

How to make a model mouse brain hemisphere

This activity accompanies the [Sleep and the Brain](#) video created by Alika Sulaman, a neuroscience graduate student at the University of Michigan. Alika created the video and activity as part of the University of Michigan Museum of Natural History's [Science Communication Fellows](#) program.

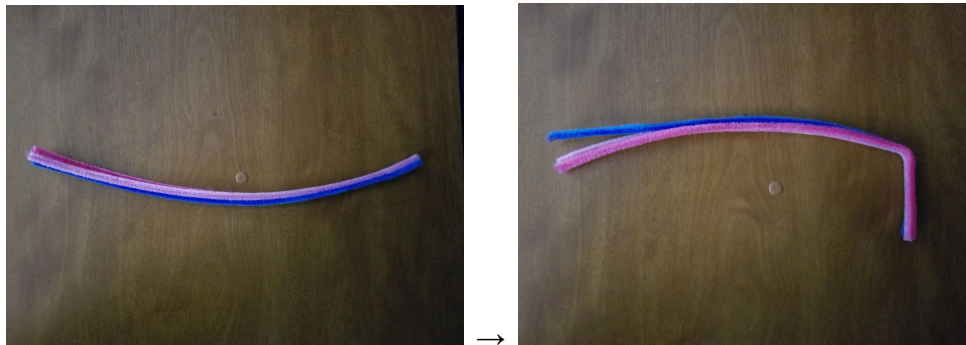
It is recommended for grades 3-8.

Materials:

- Pipe cleaners (~60 pieces)
- Scotch tape
- Optional:
 - Play-Doh or tiny balloons
 - Plastic straw
 - Light source (e.g. flashlight or laser pointer)

Method:

1. Gather 15-20 pipe cleaner pieces:
Either do all at once, or a few at a time.
 - a. At about 2 inches in from one end, bend downward at a right angle:



- b. On the other end, about 1 inch in from the end, bend slightly upward:



- c. Align all 15-20 pieces and use a piece of tape to hold the stack together.
2. Cut a piece of tape that is about 5 inches long.
 3. Lay on table with sticky side up. Fold a small piece on each end under so that the sticky part sticks to the table.

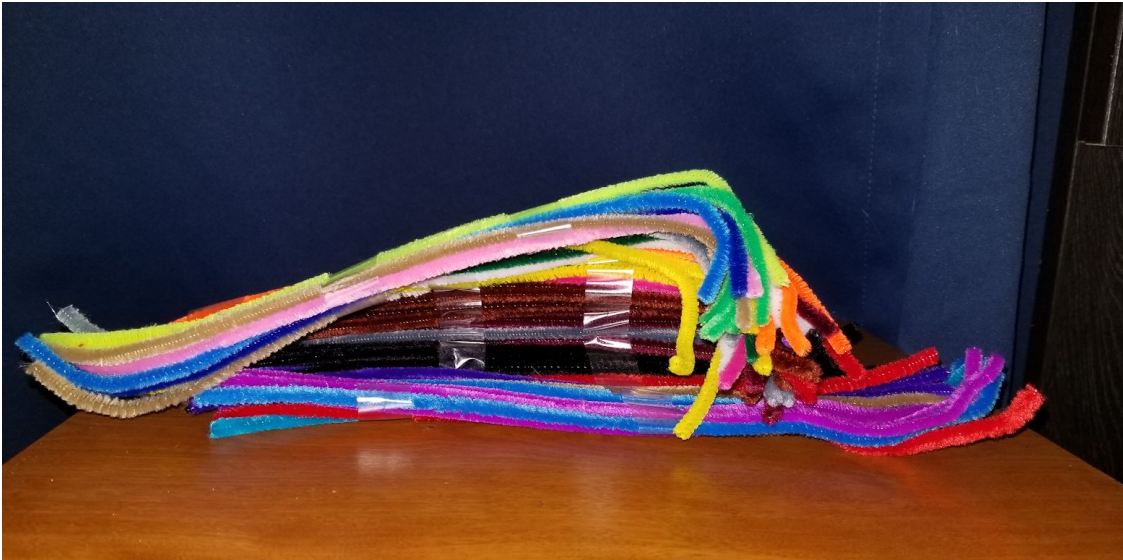
4. Place the part you have already made on the right end of the tape. The right angle part should be pointing up at you.
5. Lay more pipe cleaners to the left of the existing structure on the tape. The top of the newly added pipe cleaners should all start about one inch from the top of the first set. Fill the entire length of the tape.
6. Add another piece of tape to hold all of the pieces together.



