

PsychSim 5: BRAIN AND BEHAVIOR

Name: _____ **Section:** _____

Date: _____

In this activity you will take a tour of the human brain and explore the major brain regions to discover the functions of each region or area.

Functional Specialization

- In terms of brain function, what is functional specialization?

- Why is the principle of complex communication important to understand?

Test Yourself on Lower Brain Structures

- Match each brain part with its function:

| | |
|---------------------------|---|
| o ___ Pituitary gland | A. Located above the midbrain at the top of the brainstem; routes incoming messages from all the senses (except smell) to the appropriate brain areas for processing |
| o ___ Medulla | B. Part of the limbic system; regulates hunger, thirst, and body temperature and contains the so-called pleasure centers of the brain |
| o ___ Pons | C. The master gland of the endocrine system |
| o ___ Reticular formation | D. Located in the brainstem; controls breathing and heartbeat |
| o ___ Cerebellum | E. A nerve network that runs up the center of the brainstem; plays an important role in controlling alertness and attention |
| o ___ Midbrain | F. Located at the back of the brainstem; assists in balance and the coordination of voluntary movement |
| o ___ Thalamus | G. Part of the limbic system; is involved in learning and in forming new memories |
| o ___ Hippocampus | H. Part of the limbic system; is involved in regulation of the emotions of fear and rage |
| o ___ Amygdala | I. Located near the top of the brainstem; integrates specific types of information from the eyes and the ears, and sends this on to other parts of the brain |
| o ___ Hypothalamus | J. Located in the brainstem; controls breathing and heartbeat; connects the medulla to the two sides of the cerebellum to help coordinate and integrate movement on each side of the body; involved in sleep and dreaming |

The Cerebral Cortex

- Each hemisphere of the cerebral cortex is divided into four regions called “lobes.” Name them. Match each lobe to its associated cortex:

- o ___ _____ A. Somatosensory cortex
- o ___ _____ B. Motor cortex
- o ___ _____ C. Visual cortex
- o ___ _____ D. Auditory cortex

The Cerebral Cortex

- Name the three distinct areas of language cortex in the left hemisphere. Match them to their related dysfunction.

- o ___ _____ A. Ability to read aloud
- o ___ _____ B. Speaking
- o ___ _____ C. Language comprehension

Right Hemisphere Abilities

- If the left hemisphere generally controls language, what special abilities does the right hemisphere have?