Charting Progress with a Spreadsheet

We shall use Microsoft Excel to demonstrate how to chart using a spreadsheet. Other spreadsheet programs (e.g., Quattro Pro, Lotus) are similarly organized.

It should take about five minutes to set up a chart showing a week’s worth of daily scores. Once the spreadsheet is set up, it takes about a minute to add subsequent weekly sets of scores.

The following procedure is not the only way you can use Excel to create a chart. I do it this way because it is similar to the way many graphics and statistical programs organize their data sets. You may be more comfortable organizing the data in another way. If so, do so.

1. The first step is to open the Excel application by clicking on the Excel icon on the desktop or selecting Excel from the Start menu. The program opens with the data sheet window (Figure 1). Data sheet columns are labeled A, B, C, etc., and the rows labeled 1, 2, 3, etc.

   In column B and row 2 (cell B2) the word “Date.” Beneath this type in the consecutive dates covering the range in which data were collected.

2. In cell C2, type the word “Score.” Beneath this, type in each score next to the date on which it was collected.

   Your data should be in the range from B3 in the upper left to C9 in the lower right. The data do not include the column heads which are in cells B2 and C2.

   Later we shall see that Excel defines this as “Sheet1!$B$2:$C$9” which means “the data on sheet 1 in the cells from B3 in the upper left to C9 in the lower right.”

![Figure 1: Data Sheet](image)
3. To create a chart, click on the “Chart Wizard” icon in the Excel toolbar (Figure 2).

4. The first of four dialog boxes will appear – “Chart Wizard – Step 1 of 4 – Chart Type” (Figure 3).
   Choose “Line” in the “Chart type:” box and the first option in the “Chart sub-type:” box (“Line. Displays trend over time of categories.”). Click the “Next>” button after you have done this.

5. In the “Chart Source Data” dialog box (Figure 4) make sure that the “Data range:” text box shows the same range as covered by your data - “=Sheet1!$B$2:$C$9”. If your data cover a different range or if the information in this box is inaccurate, type in the correct information.
Your information should be organized in columns, so the “Columns” radio button should have a dot in it.

Click the “Next>” button.

Do **NOT** click the “Next>” button. Instead, click in the “Legend” tab at the top of the box.
7. Under the “Legend” tab, click on the “Show legend” checkbox to remove the check mark (Figure 6).
   Now click the “Next>” button.

8. In the “Chart Location” dialog box (Figure 7), click on the “As new sheet:” radio button. This will put the chart on a separate sheet rather than as an object within the data sheet.
   Click the “Finish” button.
9. The chart sheet (Figure 8) will now appear. To change to border and area colors right click (press the right mouse button) in the plot area (the gray background within the chart). A menu will appear next to your mouse pointer. Select the “Format Plot Area...” option from the menu.

10. In the “Format Plot Area” dialog box (Figure 9). Click in the “None” radio button in both the “Border” section and the “None” radio button in the “Area” section. Click the “OK” button.
11. Now right click on one of the dates beneath the category (X) axis. From the menu, click on the “Format Axis…” option. In the “Format Axis” dialog box, click on the “Font” tab at the top of the dialog box. Click on “12” inside the scroll box beneath the “Size:” text box. Leave the “Font:” and “Font style:” at “Arial” and “Regular” (Figure 10). Click on the “OK” button.
12. Now, right click on one of the numerals along the left side of the value (Y) axis. Format the font the same way as for the category (X) axis. Click on the “OK” button.

13. Right click on the value axis title (my value axis title is “Score”). Select the “Format Axis Title...” option from the menu. Select the “Font” tab from the tabs at the top of the “Format Axis Title” dialog box. The “Font” selection should be “Arial”; select “Bold” for “Font style:”; and set the “Size:” at “14”. Click the “OK” button.

14. Right click on the chart title (mine is “Repeated Measure”). From the menu, click on the “Format Chart Title...” option. Within the “Font” tab area, format the chart title as follows: “Font:” = “Arial”; “Font style:” = “Bold”; and “Size:” = “16”.

15. Now right click on the data series line (the line depicting the score levels). Click on the “Format Data Series...” option. Make sure that the “Patterns” tab is selected within the dialog box (Figure 11).
   In the “Line” area, click on the “Custom” radio button to put the dot in it. Leave the “Style:” dropdown box at its default selection (an unbroken line). Click on the down arrowhead to the right of the “Color:” dropdown box to change the line color to black (in the upper left corner of the palette that will appear). Click on the “Weight:” down arrowhead and select the thickest line weight. Make sure that there is no checkmark within the “Smoothed line” checkbox. In the “Marker” area of the dialog box, make sure that the dot is inside the “None” radio button. Click on the “OK” button.

![Figure 11: Format Data Series - Patterns](image-url)
The chart is now formatted. You can print it as a separate document by clicking on the “Chart1” tab before selecting the “Print…” from the “File”. Once in the “Print” dialog box, make sure that the “Active sheet(s)” radio button has a dot in it before printing.

You can also insert the chart into a Microsoft Word document. To do this you open the Word document in Word and the Excel chart in Excel. In Excel you select the chart and select “Copy” from the “Edit” menu. Then switch to the Word document and click where you want the chart to appear. The select “Paste” from the “Edit” menu (Figure 12).

Figure 12: Inserted Chart

The way most people learn how to use software is by playing with it. Try different things with the program to become more comfortable with it.