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?