Station #3. Reading Graphs

The following table contains data for a person's change in exhaled carbon dioxide in response to an increase in respiratory (breathing) rate. Use the table to answer the questions below.

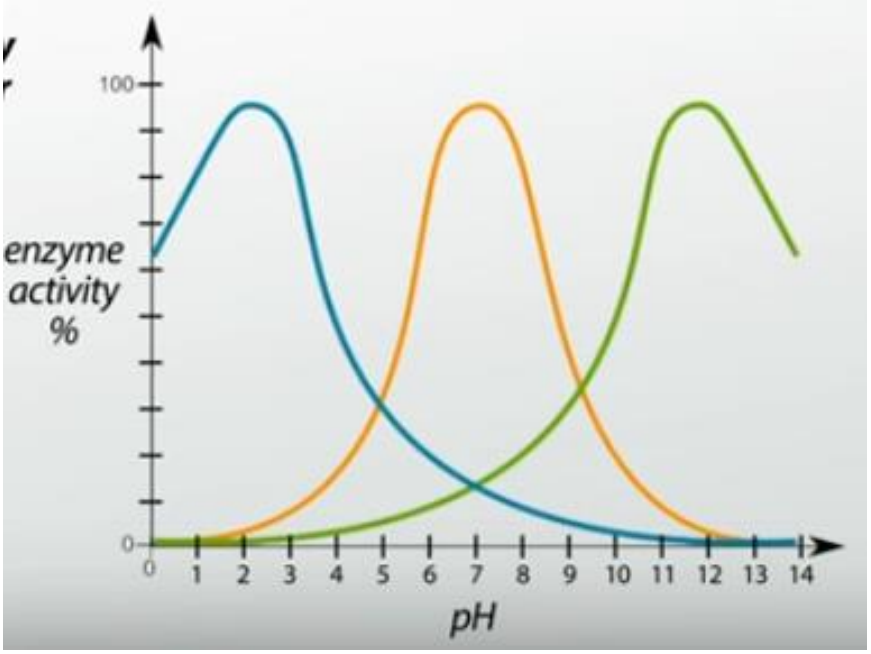
Respiratory Rate (breathes/min)	CO_2 Concentration (mmHg)
10	43
11	40
12	35
13	32
14	28

Graphs

WHEN LOOKING AT A GRAPH

1) First orient yourself to the X and Y axes.
2) Identify the Trends of the Graph
3) Answer the question on your own BEFORE looking at the answer choices.

The graph below illustrates the percentage of maximum activity of three different enzymes over a range of pH levels. Use the graph to answer the following three questions.

