

Chemistry 20 - Unit 0 - The Anatomy of a Graph

Name: _____

Line graphs compare two variables. Each variable is plotted along an axis. A line graph has a vertical axis and a horizontal axis. For example, if you wanted to graph the height of a ball after you have thrown it, you would put time along the horizontal, or x-axis, and height along the vertical, or y-axis.

Interpolation vs. Extrapolation: Determine which of the examples below is interpolation and which is extrapolation. Explain why

- 1) The value of Sarah's car in 2018 was \$17,500.

- 2) The value of Sarah's car in 2028 was \$1,900.

Independent vs. Dependent Variable Practice

- 1) A student wanted to observe how changing the temperature of the aquarium water would affect the breathing rate of his goldfish.

a) What is the independent variable? _____

b) What is the dependent variable? _____

- 2) A student wanted to determine how tall corn would grow if different types of fertilizer were used.

a) What is the independent variable? _____

b) What is the dependent variable? _____

Drawing the Graph

- 1) When can you connect the data points?

- 2) If you don't connect the data points do you still need to draw a line or curve?

Graphing Practice

Background: Clams were placed into various temperatures of water. Use the information in the data table below in order to create a proper scientific graph and to answer the corresponding questions.

Water Temperature (°C)	Number of Developing Clams
15	72
20	92
25	120
30	140
35	99
40	72
45	36
50	0

- 1) What is the dependent variable? _____
- 2) What is the independent variable? _____
- 3) What is the optimum temperature for clam development? _____
- 4) What is the mean number of clams per sample? _____
- 5) Approximately how many clams would be developing in 10 degree Celsius water? _____
- 6) What is it called when you make predictions about data not yet recorded, such as the prediction we made in question number 5? _____

