

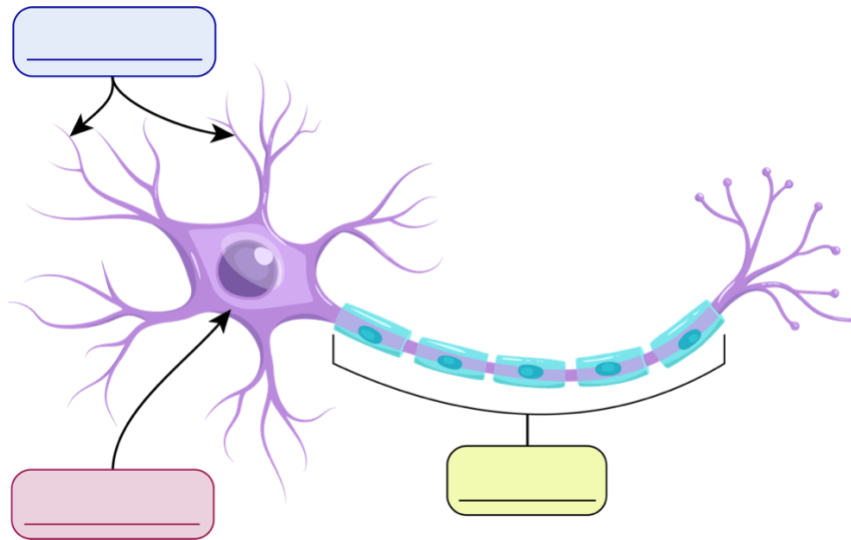
## TOPIC: NERVOUS TISSUE: THE NEURON

• A neuron has \_\_\_\_\_ basic parts:

1. **Dendrites:** extensions that lead into the cell body; receive \_\_\_\_\_ signals.
2. **Cell Body (Soma):** contains the \_\_\_\_\_ and most organelles.
3. **Axon:** long, thin portion of the neuron that conducts \_\_\_\_\_ signals.

Memory tool: signals enter via the dendrites. The Axon takes the signal Away.

**EXAMPLE:** Label the three parts of the neuron and indicate the direction of an electrical impulse travelling through the cell.



**PRACTICE:** Which of the following is the most likely path of an electrical signal travelling through a neuron and arriving at a muscle?

- a) Neuroglia → dendrites → a cell body → axon → muscle.
- a) Dendrites → cell body → axon → muscle.
- b) Dendrites → axon → cell body → muscle.
- c) Axon → cell body → dendrites → muscle.

**PRACTICE:** How does the axon's structure reflect its function?

- a) It can be long so that it can carry electrical signals long distances.
- b) It is tough in order to protect itself from damage.
- c) It is thick in order to self-insulate.
- d) It is always short so that electrical impulses can travel through it quickly.