Cornell Guided Notes

Human Anatomy & Physiology (Human Body Systems) | 2027-03-05

Name	Period	Date	Lesson
		2027-03-05	

Lesson focus

Neuron parts and the synapse

Key words and questions	Prepared details and student notes
Essential question **What is today's target?**	Label the parts of a neuron and explain how a signal crosses a synapse. Big idea: A neuron transmits an electrical signal along its axon and converts it to a chemical signal (neurotransmitter) to cross the synaptic gap to the next cell. **My notes, examples, and questions**
Key words **What vocabulary unlocks the lesson?**	- neuron - dendrite - axon - synapse - neurotransmitter - CNS - PNS - cerebrum **My notes, examples, and questions**

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Cornell Notes - Continued

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Must-know ideas **What should I understand by the end?**	- Neuron anatomy: dendrites (receive signals), cell body/soma (integrates signals), axon (conducts the action potential), myelin sheath (speeds conduction), axon terminal (releases neurotransmitter). - The synapse is the junction between two neurons. Neurotransmitters are released from the presynaptic terminal, cross the synaptic cleft, and bind receptors on the postsynaptic membrane. - Many drugs and toxins work by altering neurotransmitter release or receptor binding, connecting nervous-system anatomy directly to pharmacology and pathophysiology. **My notes, examples, and questions**
Process notes **What happens during class?**	- 0-8: Intro: neuron as the functional unit of the nervous system - 8-25: Notes: five neuron parts and synaptic transmission steps - 25-45: PLTW online task: synaptic transmission - 45-62: Label neuron diagram: dendrite, soma, axon, myelin, terminal; add signal arrow - 62-75: Write two-sentence synapse explanation: neurotransmitter release to receptor binding - 75-80: Submit diagram and explanation; preview Wednesday brain dissection **My notes, examples, and questions**

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Steps and evidence **What do I do and turn in?**	- Read the notes on the dendrite, cell body, axon, and myelin sheath. - Label a neuron diagram and mark the direction of signal flow. - Complete the PLTW online task on synaptic transmission. - Explain in two sentences how neurotransmitters carry the signal across the gap. - Submit your labeled neuron diagram and synapse explanation. Evidence: Notebook check - Labeled neuron diagram (all five parts with signal-direction arrow) and a two-sentence explanation of synaptic transmission. **My notes, examples, and questions**
Checks for understanding **How do I know I got it?**	- You can label the parts of a neuron and the signal direction. - You can explain transmission across a synapse. **My notes, examples, and questions**

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Lab or safety notes **What must I handle carefully?**	Supplies: - Preserved sheep brain or detailed brain model - Dissection tray and tools or virtual brain platform - Neuron and brain diagrams - Nitrile gloves - Safety goggles - Lab notebook **My notes, examples, and questions**

Summary

Today's lesson focused on Neuron parts and the synapse. The main target was: Label the parts of a neuron and explain how a signal crosses a synapse. The evidence of learning is Notebook check: Labeled neuron diagram (all five parts with signal-direction arrow) and a two-sentence explanation of synaptic transmission.. In my own words, the most important idea from today is:

My summary

My final question or connection