

Cornell Guided Notes

Biotechnology for Health (Biomedical Innovations) | 2027-02-26

Name

Period

Date

Lesson

Lesson focus

Physiology sensor lab

Key words and questions

Prepared details and student notes

Essential question
What is today's target?

Collect physiological data using sensors under controlled conditions. Big idea: Reliable data comes from repeated, controlled trials recorded in real time -- a data table that cannot be reproduced is not scientific evidence.

My notes, examples, and questions

Key words
What vocabulary unlocks the lesson?

- sample size
- mean
- standard deviation
- t-test
- validity
- reliability

My notes, examples, and questions

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Cornell Notes - Continued

Key words and questions

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Must-know ideas
What should I understand by the end?

- How to calibrate and operate a physiological sensor following a written protocol (Lab SOP).
- Why repeating trials and recording each reading separately is essential for reliable conclusions.
- How a structured data table with labeled conditions and units enables statistical analysis.

My notes, examples, and questions

Process notes
What happens during class?

- 0-10: Safety and calibration check: set up sensor, verify calibration, and confirm data table is open
- 10-20: Baseline trials: record baseline measurements for each participant or condition
- 20-50: Treatment trials: apply the independent variable and record all readings per trial
- 50-65: Repeat trials as needed to capture natural variation; log all readings
- 65-75: Submit raw data table before leaving the lab area
- 75-80: Exit note: describe how you controlled conditions and whether anything went wrong

My notes, examples, and questions

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Steps and evidence
What do I do and turn in?

- Set up the sensor and calibrate it per the protocol.
- Record baseline and treatment measurements for each trial.
- Repeat trials to capture variation.
- Log all readings in a structured data table.
- Submit your raw data table.

Evidence: Data table - Raw physiology data table: labeled trials, baseline and treatment conditions, measurement values with units, and a brief condition-control note.

My notes, examples, and questions

Checks for understanding
How do I know I got it?

- Your data table records repeated, labeled trials.
- You can describe how you controlled conditions.

My notes, examples, and questions

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Lab or safety notes
What must I handle carefully?

Safety:

- Wash hands before placing any sensor on a participant.
- Do not share sensor components that contact skin without wiping with an alcohol swab between uses.
- Stop the trial immediately if a participant reports discomfort, dizziness, or pain.
- Do not collect data on a participant who has not verbally consented for this class activity.
- Follow the instructor's calibration protocol exactly -- do not skip steps.

Supplies:

- Physiological sensor (e.g., heart-rate or blood-pressure monitor) provided by instructor
- Sensor interface cable or wireless receiver
- Laptop or tablet for data logging software
- Pre-lab data table (paper or digital, prepared Monday)
- Pencil or pen for real-time annotation
- Timer or stopwatch for consistent trial intervals

My notes, examples, and questions

Summary

Today's lesson focused on Physiology sensor lab. The main target was: Collect physiological data using sensors under controlled conditions. The evidence of learning is Data table: Raw physiology data table: labeled trials, baseline and treatment conditions, measurement values with units, and a brief condition-control note.. In my own words, the most important idea from today is:

My summary

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My final question or connection