**Brain Structure**

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| ***Pic*** | ***Section***  | ***Function***  |
| *250px-Human_brain_right_dissected_lateral_view_description.JPG* | *A. The Cerebrum* | *•****Parts****:* *–Divided into* ***right*** *and* ***left*** *cerebral hemispheres* *–The cerebral cortex is divided into* ***LOBES*** *which control various functions**•****Structure****:* *–Covered by:**•Folds called* ***convolutions****•grooves called* ***sulci*** *(little groves)* *•****Fissures*** *(big grooves)**–It has a* ***cortex****: an outer covering* *about 2 mm thick**–****Gray*** *matter vs.* ***white*** *matter**•****White****: Myelinated Axon is white (insulation on the nerve)**–****Function****: Tissue through which messages pass between different areas of gray matter within the nervous system**•****Grey****: absence of Mylin.* *–****Function****: muscle control, sensory perception such as seeing and hearing, memory, emotions, speech, decision making, and self-control.* *–While 20% of all oxygen taken in by the body goes to the brain, 95% of that goes specifically into the grey matter**•Connected by the corpus callosum* |
|  | ***Lobes****:* ***1. Frontal Lobe****–Control of voluntary muscles in the body**–Motor speech (Broca’s area)**–Voluntary eye movement**–Concentration, planning, problem solving**–Rational thought, intelligence****2. Motor Area (frontal)*** *movement of skeletal muscles****3. Pre-Motor Area (frontal)*** *learned motor skills****4. Motor Speech Area (Broca’s) (frontal)****controls mouth movement for speech* |
| ***5. Parietal Lobe******–*** *touch, taste and other sensory info**–understanding speech, using words (Wernicke’s****6. Sensory Area (frontal/parietal)****• conscious awareness of sensations**•interpretation of sensory experiences* |
|  | *A. The Cerebrum* | ***7. Temporal Lobe****–smell and hearing* *–interpretation of sensory experiences****8. Auditory Area (temporal)****•Hearing is processed* |
| ***9. Occipital Lobe****– visual senses****10. Visual Area (occipital)****–Processes input from optic nerves* |
|  | ***Cerebral Hemispheres (11)****•Hemisphere = half of sphere (brain)**•The right side of the brain controls the left side of the body and vice versa* *•Hemispheres connected by the Corpus callosum*  |
| *Right Vs Left – Creativity* *Left_Vs_Right_Brain.gif* [*http://blogs.scientificamerican.com/beautiful-minds/2013/08/19/the-real-neuroscience-of-creativity/*](http://blogs.scientificamerican.com/beautiful-minds/2013/08/19/the-real-neuroscience-of-creativity/) |
| *18008_9562_5.jpg* | *B. Cerebellum #13* | *•Processes sensory information about limbs, joints, and other body parts to determine desired positions.**•Balance, coordination of skeletal muscle, posture* |
| *image-of-brain-stem-upb1eeft.jpg* | *C. Brainstem (14)* | *•Brainstem: Connects the cerebrum to the spinal cord**–****Midbrain (15)****: visual and auditory reflex center**–****Pons****:(#16) transfers nerve impulses from cerebrum to cerebellum**–****Medulla Oblongata****: (#17) controls heart and breathing rates, controls blood pressure, vessel changes* |
| *thalamus-hypothalamus.jpg* | *D. Diencephalon (18)* | *•****Thalamus****-(#19)* *-Receives all sensory impulses and relays them to the appropriate region of the cerebral cortex**-Produces awareness of sensation**•* ***Hypothalamus*** *– (#20)**–Links the nervous system to the endocrine system**–Regulates heart rate, blood pressure, body temp, hunger, gland secretions, sleep etc.* *–Maintains homeostasis-links nervous to endocrine system* |

**Summary:**