Alexandra Colón Rodriguez PhD student Comparative Medicine and Integrative Biology Program Environmental and Toxicological Sciences Program Michigan State University

Do you know your brain? Hands-on activity

The purpose of this activity is to learn about the different parts of the brain and the functions of each part. Handouts (in color) with the parts of the brain and their functions as well

as the plaster brains should be provided. Participants can paint the plaster brains by identifying the parts of the brain with a different color or by painting them in another way.

Materials:

- Water
- Napkins
- Acrylic paints (~10 colors)
- Plastic cups
- Paintbrushes (small and medium)
- Plastic paint palette with 6 wells (~15)
- Small plastic or paper plates



Materials for mini plaster brains:

- Plaster of Paris (\$5-\$10)
- Brain shaped ice cube tray (Amazon – Fred's Brain Freeze Ice Cube Tray; makes 4 brains; \$4-\$8)
- Silicone spatula
- Glass bowl (Large)
- Water
- 1 cup, measuring cup





Making the mini plaster brains

 In a glass bowl, mix 2 cups of plaster of Paris with 1 cup of water. One mold takes 2 cups of plaster of Paris. Calculate accordingly.

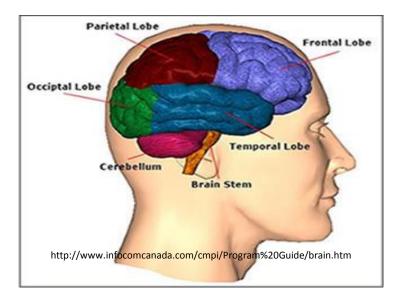
2. Mix well until there is a homogeneous thick mix.

- 3. Pour the plaster in the molds, filling them up all the way to the top. Move the molds softly from side to side to allow the plaster to set nicely and also to allow the top to get flattened. Let dry for approximately 15 min (Plaster of Paris) or 5 min (Fast set plaster).
- 4. Remove brains from mold and let dry (for at least 24 hours) on top of tracing paper or paper towels, because as they dry they release some water. *I have used the brains 1 hour after they were made and they worked fine, but it is not preferred because it is harder for the acrylic paint to stay.

Notes:

- Provide color pictures of the different lobes of the brain.
- Have a sink nearby to periodically rinse out and replace paint trays.
- Suggest that brushes should be rinsed in between colors.
- This is a messy activity, especially with young children.
- Set up a table to allow kids to leave their plaster brains to dry.

Parts of the Brain



Frontal lobe - Decision making, emotions, behavior, memory, movement

Temporal lobe - Language, hearing, memory

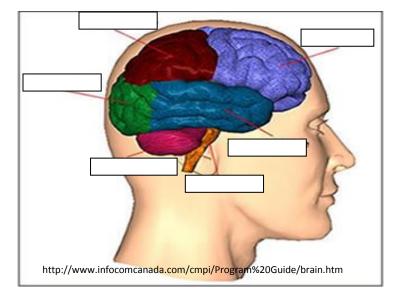
Occipital lobe – Vision

Parietal lobe – Sensory, spelling, spatial relationship

Cerebellum – Balance, motor coordination

Brainstem – Breathing, heart rate, sleep wake cycle





Identify each lobe of the brain by writing the correct letter in the blank space. Choose from the following:

- a. Brainstem
- b. Occipital lobe
- c. Cerebellum
- d. Frontal lobe
- e. Temporal lobe
- f. Parietal lobe