**The Human Brain**

**Overview: Below are seven different portions of the brain that we will discuss sometime this semester:**

#1 - AMYGDALA: Lying deep in the center of the emotional brain, this powerful structure, the size and shape of an almond, is constantly alert to the needs of basic survival including sex, emotional reactions such as anger and fear. Consequently, it shows up visibly - such as sweaty palms.

#2 - BRAIN STEM: The part of the brain that connects to the spinal cord. The brain stem controls functions basic to the survival of all animals, such as heart rate, breathing, digesting foods, and sleeping. It is the lowest, most primitive area of the human brain.

#3 - CEREBELLUM: Two peach-size mounds of folded tissue located at the top of the brain stem, it is the guru of skilled, coordinated movement (e.g., returning a tennis serve or throwing a slider down and in) and is involved in some learning pathways.

#4 CEREBRUM: This is the largest brain structure in humans and accounts for about two-thirds of the brain’s mass (**its** **four lobes are described in detail below)**. It is divided into two sides — the left and right hemispheres—that are separated by a deep groove down the center from the back of the brain to the forehead. The cerebrum is positioned over and around most other brain structures, and its four lobes are specialized by function but are richly connected.

**(Note, the diagram for these portions of the brain is on page 3 - fill in the description box...no picture)**

1. The Frontal Lobe is the most recently-evolved part of the brain and the last to develop in young adulthood. It’s in charge of executive functioning, meaning that it helps you make logical decisions. It organizes responses to complex problems, plans steps to an objective, searches memory for relevant experience, and then guides the appropriate behavior for the situation. It also helps us function as social beings by managing feelings like empathy (concern for the well-being of others), and the interpretation of facial expressions (“A frown means that this person is angry at me”).
2. The Temporal Lobe controls visual memory storage area, emotion, hearing, and, on the left side, language.
3. The Parietal Lobe receives and processes sensory information from the body including calculating location and speed of objects.
4. The Occipital Lobe processes visual data and routes it to other parts of the brain for identification and storage.

#5 HIPPOCAMPUS: Located deep within the brain, it processes new memories for long-term storage. It is among the first functions to falter in Alzheimer's, making new memories increasingly impossible.

#6 HYPOTHALAMUS: Located at the base of the brain where signals from the brain and the body’s hormonal system interact, it maintains the body’s status quo. It monitors numerous bodily functions such as blood pressure and body temperature, as well as controlling body weight and appetite.