Eaglecrest AP Biology Quick Guide

AP BIOLOGY BIG IDEAS  
 • Evolution  
 • Energy  
 • Information  
 • Interactions

Big Ideas Questions  
 1. E- What is the adaptive significance?  
 2. E- How is energy transferred? How is this process regulated, or how does it change with   
 changing conditions?  
 3. I- How is this information passed on? (generation to generation, organism to organism, or cell   
 to cell)  
 4. I- What are the interactions? (between molecules, cells, organisms, or populations)

When you see “Design an experiment”. . . you should:  
 1. Identify the IV and DV

2. Describe the control and experimental groups  
 3. Make a prediction  
 4. Write a hypothesis

When you see “hypothesis” you should think:  
 • IF (relationship between variables), THEN (prediction, effect of the IV on the DV)  
 BECAUSE( reasonable scientific explanation based on biological principles)

• NULL- (The IV has no effect on DV, OBSERVED and PREDICTED are no different)

When you see a graph or data table, you should:  
1. Determine the type of graph. Remember, lines are best for showing trends over time, bars best   
 represent comparisons, pies show percentages.

2. Check out the TITLE. What is this about?

3. Check out the X-axis, usually the IV. What is it? What are the units?

4. Check out the Y-axis, usually the DV. What is it? What are the units?

5. Is there a key or legend? If so how many conditions are being graphed?  
6. Determine the trend. Increasing, decreasing, staying the same? Exponential or logistic?

7. Recap: Write you own sentence describing what is being shown in the data table/graph.

This is a \_\_\_\_\_\_\_ showing the effect/relationship of \_\_\_\_\_\_\_\_\_ on \_\_\_\_\_\_\_\_.

As the IV increases the DV \_\_\_\_\_\_\_\_, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Modfied from handout by Jennie Edgar Cherry Creek High School