

Make Up Your Mind: Brain Cap Activity

Activity 1B

Activity Objectives:

Using paper templates, students will construct a three dimensional model of the exterior and interior of the brain. Students will be able to:

- ▼ Identify the cerebrum, cerebellum, and medulla
- ▼ Observe how the lobes of the brain lobes fit together
- ▼ Identify major lobes of the cerebral cortex
- ▼ Observe a portion of the spine, spinal cord, and spinal nerves
- ▼ Observe how structure and function are related in the brain

Activity Description:

Models are a motivating, effective and fun way to improve knowledge and promote self-directed learning. Students visualize and reflect as they construct models. In this activity, as they **“Make up Their Minds”**, your students will assemble a brain cap that will allow them to examine basic brain anatomy.

As they construct the brain cap, students will use templates provided in the teacher section of this activity along with processing out information from **Activity 1A A Piece of Your Mind: Brain Anatomy**. They will color, label, and list the function of each part of the brain. Next, students will cut out and construct their brain cap.

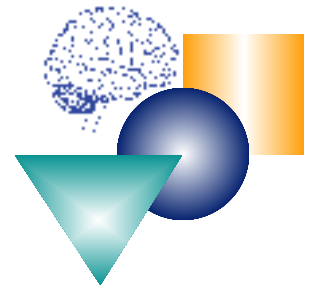
Activity Background:

This activity is designed to appeal to multiple intelligences as basic brain anatomy comes alive for students. This activity builds upon the work done in **Activity 1A A Piece of Your Mind: Brain Anatomy**. It will appeal to kinesthetic, spatial, and logical/mathematical intelligences as students construct a model of the exterior of the brain. Students will also construct nerve pathways and a model of how the nerves join in the brainstem and travel down the spinal cord through the vertebrae.

More in depth background information on brain anatomy is provided in **Activity 1A Piece of Your Mind: Brain Anatomy**,
<http://www.teiteachers.org/activity/activity-1a-piece-your-mind-brain-anatomy>

Materials:

- ◆ Brain Cap Templates (*provided after this teacher section of the activity*)
- ◆ Completed Brain Cap as an Exemplar
- ◆ Colored pencils or markers
- ◆ Scissors



Activity Overview




- ◆ Tape
- ◆ Glue
- ◆ *Student Activity Pages* from **Activity 1A A Piece of Your Mind: Brain Anatomy**
- ◆ 1 copy of *Processing Out Pages* of this activity per student

Activity Instructions:

1. Cut out the Brain Cap Templates and assemble according to directions on the templates.
2. After students have completed their Brain Caps and are wearing them, engage in a whole group review of the structure and function of the brain. Cut the paper strips provided after this section into pieces. Place them into a container. Draw one strip at random and read the text out loud. Students should point to the part of the brain involved. Continue until all strips have been used. Repeat as needed for practice.

Management Suggestions:

- Divide students into groups of 2 to complete the activity
- Have all supplies ready prior to beginning the activity
- A *slideshow* is provided on the website to help teachers process out the activity with students 
- Alternately, teachers can use this activity as an assessment tool

Suggested Modifications:

Teachers can demonstrate how to assemble the brain cap for students needing assistance

Suggested Extensions:

- Cooperative learning activity allowing students to role play areas of the brain and have class guess what area they represent
- Ask students to choose a part of the brain and design an advertisement to convince people that their part of the brain is the most important.

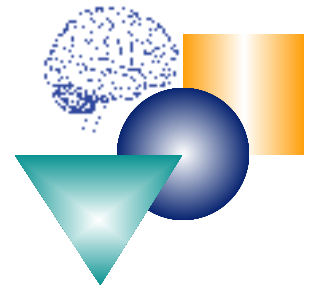
References Used:

Abu-sitta, SA; Shalaby, MA; Hajek, J. (1984). The value of student-made models as learning aids in physiology. *Medical Education*, 5, 326-330.

Cohen, BJ. (2005). Memmler's structure and function of the human body 8th ed. Baltimore, MD : Wolters Kluwer Health/Lippincott William & Wilkins.

Gilbert, JK. (2007). Visualization in Science Education: Models and Modeling in Science Education , Vol. 1. New York: Springer Publications.

Brain Cap Templates on following pages.



Activity Overview