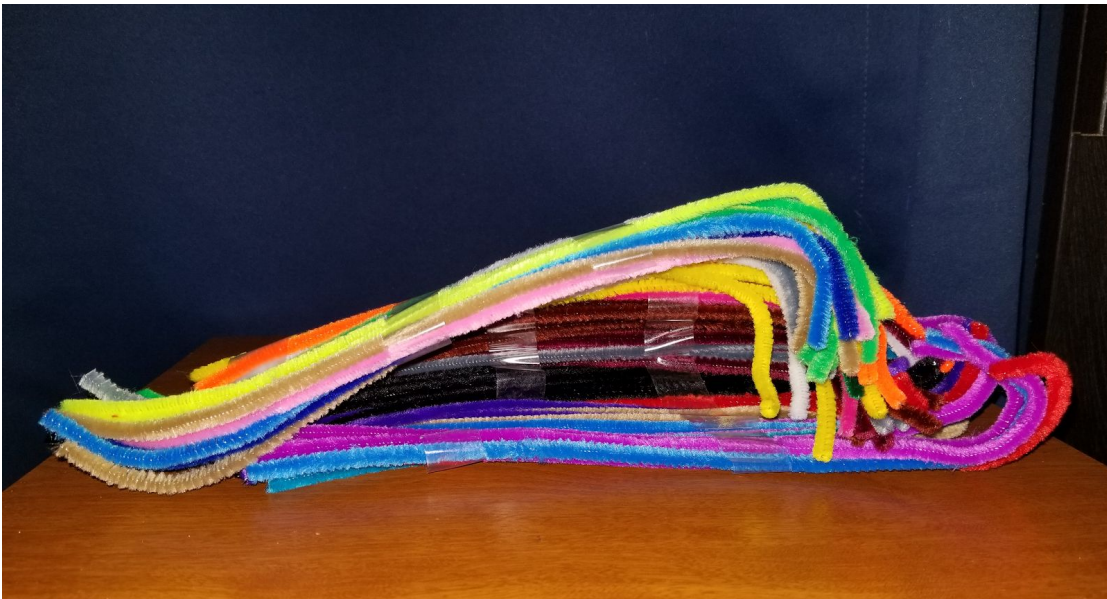
7. Half of the newly added set (closer to the right end of the tape): bend the overhanging ends up toward you (like the first set)



8. Unstick from the table and fold the right side of the structure over the left part. The ends that were facing up toward you are now pointing down toward the table (or toward you).



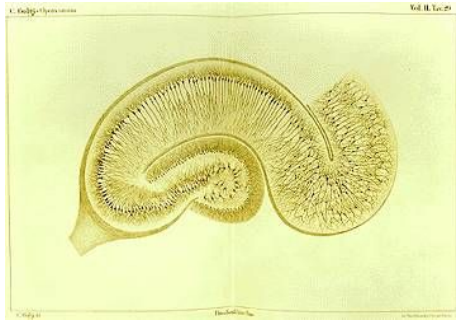
9. Bend the overhanging parts of the remaining pieces so that they point toward the other pieces. (This part represents the cerebellum, which sits at the back of the brain and is very important for coordinating your body's movement.)



OPTIONAL

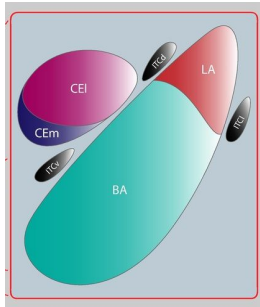
If you want to add some "brain regions," you can make shapes out of Play-Doh or small balloons and place them into the open area of the brain.

Want to try your hand at a **hippocampus**? This is a brain region that keeps track of where you are in space.



Think banana for the 3D shape!

How about the **amygdala complex**? This is a brain region that helps you to learn about scary things.



Think raindrop for the part on the right, and an egg for the part on the left!

amygdala image was adapted from Robert Hurt's licensed image [here](#).

If you want to deliver light into the brain like I did in the video, you can use a plastic straw as the tube and use a torchlight or laser pointer as the light source to send light through the tube, and into the brain region you want to “turn off”.