Bi.12 M.Johnston

Intro: Nervous System

| Name: | | |
|--------|-------|--|
| Block: | Date: | |

1) What is the difference between a nerve a nerve cell and a neuron?

Nerve cell: **ONE CELL, CAPABLE OF TRANSMITTING AN ELECTRICAL MESSAGE**

Neuron: FORMAL NAME FOR A NERVE CELL

Nerve: MANY NERVE CELLS TOGETHER

2) There are three types of neurons. What are they? MOTOR NEURON, SENSORY NEURON, INTERNEURON

3) Fill in the following table to identify the structure and function of each of the neuron types. Do not use the terms "periphery" or "CNS" when describing function. Instead, identify a specific receptor and/or effector [one has already been done for you].

| Structure CELL BODY | Neuron name | Function |
|-----------------------------|-------------------|---|
| DENDRITE D I R E C T I O N | INTERNEURON | CARRY IMPULSES BETWEEN OTHER NEURONS. |
| CELL BODY O DENDRITE AXON | SENSORY NEURON | Carry nerve impulses from the skin or sensory organ to the spinal cord. |
| CELL BODY AXON DENDRITE | MOTOR NEURON | CARRY IFNORMATION FROM SPINAL CORD/BRAIN TO MUSCLE OR "EFFECTOR" |

| 4) | In each of the three figures above, label the dendrite, axon and cell body. | | | |
|----|--|--|--|--|
| 5) | Draw arrows beside each neuron indicating the direction a nerve impulse would travel in this specific neuron. SHOWN BY THE | | | |
| 6) | What statement can you make about axon length versus dendrite length in | | | |
| | a) Sensory neurons? <u>LONG DENDRITE – SHORT AXON</u> | | | |
| | b) Interneurons? THEY CAN BE EITHER LONG OR SHORT | | | |
| | c) Motor neurons? SHORT DENDRITE – LONG AXON | | | |
