

# Charts with Microsoft Excel

## ***Decide where to put it -- sheet or object?***

Charts can either appear as a separate sheet in the Excel workbook or as an object on one of the other sheets. The former is easier for making a chart to take to another application (like Word); the latter is better if you want to print the data and the chart on the same stack of paper.

## ***What kind of a chart?***

- Column and bar charts are good when you want to compare a small number of samples over time; line and area charts are better when you have a large number of samples. All of these can be stacked so that all of the values add together and the distance between shows the proportion of each contribution, but be sure you clearly label that or your reader may be deceived and/or confused by the chart.
- XY charts are used when you want to plot something (dependent variables) with respect to something else (an independent variable).
- Pie charts are for showing how different items contribute proportionally to something.
- Stock charts include high-low-close charts, which can be abused for plotting data with error bars.

## ***Setting up your data***

1. Lay out the information to be plotted in a table using columns.
2. If using a bar, column, line or area chart, put the X axis labels to the left of the table. If using an XY chart, put the X variable on the left side of the table, and the dependent variable(s) to the right.
3. If you have labels for a legend, put those at the top of the columns.

## ***Beginning the chart***

1. Highlight the data for the chart including the legend items at the top of the columns. Do not highlight X axis labels if they're numeric, as they'll be plotted along with the real data. You can hold down Ctrl and click, hold and drag to select ranges that are not contiguous.
2. Select Insert -> Chart.
3. Pick the chart type and the sub-type by clicking and click Next.
4. Add labels to column, bar, line and area charts by clicking "Series", then click the button next to "Category (X) axis labels" and highlight the label range.
5. If you want a legend, the legend names will appear as the series names. If you don't like the name listed, change it under "Name".
6. Click Next.
7. Add title and axis labels if desired, then click Next.
8. Click the radio button for either "As new sheet" or "As object in" and click Finish.

## ***Tweaking options***

To make changes to a chart, select it by clicking at the outer edge. (If you click in the middle you may select one of the chart elements instead.)

### **Changing chart type**

1. Select Chart → Chart Type
2. Pick a different type and/or sub-type
3. Click OK.

### **Changing chart location**

1. Select Chart → Location
2. Either select "As new sheet" and enter a sheet name, or select "As object in" and select the sheet to insert the chart in.
3. Click OK.

### **Modifying chart options**

Here's where you add titles, legends, gridlines, etc.

1. Select Chart → Chart Options
2. Click the appropriate tab and make changes
3. Repeat step 2 until finished
4. Click OK.

## ***Copying the chart to Word***

1. Select the chart by clicking at the outer edge.
2. Select Edit → Copy.
3. Switch to Word.
4. Either:
  - Select Edit → Paste.
  - Select Edit → Paste Special and choose "Microsoft Excel Chart Object"

Pasting as an Excel chart object allows you to open and modify the chart from inside Word; a normal paste allows you to modify it as a drawing.