

Graphing with Excel

Inputting data on the spreadsheet

1. This is done by click on a cell to select it.
 - Click on an empty cell and you can start typing in it. (Note: Excel uses AutoComplete when you start typing in an empty cell)
 - Use the [**Enter**] key after your input moves to the next immediate cell **below** the current one
 - Use the [**Tab**] key after your input moves to the next immediate cell to the **right**
 - Use the **arrow keys** after your input to move to the next immediate cell in the direction of the arrow
2. To change data that has already been inputted, **double-click** on the cell and you can change your data

Columns and Rows

1. Columns are vertical and use **letters** for their headings (i.e. A, B, C, D, E...)
2. Rows are horizontal and use **numbers** for their headings (i.e. 1, 2, 3, 4, 5...)

Creating new columns or rows

1. If you need to insert a new column or row after you have already inputted your data, **left-click once** on the letter of the column or the number of the row. This will highlight the column or the row.
2. If you are creating a new column, move the mouse cursor over the highlighted letter. It should turn into a down arrow. Right-click on it once and select **I**nser from the menu. It will insert a new column **directly to the left** of the highlighted column
3. If you are creating a new row, move the mouse cursor over the highlighted letter. It should turn into a right arrow. Right-click on it once and select **I**nser from the new menu the pops up. It will insert a new row **directly above** the highlighted row.
4. If you ever need to change the column width so that your text fits in the cell, move the mouse cursor over the line between the column your in and the column to its immediate right. The mouse cursor should change to a line with double arrows. Double-click and the column should widen to fit the text.

Creating a Bar Graph with one independent variable

1. Column A is the **independent variable**. In cell A1 (column A, row 1) you can input the heading or title of the independent variable. Start inputting the independent variables from cell A2 down.
2. Column B is the **dependent variable**. In cell B1 (column B, row 1), you can input the heading or title of the dependent variable. Start inputting the dependent variables from cell B2 down.

Note: The headers at the top of each column are not necessary, but they do help identify the variables

3. Go back and select cell A1. Now click on the **graph icon** in the toolbar (it is the one with three bars in primary colors). If it is not present, the click on **Insert** in toolbar, and select **Chart...**
4. A new window pops up and it should be titled, "**Chart Wizard – Step 1 of 4 – Chart Type**". Depending on what kind of chart you're making, the default choice is usually good enough for a bar graph, so click on **Next >**.
5. The window should now be titled, "**Chart Wizard – Step 2 of 4 – Chart Source Data**". If you had selected cell A1 in Step 3, then Excel will automatically select all of the data you typed. You can verify this by looking for the "marching ants" line around everything you typed in. When done, click on **Next >**.
6. The window should now be titled, "**Chart Wizard – Step 3 of 4 – Chart Options**". This window will probably take the most time out of all the steps, since this is where you can customize most of your chart.
 - If you want to title your chart, or title the x- or y-axis, click on the **Title** tab.
 - If you need to change the x- or y-axis, click on the **Axes** tab (you usually don't need to change this).
 - If you need to change the gridlines for your graph, click on the **Gridlines** tab.
 - If you want to show the legend, or change the placement of the legend, click on the **Legend** tab.
 - If you want to label the bars on your graph, click on the **Data Labels** tab.
 - If you want to input a table with the data you typed, then click on the **Data Table** tab.

When you are finished, click on **Next >**.

7. The window should now be titled, “**Chart Wizard – Step 3 of 4 – Chart Location**”. Click and select the first radio button (**o As new sheet:**). You may title the chart whatever you like. When you are done, click on **Finish**. The chart will be inserted on the row of Excel with the other “page titles” (Sheet 1, Sheet 2, Sheet 3, etc.). You can format most of the colors or fonts on this graph by double-clicking on the items you want to change.
8. To print out the graph, click on **File** and then **Print...** in the top menu toolbar. You may wish to preview the graph before you print it (**Print Preview**).

Creating a Bar Graph with two independent variables

This is pretty much the same as creating a graph with one independent variable. Except now, you would insert the new independent variables in Column C.

References:

1. LabWrite Resources: <http://www.ncsu.edu/labwrite/res/gt/gt-cell-home.html>