take other pipe cleaners and push them through the "cell body" on the side opposite the axon. These are dendrites. These can be shorter than your axon and you can twist more pipe cleaners to make more dendrites.



4. Wrap small individual pipe cleaners along the length of the axon. These will represent the myelin sheath.

5. Wrap another pipe cleaner on the end of the axon. This will be the synaptic terminal.

Make a neuron (using playdough)



If you don't have playdough at home you can make your own

What you need: 1 cup of flour, 1/4 cup of salt, 3/4 cup of water, 3 tablespoons of lemon juice (vinegar should work too), 1 tablespoon of vegetable oil, Food colouring

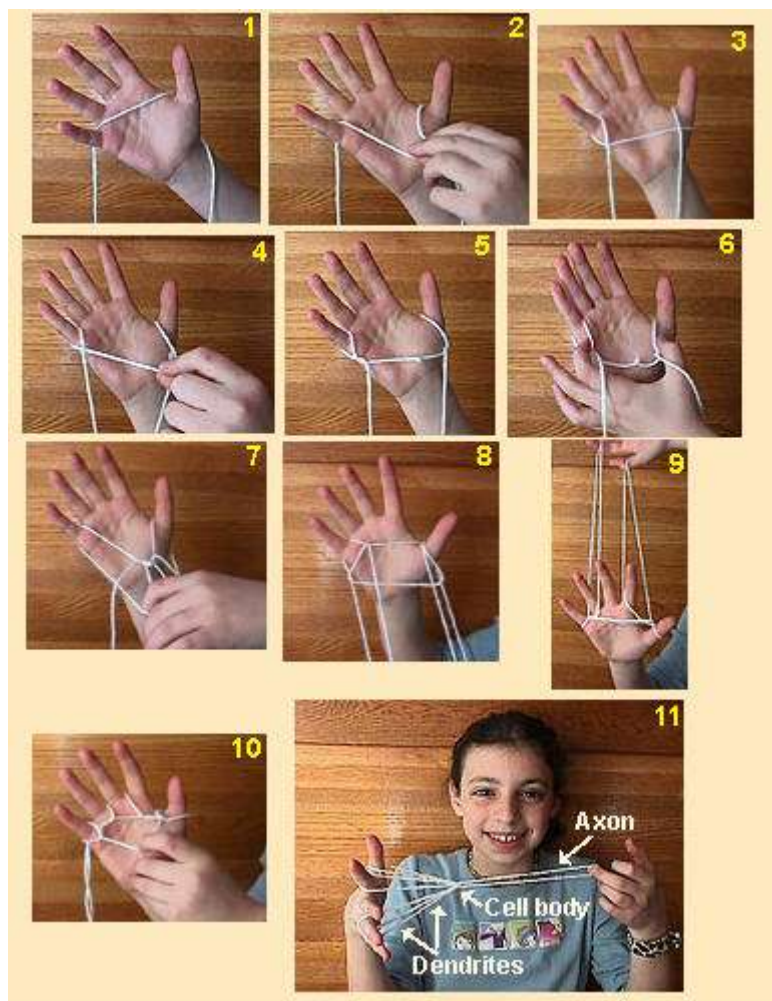
1. Add the water, oil and lemon juice to a medium non-stick pot and heat on medium heat on the stove (maybe even slightly lower heat depending on your stove).
2. Add food colouring to the water mixture.
3. In a mixing bowl, combine the flour, salt
4. After the water is hot, but not boiling, slowly add the dry ingredients to the pot and while mixing to combine. I use a wooden or plastic cooking spoon.
5. Continuously stir until the ingredients combine, dry out and begin to form a ball. If there are parts that seem a bit sticky still, just flatten the dough out and put the sticky side down on the bottom of the pot very briefly. Flip back and forth frequently until it doesn't seem sticky anymore. However, don't cook it too long. It is better to be a bit undercooked as it will firm up as it cools down.
6. Place on a sheet of wax paper until it cools down a bit. Then knead the dough for a minute or two to bring it all together.

Here's a youtube video for some inspiration:

https://www.youtube.com/watch?time_continue=123&v=Bxs-ISFdKHw&feature=emb_logo

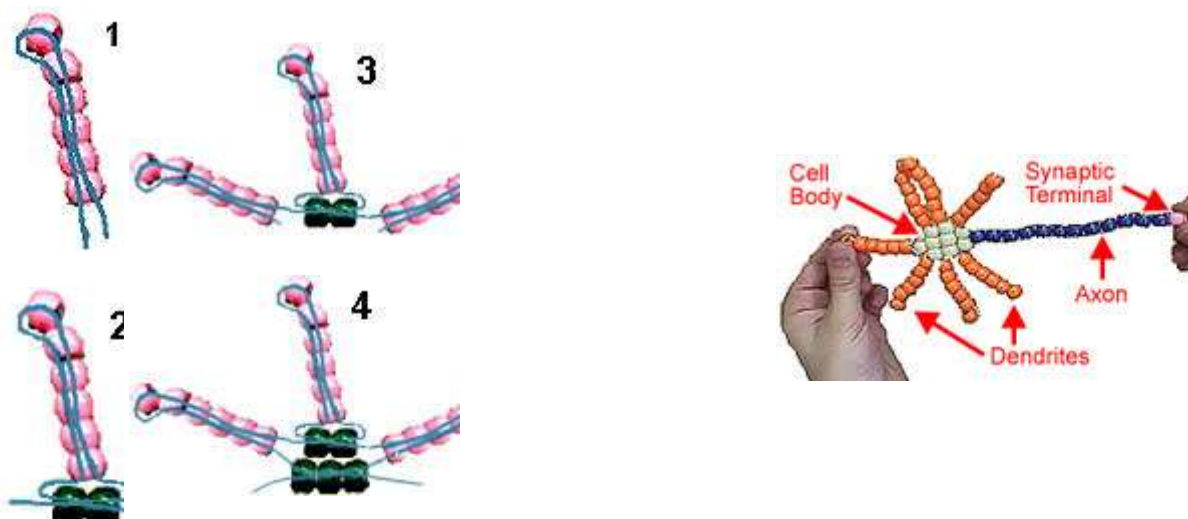
Make a neuron using just string

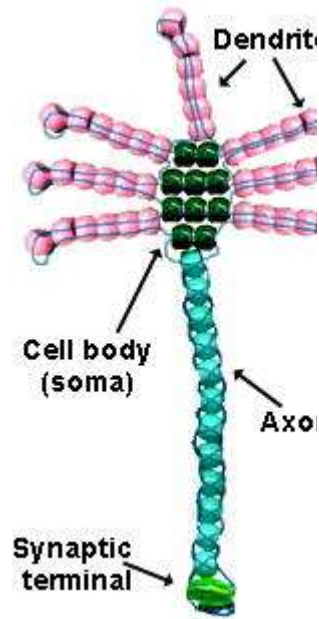
If you have string at home: you can make a neuron using string and your hands



Make a neuron using beads

If you have beads and string at home you can make a neuron using these. The string can be yarn, rope, or flexible wire.





Make a neuron using a CD

If you have old CDs at home you can make one using string that looks a bit like this

In this image, they made holes in the CD but you can just wrap the dendrites around the centre hole too!

