Cornell Guided Notes

Biotechnology for Health (Biomedical Innovations) | 2027-03-04

Name	Period	Date	Lesson
		2027-03-04	

Lesson focus

Bias, error, graph choice

Key words and questions	Prepared details and student notes
Essential question **What is today's target?**	Identify sources of bias and error and choose the right graph for your physiology data. Big idea: Choosing the right graph for your data is not an aesthetic decision -- the wrong graph can obscure or distort the pattern your study was designed to detect. **My notes, examples, and questions**
Key words **What vocabulary unlocks the lesson?**	- bias - limitation - replication - statistical significance - evidence **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?**	- The specific bias and measurement-error sources that threaten validity in a physiology study. - How to select the appropriate graph type for a comparison between two conditions. - How acknowledged bias or error must appear in any honest data interpretation. **My notes, examples, and questions**
Process notes **What happens during class?**	- 0-10: Introduce bias versus measurement error: definitions and examples in physiology studies - 10-30: List possible bias and error sources specific to your own study - 30-50: Choose a graph type: bar, line, scatter, or box plot -- justify the choice for your comparison - 50-65: Draft the graph with labeled axes, units, and a title - 65-77: Add a bias-and-error annotation note on the graph and submit - 77-80: Exit check: which bias source is most likely to affect your conclusion and why? **My notes, examples, and questions**

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Cornell Notes - Continued

Key words and questions	Prepared details and student notes
Steps and evidence **What do I do and turn in?**	- List possible sources of bias and measurement error in your study. - Decide which graph type best shows your comparison. - Draft the graph with labeled axes and units. - Note how bias or error could affect what the graph shows. - Submit your graph draft with a bias-and-error note. Evidence: Data table - Draft graph showing the physiology comparison with labeled axes, units, a title, and an annotated bias-and-error note. **My notes, examples, and questions**
Checks for understanding **How do I know I got it?**	- You can name specific bias and error sources in your study. - You can justify your graph choice for the comparison. **My notes, examples, and questions**

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Cornell Notes - Continued

Key words and questions | **Prepared details and student notes**

Lab or safety notes
What must I handle carefully?

Supplies:
- Lab computers with spreadsheet software
- Saved physiology dataset from prior week
- Graphing or charting tool
- CER conclusion template
- Calculator
- Projector for sharing graphs

My notes, examples, and questions

Summary

Today's lesson focused on Bias, error, graph choice. The main target was: Identify sources of bias and error and choose the right graph for your physiology data. The evidence of learning is Data table: Draft graph showing the physiology comparison with labeled axes, units, a title, and an annotated bias-and-error note.. In my own words, the most important idea from today is:

My summary

My final question or connection