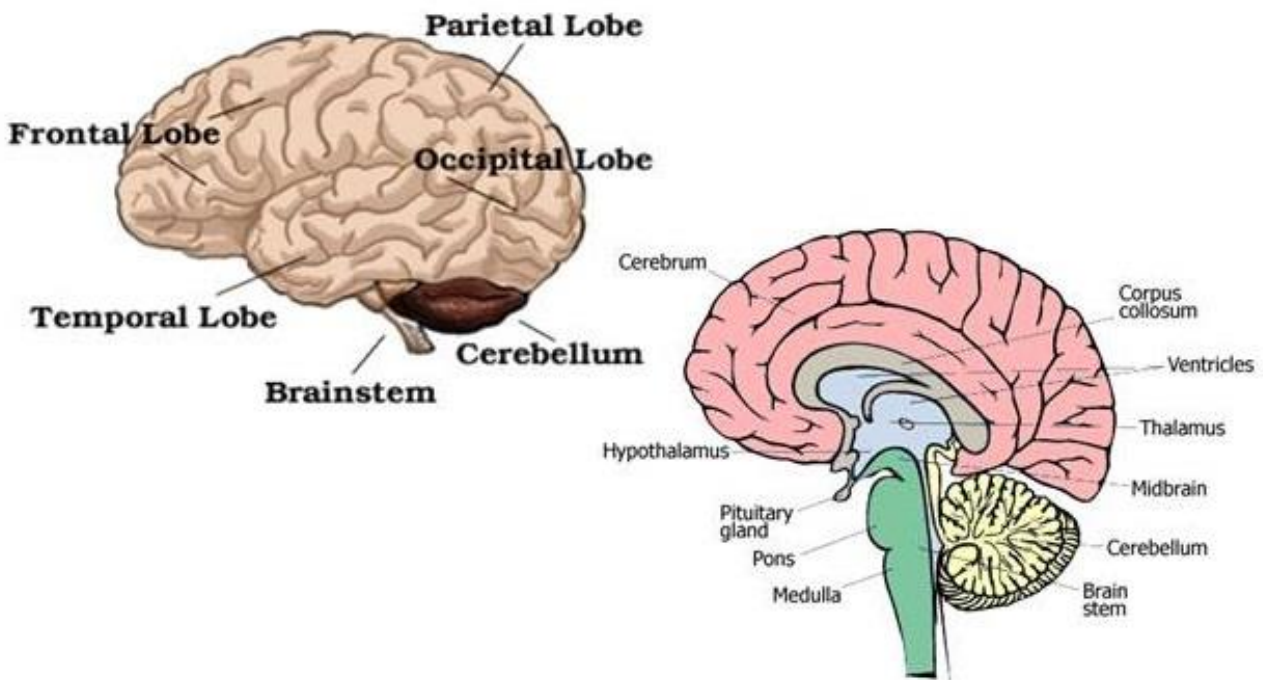


Inquiry Question

What does my brain look like?

Name: _____ **Date:** _____



The human brain is composed of many important parts. It includes the brainstem (the pathway between brain and spinal cord), the cerebellum (rear, lower portion), the hypothalamus and thalamus in the central region, the cerebrum (contains 2 hemispheres), and the corpus callosum (which holds these hemispheres together). The cerebrum is the largest part of the brain which consists of four main parts including: the frontal lobe, temporal lobe, parietal lobe, and occipital lobe.

How are all of these parts of the brain combined? Where are each of these different parts located in the brain? What does it look like? There are different ways in which we can view it, as a whole from different angles or as cross-sections.

In this project you will create a model of the brain by using clay, playdough, styrofoam, recyclables, food, etc. Create a whole brain or use a brain atlas and create cross-sections of the brain at different levels. Use different colors to indicate different structures.

General Instructions

The goal of this project is to learn about the different parts of the brain and to visualize what it looks like.

Materials you'll need:

Materials:

- Clay or Playdough or Styrofoam or Recyclables (bottle caps, cups, buttons, etc.) OR Food (fruit, jelly beans, etc.)
- A picture or diagram of the brain

Ideas and Hints:

Brain "Recipes"

Here are two recipes for the construction of a model brain:

Recipe 1 (from the Pacific Science Center <https://www.pacificsciencecenter.org> and the Group Health Cooperative in Seattle, WA)

Materials:

- 1.5 cups (360 ml) instant potato flakes
- 2.5 cup (600 ml) hot water
- 2 cups (480 ml) clean sand
- 1 gallon ziploc bag

Combine all of the ingredients in the ziploc bag and mix thoroughly. It should weigh about 3 lbs. (1.35 kg.) and have the consistency of a real brain.

Recipe 2 (from BrainLink)

Materials:

- 2 cups water
- 2 cups flour
- 4 teaspoons cream of tartar
- One quarter cup vegetable oil
- 1 cup salt
- Red food coloring

Mix the water, salt, flour and cream of tartar in a large bowl or blender until the lumps disappear. Then mix in the vegetable oil. Put the entire mixture into a sauce pan and "cook" it over low heat until it gets lumpy. Pour the mixture out and let it cool. Then knead and shape it into the form of a brain. Don't forget to add wrinkles (gyri) to your brain. Squirt in red food coloring for blood vessels.

Project submission:

Write up a set of tips and pointers for future students who decide to complete this project. Make your instructions clearer by creating a video of your techniques. If you can drop in to the school, you can present it to your teacher in-person. Otherwise, upload it to the project submission folder at the end of the unit.