Cornell Guided Notes

Genetics of Disease (Medical Interventions) | 2026-09-30

Name	Period	Date	Lesson
		2026-09-30	

Lesson focus

Antibiotics report submission

Key words and questions	Prepared details and student notes

Essential question
What is today's target?

Submit a report connecting antibiotic mechanism, zone-of-inhibition data, resistance, and stewardship. Big idea: How does integrating mechanism, experimental data, and evolutionary biology produce a scientifically grounded stewardship recommendation?

My notes, examples, and questions

Key words
What vocabulary unlocks the lesson?

- antibiotic
- bacteriostatic
- bactericidal
- MIC
- zone of inhibition
- resistance
- plasmid

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?**	- A strong antibiotics report chains three levels: mechanism (how it works), data (how effective it was), and evolution (how resistance changes the picture). - A stewardship recommendation is only valid if it is grounded in both the biology of resistance and the clinical context. - Noting an open question at the end of a report signals intellectual honesty and points to future research. **My notes, examples, and questions**
Process notes **What happens during class?**	- 0-10 min: Assemble materials: zone measurements, effectiveness ranking, resistance diagram, stewardship list - 10-25 min: Draft Claim: which antibiotic worked best and why, citing zone size in millimeters - 25-45 min: Write Reasoning paragraph: connect zone size to MIC to mechanism; cite at least two pieces of data - 45-58 min: Write the resistance paragraph: how could resistance shift the effectiveness ranking, and which drug is most at risk? - 58-68 min: Write stewardship recommendation with biological justification; proofread the full report - 68-80 min: Submit in the course shell; confirm turned in; note one open question about resistance **My notes, examples, and questions**

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Cornell Notes - Continued

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Steps and evidence **What do I do and turn in?**	- Assemble your zone measurements and antibiotic effectiveness ranking. - Write a Claim about which antibiotic worked best and a Reasoning paragraph using your data. - Explain how resistance could change which antibiotic is most effective. - Add one stewardship recommendation supported by your reasoning. - Submit the report in the PLTW course shell. - Confirm it is turned in and note one open question about resistance. Evidence: Lab report - Antibiotics report: claim citing zone measurements, reasoning connecting mechanism and data, resistance paragraph with zone-data connection, and evidence-based stewardship recommendation. **My notes, examples, and questions**
Checks for understanding **How do I know I got it?**	- You will be able to submit a data-supported antibiotics report. - You will be able to connect mechanism, data, and resistance. - You will be able to justify a stewardship recommendation. **My notes, examples, and questions**

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Lab or safety notes
What must I handle carefully?

Supplies:
- Pre-poured agar plates (or simulation)
- Antibiotic disks
- Sterile forceps
- Ruler or calipers for zone measurement
- Inoculating loop
- Marker and tape for labeling

My notes, examples, and questions

Summary

Today's lesson focused on Antibiotics report submission. The main target was: Submit a report connecting antibiotic mechanism, zone-of-inhibition data, resistance, and stewardship. The evidence of learning is Lab report: Antibiotics report: claim citing zone measurements, reasoning connecting mechanism and data, resistance paragraph with zone-data connection, and evidence-based stewardship recommendation.. In my own words, the most important idea from today is:

My summary

My final question or connection