Cornell Guided Notes

Human Anatomy & Physiology (Human Body Systems) | 2026-11-10

Name	Period	Date	Lesson
		2026-11-10	

Lesson focus

Run the investigation

Key words and questions	Prepared details and student notes

Essential question
What is today's target?

Students will conduct the C. elegans heavy-metal investigation and collect data on worm response. Big idea: Running a controlled investigation generates the raw data that will be used to test a hypothesis and draw evidence-based conclusions.

My notes, examples, and questions

Key words
What vocabulary unlocks the lesson?

- heavy metal
- toxicology
- hypothesis
- data table
- graph
- limitation
- conclusion

My notes, examples, and questions

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Cornell Notes - Continued

Key words and questions	Prepared details and student notes
Must-know ideas **What should I understand by the end?**	- Every condition in an experiment, including the control, must be documented with the same level of detail. - Unexpected observations are scientifically valuable and must be recorded, not ignored. - Dose-response relationships are central to toxicology and connect to Anatomy/Physiology/Pathophysiology WebXam content. **My notes, examples, and questions**
Process notes **What happens during class?**	- 0-10: Safety review: handling heavy-metal solutions, disposal, PPE - 10-20: Set up exposure conditions and control; verify labels and concentrations - 20-50: Apply treatments; observe and record worm movement or survival at regular intervals - 50-62: Tabulate all results: condition, concentration, response metric, units - 62-72: Record any unexpected observations with description and time stamp - 72-80: Cleanup per safety protocol; submit completed data table **My notes, examples, and questions**

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Steps and evidence **What do I do and turn in?**	- Set up the exposure conditions and your control. - Apply the heavy-metal treatments at planned concentrations. - Observe and record worm movement or survival over time. - Tabulate results for each condition. - Note any unexpected observations during the run. Evidence: Data table - Completed data table with results for all treatment concentrations and the control, consistent units, and notes on any unexpected observations. **My notes, examples, and questions**
Checks for understanding **How do I know I got it?**	- Data is recorded for all treatment and control conditions. - Observations are logged with consistent units. **My notes, examples, and questions**

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Lab or safety notes
What must I handle carefully?

Safety:
- Wear nitrile gloves and safety goggles at all times when handling heavy-metal solutions.
- Never pipette by mouth; use mechanical pipette aids only.
- Dispose of all heavy-metal waste in the designated container, not the sink.
- Wash hands thoroughly after removing gloves and before leaving the lab.
- Report any spills immediately to the teacher; do not attempt to clean chemical spills independently.

Supplies:
- C. elegans cultures (control and treatment groups)
- Heavy-metal solutions at planned concentrations (teacher-prepared)
- Sterile transfer pipettes or worm picks
- Multi-well plates or agar plates labeled per condition
- Dissecting microscope or hand lens
- Lab notebook or printed data table
- Timer or stopwatch

My notes, examples, and questions

Summary

Today's lesson focused on Run the investigation. The main target was: Students will conduct the C. elegans heavy-metal investigation and collect data on worm response. The evidence of learning is Data table: Completed data table with results for all treatment concentrations and the control, consistent units, and notes on any unexpected observations.. In my own words, the most important idea from today is:

My summary

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My final question or connection