Using Excel Spreadsheets

This tutorial is only a very limited introduction to using Excel in the context of the lesson plans that are described. If one searches the web, one will find a variety of sites that can provide most any level of training regarding the use of Excel. An example: ttp://people.usd.edu/~bwjames/tut/excel/index.html.

Open Excel

When you first launch the application, you will be presented with an empty spreadsheet divided into rows (labeled as 1, 2, 3, 4, ...) and columns (labeled as A, B, C, D, ...). Generally, each column is reserved for a given quantity (e.g., power, time, temperature, wind speed).

Importing Data

One of the most important tasks we need is to import data from a *.txt format into an Excel spreadsheet. To do this, click and hold on the Data tab at the top menu and navigate to the Get External Data link and then select Import Text File. A window will open allowing you to browse to the specific text file you wish to import. Once you have selected the desired file, a Wizard routine will analyze the format of the data and suggest the options on how to import the data. The files at the Creighton archive are all of a simple tab delimited format and your wizard should already recognize this. If not, select "delimited" and click the next tab at the lower corner. At the next window, the wizard should already recognize the format as "tab" delimited. If not, select the "tab" checkbox and click the next tab. The last window inquires as to the format style (numbers, dates or text) that the data are to be presented as in Excel. Choose "general" and click finish. The next window that you are presented with, asks where in the spreadsheet (beginning at what cell of a given row and column combination) do you want the data input to begin. The suggested location corresponds to the currently highlighted cell on the spreadsheet and is usually the upper left hand cell (A1).

Graphing Two Quantities

Let us suppose that you have two quantities (X and Y) that are each located in two columns next to one another. We begin by highlighting both columns. This will then associate the X value with the first column and the Y value with the second column. Next select the "Chart Wizard" icon from the menu bar just below the main menu bar (the icon looks like a bar graph). This will launch a set of windows. In the first window, we want to select a "(XY) scatter" plot. If you have already highlighted the two columns of data, the next window will already show the data plotted against one another and will indicate the range of data in the spreadsheet that is highlighted. If you have not already highlighted the data, now is the opportunity to do that. If all appears correct, proceed to the "next" window. The next window allows you to input a title for your plot and labels for both the X and Y axes. As you will see there are additional tabs that allow for other adjustments to be made to the final appearance of your graph. You are encouraged to explore these at your leisure, but for now, hit "next". On the last wizard window, we select where the graph will be placed. For now, let's leave it on the same page as our data. Select "finish" to exit the wizard. Now you should find the graph appears somewhere on your spreadsheet and can be resized and moved about however you like.