Nervous System Guided Reading Questions

1. Compare and contrast the central and peripheral nervous systems.
2. Differentiate between sensory neurons, interneurons, motor neurons, and effector cells.
3. Describe the basic pathway of information flow through neurons that cause you to turn your head when someone calls your name.
4. More primitive invertebrates such as jellyfish possess a nerve net. Which part of the neural pathway is missing?
5. How would severing an axon affect the flow of information in a neuron? Explain.
6. Differentiate between a resting potential and a threshold stimulus. What happens when a threshold stimulus is reached?
7. Using the image below, use arrows and describe in detail how an action potential moves form one neuron to another neuron.

 

1. Does an axon with a larger or smaller diameter conduct an impulse faster? Why?
2. Diagram an action potential as it travels the length of an axon. Be sure to include Na+ and K+ concentrations and movements as the impulse moves along the axon.
3. Why does is the term “salty banana” used to describe a neuron at resting potential?
4. What is a synapse? How does is the action potential from the pre-synaptic neuron passed to the post-synaptic neuron?
5. What would be the effect of a drug that causes potassium to leak out of a neuron?