Excel 2007 Tutorial

There are two methods I've described here. The 'manual' method is tedious, but will get you acquainted with a more generalized way of making a graph. The 'automatic' method is MUCH quicker, but may not be helpful for as many situations (though I've tried to cater it towards Exp1). Please notify me (Adam Scott) if you find a step confusing or with typos. Thanks and good luck!

<u>The 'manual' method of making a scatter plot of data:</u>

First, select any blank cell on the Excel spreadsheet to which you want to add a graph. Next, select the "Insert" tab near the top left of the Excel window. A row of new options will appear just below the tabs row. Near the middle of the row of options, you'll see a box labeled "Scatter". Select this and a drop down menu should appear with various scatter graph options. Select the "Scatter with only Markers" option (The options aren't labeled by name, but the associated picture looks like graphed polka dots. You can check the option by scrolling over the picutres and letting your mouse cursor sit for a second or two). After selecting the desired plot, a blank rectangle will pop up over some of your Excel worksheet, and a new row of options will appear just below the row of tabs.

The blank rectangle will house your plot, but to do so you'll need to first select your data. Select from the options row, "Select Data". A pop-up window "Select Data Source" will appear. Under the section labeled "Legend Entries (Series)" you'll have the choice to "Add", "Edit", "Remove", and two series ordering buttons (up and down arrows). Since no data was selected before opening "Select Data", no series will appear under "Legend Entries (Series)" (this is how the 'manual' method contrasts to the 'automatic' method).

To add a data series, select the "Add" button. A new pop-up window will appear, "Edit Series". Here, you can label your series by clicking in the blank space under "Series name:". Then, you can add values you want to plot along the x-axis, such as time values. To do this, select the white space under "Series X values:". Now on your worksheet, you can click and drag to select a single column OR a single row (Excel won't know what to do if you select multiple rows or columns, so it may fuss at you). Once your desired row OR column is selected, you'll notice that the white space under "Series X values:" is filled in. This is good, but now you'll need to plot data along the y-axis. To do so, select the white space under "Series Y values:". Delete{1} from this space. Now, you may click and drag over a row OR column on your worksheet which you want to plot along the y-axis, for example, position data. The white space under "series Y values:" will be filled in after you've made your selection, which SHOULD mean you are done selecting some data. Click the "OK" button on the "Edit Series" pop-up window to return to the "Select Data Source" window. Notice that the series you just selected from the worksheet is now under "Legend Entries (Series)". From here, you can add more series by following the steps above in THIS paragraph. You can rename or select alternative data for a series you have created by selecting your series first and then selecting "Edit". Once you have all your desired series on your graph, click "OK" on the "Select Data Source" window to return to your worksheet and fancy new graph.

The 'automatic' method of making a scatter plot of data:

First, make sure the cell above each column of data is labeled (for example: above time values, make the cell just above the time data cells say "Time (*you insert appropriate units here*)". Then, with your x-axis values on the left side of your data table (this should be the time values for this example 'experiment'), select ALL columns of data you'd like to plot. The rows to the right of the time column should be position, velocity, and acceleration for this example. Now, while this data table is selected, click the "Insert" tab from near the top left corner of the Excel window. Look for the "Scatter" button near the middle of the row of options. Then select the polka dots of data picture which should represent "Scatter with only Markers". Once you have selected this plot type, a graph should appear over your worksheet with your data series automatically plotted. And that's it besides adding a label for your x-axis and a plot title.

To add axis labels and a chart title:

First select your graph by clicking somewhere in the white space around the legend. Next, select the "Layout" tab. Near the mid left of the options row, the "Chart Title" option will allow you to input a chart title, and the "Axis Titles" option will allow you to input horizontal and vertical axis titles. Once you've selected your desired title(s), you can edit them by clicking on them in your graph.