

Enzyme-Rate and Inhibition Data Models

g12_u03_w10

Purpose and boundary

Interpret original fictional rate-versus-condition data cards. No experiment, biological sample, treatment, diagnosis, or health advice is requested.

Targets: I can read a stated rate trend, identify a control/model limit, and avoid causal overclaim. **Vocabulary:** rate, condition, control, saturation model, inhibitor model, correlation. **Prerequisites:** rates, graph reading, collision/equilibrium models.

Fictional Card K lists rates in arbitrary units under stated paper-model conditions only.

1. What does a rate value describe in a stated data model?

2. Why must a rate comparison name its conditions?

3. What is a control comparison?

4. Why is one data point weak evidence for a broad trend?

5. What does a plateau-like trend mean in a simple saturation model?

6. Why does a plateau not prove a mechanism?

7. Define inhibitor model as a simplified description.

8. Why can different mechanisms give similar rate patterns?

9. Card K shows a lower rate in condition B than A. What is directly supported?

10. What causal claim is not yet supported by item 9?

11. Name one variable that should be held constant in a fair fictional rate comparison.

12. Why does a stated control not remove every uncertainty?

13. What does replicate agreement add to a trend claim?

14. What does scatter or variation require a reader to report?

15. Why should axes, units, and arbitrary-unit labels be read before comparing slopes?

16. A graph has a steeper early slope in A than B. Write a cautious interpretation.

17. State one limitation of extrapolating a card trend beyond its supplied range.

18. How can a data table be accessible without color?

19. Compare correlation with a causal mechanism claim.

20. Write a two-sentence conclusion for Card K that names evidence and limitation.
