

## Science Graphing Guidelines

*Graphing is a major part of data interpretation for science classes. Graphs are a representation to help explain data, as well as giving a quick, visual model of physical, biological, and/or chemical events.*

Use the following guidelines for the construction and presentation of graphs:

1. All graphs need a **TITLE** – the title “GRAPH” will not do, it should explain what the graph represents.
2. Remember **DRY-MIX**: Plot the **D**ependent, **R**esponding variable on the **Y**-axis and **M**anipulated, **I**ndependent variable on the **X**-axis
3. Both the X- and Y-axis will be labeled with an axis descriptor and appropriate scales will be used, i.e. don't measure the height of people in miles. ALL units will be given using the appropriate **METRIC** abbreviation.
4. All values in the graph should be listed in a table near the graph, or on a separate piece of paper stapled to the graph (or in the appropriate place in the lab notebook).
5. The scales should be **drawn** so that the **graph** takes up **as much of the paper as possible**.
6. Use a ruler when drawing the *best-fit line*. (for a *best-fit curve*, use a set of French Curves).
7. Dots are not connected unless the graph shows a change over time.
8. The independent—manipulated—variable (that one you change in the lab procedures) should be on the X-axis while the dependent—responding—variable (the one you measure) is on the Y-axis.
9. All lines on the graph need to be explained in your results. (The equation of the line needs to be listed for geometry students.)
10. All data points should be plotted with dot •. Because dots by themselves have a way of getting lost, or stray marks may become extra data points, you **MUST** put a circle around the dot. This is what your points should look like ⊙.
11. Points that are unrealistic should be plotted, but they are not to be included in the best-fit line. You will need to explain why they are unrealistic.
12. If you are plotting the points and make a mistake, draw an “X” through the point -- ~~⊙~~

Height vs. Shoe size

Shoe Size	Average height (cm)
7.0	167.5
8.0	175.0
9.0	182.5
9.5	202.5
10.0	187.5
11.0	195.0
12.0	200.0

