Graphing
Directions and Checklist

☐	1. Determine the best graph to use for the data. • Use a **bar graph** when comparing data. • Use a **line graph** to show continuous change over time. • Use a **scatter plot** to display data points before determining the line of best fit. • Use a **histogram** to summarize data within intervals. • Use a **circle (pie) graph** to show parts of a whole.
☐	2. Use a **sharp pencil** and a **ruler** to draw the x- and y-axes on **graph paper**. Allow space for labels outside the axes.
☐	3. Identify the **independent variable (IV)** and the **dependent variable (DV)**. The IV or unit of time goes on the x-axis and the DV goes on the y-axis.
☐	4. **Label both axes** with the name of the variables being plotted and the unit of measurement. For example: mass (g).
☐	5. Determine the **range** for the data. Divide each axis so that the numbers for data are equally spaced (0, 1, 2, 3 … or 0, 2, 4, 6 … or 0, 5, 10, 15 …). The two axes do not have to be spaced with the same intervals.
☐	6. **Plot** your data (use small pencil dots or bars, as appropriate). On a line graph, connect the dots with straight lines after plotting.
☐	7. **Use different colors or patterns** if showing more than one set of data on a graph. Include a **key** to show which color or pattern goes with each data set.
☐	8. If asked, find the **mean**, **median**, and **mode** and include them with units.
☐	9. Put a **title** at the top of the graph that clearly describes the information that was graphed. When graphing the results of an experiment, use the proper format, *The Effect of the IV on the DV.*
☐	10. If the graph is not included in a formal lab write-up, you must write a summary statement highlighting any trends or patterns you see. For example…As the amount of time increased from 0 to 60 seconds, the conductivity of the distilled water also increased from 7µS to 3000 µS, thus demonstrating diffusion did occur.

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