II Communication in the Nervous System

* Neuron- Define
* Glia- Define
* Neurons are often called?
* Estimated amount in humans?

1. The Structure of the Neuron

* 3 main parts?
* Dendrites- Define
* Cell Body- Define
* Axon- Define
  + Axon Terminals- Define
* Neurons 2 jobs?
* Myelin Sheath- Define
* Draw **Figure 4.5** (on a separate piece of paper)

1. Neurons in the News

* Regeneration- Explain
* Do mammals produce new CNS cells- Explain
* Stem Cells- Define
  + What can promote the production of new cells?
  + What can hurt?
  + Debate on Stem Cell Research?
    - Beside embryos where do you get stem cells?

1. How Neurons Communicate

* Draw **Figure 4.7** (on a separate piece of paper)
* Synaptic Cleft- Define
* Synapse- Define
  + When do they form?
  + What should parent so to help?
  + How long does forming and pruning last?
  + Plasticity- Define
* Action Potential-Define
  + Explain unmyelinated?
* Synaptic Vessels- Define
  + Explain
* Neurotransmitter- Define
* Receptor Sites- Define
  + Effects
    - Excitatory- Define and Explain
    - Inhibitory- Define and Explain

1. Chemical Messengers in the Nervous System
2. Neurotransmitters: Versatile Couriers
   * Where do they exist?
   * What can they affect?
   * More well-known neurotransmitters:
3. Serotonin- Explain
4. Dopamine- Explain
5. Acetylcholine- Explain
6. Norepinephrine- Explain
7. GABA- Explain
8. Glutamate- Explain
   * Name the three things that can occur?
   * What do they warn you about? Why?
9. Endorphins: The Brains Natural Opiates
   * Endorphins- Define
   * What roles do they play?
   * Who discovered them?
   * When do endorphins “shoot up?”
   * What does this give animals? Give examples
10. Hormones: Long-Distance Messengers
    * Hormones- Define
    * Endocrine Glands- Define
    * How do they work?
    * Examples of hormones:
11. Melatonin- Explain
12. Adrenal Hormones- Explain
    * + Cortisol- Explain
      + Epinephrine- Explain
      + Norepinephrine- Explain
      + How can it improve memory? Give example
13. Sex Hormones- Explain
    * + Androgens- Explain
      + Estrogens- Explain
      + Progesterone- Explain