

## Graphing in Excel

### Make a bar graph in Excel

1. Open a new Excel 2010 spreadsheet. Identify two or more variables you want to include. For example, to graph the number of drops of HCl needed to turn an antacid solution acidic, use the variables “antacids” and “drops of HCl”.
2. You will want to place the independent variable on the x-axis and the dependent variable on the y-axis. Type the variable name, such as “antacid”, into cell A1; this will be placed on the x-axis. Type the second variable name into cell B1; this will be placed on the y-axis. Add additional variables as necessary. Type data under each variable to create a data set.
3. Highlight the data set you just created including the variable titles. Click the “Insert” tab and select “Column” in the “Charts” section. Select the “2-D Column” chart. A basic bar chart will appear in your Excel 2010 spreadsheet.
4. Go to the “Design” tab and click the bottom arrow of the “Charts layouts” selection to bring up a drop down menu. Choose the option that will give you a title, x-axis label, y-axis label, and a legend (layout 9). Click on each chart label to properly label your chart.
5. Use the “Layout” tab and the “Format” tab of the “Chart Tools” area to further format your graph. The “Layout” tab will allow you options to change the axis names, grid lines, legend or chart title. The “Format” tab will allow you to modify the color, shape and appearance of the bar graph.
6. The information from the data set can be used to create a table in Word. “Copy” the data set (including labels) and “Paste” the data into Word. Choose a “Paste” option within Word that allows you to “Use Destination Styles”; this will keep the formatting and create a bordered table in Word. Once the table is created be sure to add an appropriate title.
7. The graph can also be copied and pasted into Word. Click on a blank area of the graph and choose the “Copy” function. “Paste” the graph into your Word document.

**Independent variable** – It is the variable that stands alone and isn’t changed by the other variables you are trying to measure. For example someone’s age might be an independent variable. Other factors such as how much someone eats, exercises, etc. isn’t going to change the person’s age.

**Dependent variable** – It is the result of the experiment or the variable whose value is decided by the independent variable. It depends on other factors. For example, a test score could be dependent on how much studying you did, how much sleep you got, or if you are hungry.

*Put your variables in the following sentence to determine which is the independent variable and which is the dependent variable: (Independent variable) causes a change in (dependent variable) and it isn’t possible that (dependent variable) could cause a change in (independent variable).*

Helpful Graphing Websites:

[http://www.ehow.com/how\\_8103386\\_make-bar-graph-excel-2010.html](http://www.ehow.com/how_8103386_make-bar-graph-excel-2010.html)

[http://spreadsheets.about.com/od/excelcharts/ss/line\\_graph.htm](http://spreadsheets.about.com/od/excelcharts/ss/line_graph.htm)