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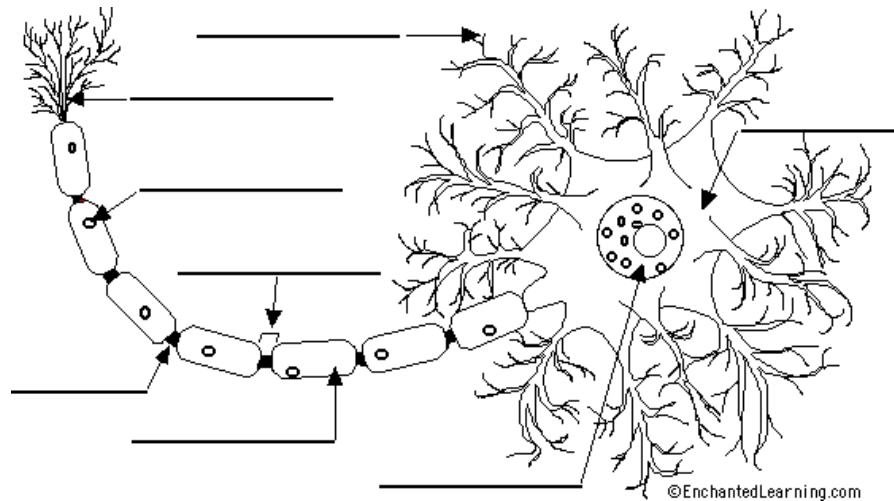
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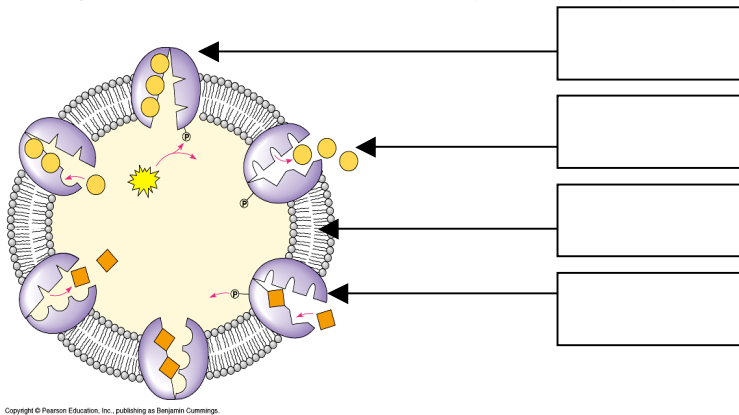
Biology: Nervous System

Understanding Impulses

Label the neuron below.



1. What is the purpose of the myelin sheath on the axon?
2. At which structure are chemical messengers, called neurotransmitters, received? Where are neurotransmitters released?
3. What do we call the 'space' that neurotransmitters cross between nerve cells?
4. What will happen to the next nerve cell when it gets 'hit' by neurotransmitters?
5. Label the diagram of the cell with sodium potassium pumps below.



6. For every three _____ ions pumped out of the cell, two _____ ions are pumped in.
7. After the sodium potassium pump has done its job, the cell is at 'resting potential' meaning that it isn't working right now, but is ready to send a message. When a message is moving down a neuron, this is called the _____ or impulse.
8. Lots of sodium ions can give a solution a positive charge. At resting potential, is the cell positive on the outside or inside?
9. An impulse traveling down an axon will cause ion channels to open in the cell membrane. What will happen to the sodium and potassium ions when ion channels are opened?