

## SUPPLEMENTAL MATERIAL 4

### Neuro for Kids - Example Ideas for Activities

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- What is a cell? Draw one. Is a neuron a cell? Draw one and discuss.
- Discuss different types of neurons and draw pictures. (keep simple for elementary students; include organelles, channels, etc.. for middle school students). Show them example pictures (e.g. pyramidal, Purkinje, motor, sensory neurons).
- Have them make neurons with pipe cleaners/Play-Doh
  - a. For middle school students use pipe cleaners for neurons and Play-Doh for glia, channels, or organelles, etc... . (e.g. Schwann cells, nucleus, mitochondria, neurotransmitters, receptors, channels, sodium, potassium, calcium, etc...). Ask the students what they are learning in their science class and have them apply that knowledge here
  - b. Ask the students to arrange the neurons in a circuit. Show the neurotransmitters (are they excitatory/inhibitory? What is the function of this circuit?).
- Discuss the lobes of the brain and have the students color in the lobes or make a brain using the Play-Doh and have the different lobes different colors.
- Neuroscience Jeopardy!
- Sensory labs (e.g. identify different odors and measure distance of detection and time to adaptation; test for blind spot, two point discrimination, etc...)
- Neurotransmitter races: Create groups. Each group starts at a starting line and has a ball. Each group member has a specific receptor (their hands). A neurotransmitter is called out by the teacher (e.g. Ach). The student with the ball must pass the ball (neurotransmitter), but only the students with the correct “receptor” (e.g. cholinergic/muscarinic) can receive the run to the next station, continue until someone reaches the finish line. You can make this as simple or complex as you like.
- Brain model – discuss specific regions of the brain and have the children find them on the model. If your models have multiple pieces, have the children take the model apart and put it back together. Then time them and see how fast they can do it correctly.
- \*It is also nice to let the children take something like a can of Play-Doh home with them.