Psychsim 5: brain and behavior



PsychSim 5: Brain and Behavior 21 PsychSim 5: BRAIN AND BEHAVIOR Name: Section: Brain & Behavior Date: 1/20/2013 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? Each independent part of the brain is responsible for a certain function such as hearing, sound, or moving a body part. - Why is the principle of complex communication important to understand? Complex Communication is important to understand because we need to know how each influence happens and what influences each part of the brain. Also an understanding of where each influence developed and origionated. Test Yourself on Lower Brain Structures - Match each brain part with its function: o C 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 D Medulla B. Part of the limbic system; regulates hunger, thirst, and body temperature and contains the so-called pleasure centers of the brain o __J_ Pons C. The master gland of the endocrine system o __E_ Reticular formation D. Located in the brainstem; controls breathing and heartbeat o F Cerebellum E. A nerve network that runs up the center of the brainstem; plays an important role in controlling alertness and attention o I Midbrain F. Located at the back of the brainstem; assists in balance and the coordination of voluntary movement o __A_ Thalamus G. Part of the limbic system; is involved in learning and in forming new memories o G Hippocampus H. Part of the limbic system; is involved in regulation of the emotions of fear and rage o H 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 B 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 22 PsychSim 5: Brain and Behavior 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 B Frontal Lobe A. Somatosensory cortex o __A Parital Lobe B. Motor cortex o __D Temporal Lobe C. Visual cortex o C Accipital Lobe D. Auditory cortex The Cerebral Cortex - Name the three distinct areas of language cortex in the left hemisphere. Match them to their relat- ed dysfunction. o B Broca's Area A. Ability to read aloud o C Wernicke's Area B. Speaking o A Angular Gyrus C. Language comprehension Right Hemisphere Abilities - If the left hemisphere generally controls language, what special abilities does the right hemisphere have? The special abilities that the right side of the brain has is the ability to perform better in spatial tasks, face recognition, expression of emotion, reading emotions, intuition, creativity, etc.