Tips for Creating Line Graphs

1. Place your data in a data table.

2. Label the horizontal axis (axis from left to right) with <u>the name</u> of the Independent Variable (manipulated variable). Label the vertical axis (axis from top to bottom) with <u>the name</u> of the dependent variable (responding variable). Include the *units of measure* (cm, seconds, grams, Celsius, etc).

3. Create a scale on each axis by marking off *equally-spaced numbers* along the axis. Begin with zero or a number slightly less than the smallest number to be graphed. Be sure that each scale covers the entire range of data collected for that variable (the highest possible number you will graph). <u>Label the units</u> on each scale.

4. <u>Plot</u> each point where the variables intersect. You can do this by following an imaginary line up from the measurement on the x-axis. Then follow a second imaginary line across from the corresponding measurement on the y-axis. <u>Place a dot</u> where the two lines intersect.

5. Consider whether you will plot from point to point or make a best fit graph. If you plot from point to point, each segment connecting two adjacent points should be straight. If you make a best fit graph, the connecting line should be smooth.

6. Give your graph a <u>title</u> that identifies the Independent and Dependent Variables, you can change your testable question into a statement and use it because it has both variables in it.

Number of Croaks at Different Temperatures

(All of the temperatures don't happen at once, they happen **over a time period.)**

Air Temperature in °Celsius	Frog Croaks per Minute
22	12
23	14
24	15
26	16
28	17
31	21
32	26