SCIENCE FAIR PROJECT

GRAPHS

Make sure your graph reflects the kind of data you have collected.
 A line graph demonstrates a relationship between two number variables.
 A bar graph demonstrates a relationship between a number variable and a category.
 A circle/pie graph compares parts to the whole.

Graphs and tables should be neatly done. Use computer generated graphs and tables or make them yourself. Use a ruler and colored pencils or markers to make them really eye appealing.

GRAPHS

Graphs are often an excellent way to display your results. In fact, most good science fair projects have at least one graph.

For any type of graph:

- Generally, you should place your independent variable on the x-axis of your graph and the dependent variable on the y-axis.
- Be sure to label the axes of your graph— don't forget to include the units of measurement (grams, centimeters, liters, etc.).
- If you have more than one set of data, show each series in a different color or symbol and include a legend with clear labels.

Different types of graphs are appropriate for different experiments. These are just a few of the possible types of graphs:

A **bar graph** might be appropriate for comparing different trials or different experimental groups. It also may be a good choice if your independent variable is not numerical. (In Microsoft Excel, generate bar graphs by choosing chart types "Column" or "Bar.")

A **line graph** shows the relationship between your dependent and independent variables when both are numerical and the dependent variable is a function of the independent variable. (In Microsoft Excel, choose the "XY (scatter)" chart type, and then choose a sub-type that does draw a line.)

Data Chart/ Data Analysis Checklist

What Makes for a Good Data Analysis Chart?	For a Good Chart, You Should Answer "Yes" to Every Question
Does your chart have labels for columns and rows?	Yes / No
Does your chart specify units of measurement for all data?	Yes / No
Have you verified that all calculations (if any) are correct?	Yes / No
Have you summarized your data with an average, did you find the mode and median?	Yes / No
Have you analyzed your data, look for trends or patterns?	Yes / No

Graph Checklist

What Makes for a Good Graph?	For a Good Graph, You Should Answer "Yes" to Every Question
Have you selected the appropriate graph type for the data you are displaying?	Yes / No
Does your graph have a title?	Yes / No
Have you placed the independent variable on the x-axis and the dependent variable on the y-axis?	Yes / No
Have you labeled the axes correctly and specified the units of measurement?	Yes / No
Does your graph have the proper scale (the appropriate high and low values on the axes)?	Yes / No
Is your data plotted correctly and clearly?	Yes / No