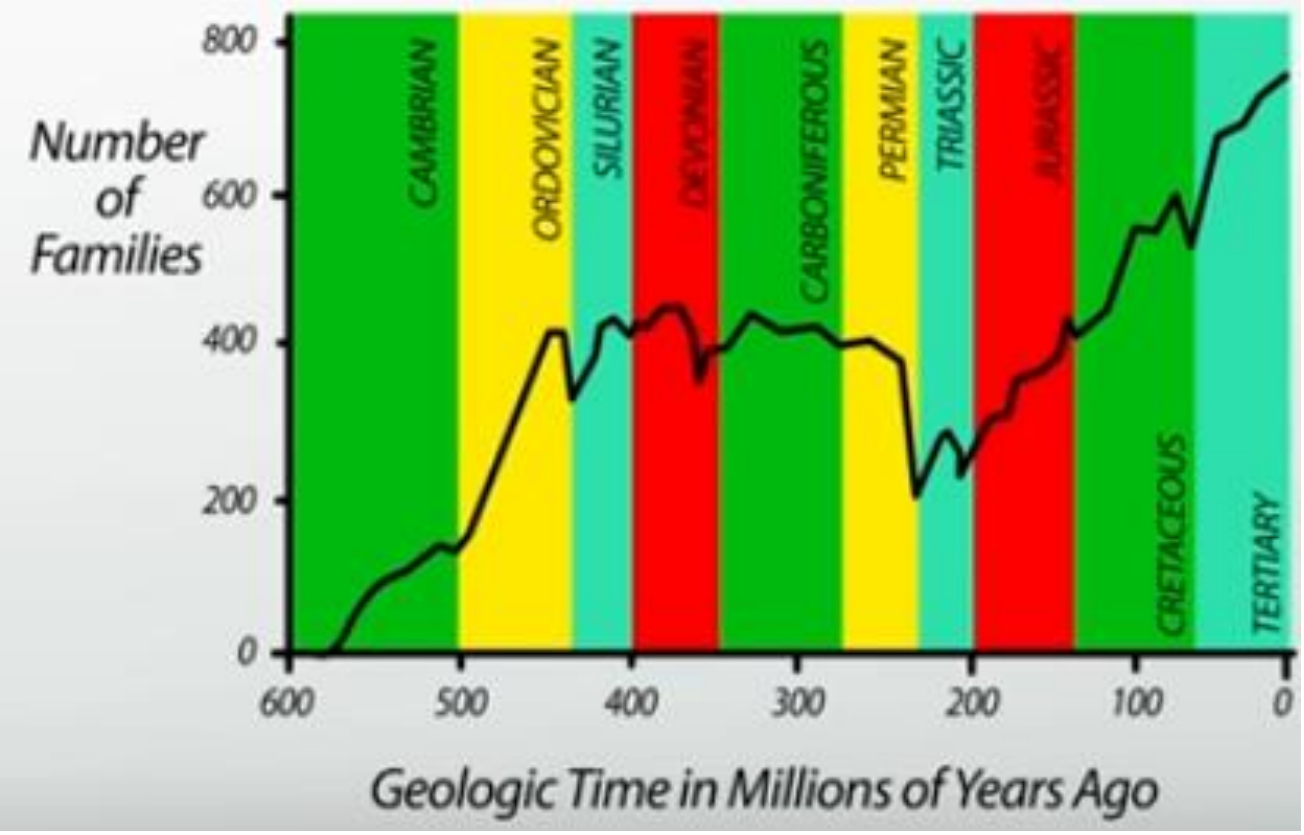


Charts

*****WHEN LOOKING AT A CHART*****

1) First orient yourself to the X and Y axes.
2) Identify the Trends of the Graph
3) Answer the question on your own BEFORE looking at the answer choices.

The following chart illustrates how many families of species exist in the fossil record as a function of geologic time. Use the chart to answer the next four questions.



Name: _____ **Interpreting and Analyzing Data**

Tables

_____ (1) What is the relationship between respiratory rate and carbon dioxide concentration?

a. Inversely proportional
b. No relationship
c. Directly proportional
d. Exponentially Proportional

_____ (2) Select the graph that accurately represents the data in the table.

a. 
b. 
c. 
d. 

Graphs

_____ (1) Which enzyme is most active at a pH of level 3?

a. Enzyme A
b. Enzyme B
c. Enzyme C
d. All enzymes are inactive at pH 3

_____ (2) What is the optimum pH for enzyme C?

a. pH 3
b. pH 7
c. pH 11
d. pH 14

_____ (3) What is the order of enzyme activity, from greatest to least, at a pH level of 8?

a. Enzyme B, Enzyme C, Enzyme A
b. Enzyme B, Enzyme A, Enzyme C
c. Enzyme C, Enzyme A, Enzyme B
d. Enzyme C, Enzyme B, Enzyme A

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Charts

_____ (1) According to the fossil record, during which Period did the largest number of families exist?

a. Permian b. Jurassic c. Cretaceous d. Tertiary

_____ (2) At what point did the largest extinction occur?

a. End of the Permian Period
b. End of the Triassic Period
c. End of the Cretaceous Period
d. End of the Devonian Period

_____ (3) If dinosaurs appear in the fossil record during most of the Cretaceous Period, but do not exist in the Tertiary Period, then when did dinosaur extinction occur?

a. Middle of the Tertiary Period
b. End of the Tertiary Period
c. Beginning of the Cretaceous Period
d. End of the Cretaceous Period

_____ (4) Which extinction event made the smallest impact on the number of families for that time?

a. Triassic-Jurassic extinction event
b. Permian-Triassic extinction event
c. Cretaceous-Tertiary extinction event
d. Ordovician-Silurian extinction event

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