



LESSON 19

PHYSICAL SCIENCE GRAPHING GUIDELINES

In physical science, incorporating graphs into your lab reports is often helpful. Graphs allow raw data to be analyzed and interpreted easily. Below are standard guidelines for creating graphs.

1. For this course, graphs should be hand-drawn. Be sure to use graph paper which will allow you to easily space things apart on the paper. When drawing line graphs, you should use a straight edge, such as a ruler, to connect the dots so your lines are straight and data is easier to interpret.
2. Unless otherwise noted, graphs will relate the two variables involved in each experiment. They will be graphed on a pair of perpendicular axes, an x-axis, and a y-axis.
3. The horizontal axis, or x-axis, will contain the variable we changed, the independent variable. The x-axis should be labeled with that variable's name and units and marked in even increments.
4. The vertical axis, or y-axis, will contain the variable that responded to the changes, the dependent variable. This axis should also be labeled with the variable's name and units and marked in even increments.
5. For each measurement, you will graph an ordered pair of numbers onto a single dot on the graph. Just like in algebra, the first number in the ordered pair will determine how far along the horizontal axis you go, and the second number will determine how far up the vertical axis you go, and the dot will lie at the corresponding point. It will very rarely make sense to have negative data.

6. If multiple data sets are included on one graph, be sure to include a legend so readers can distinguish between data sets.
7. Include a title at the top of your graph that concisely states what's shown in the graph.

