

Cornell Guided Notes

Human Anatomy & Physiology (Human Body Systems) | 2026-10-07

Name

Period

Date

Lesson

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