

Instructions for making graphs in Excel™

Note about locked spreadsheets: HBRF's Excel files have been "locked" (protected) at the request of the investigators who collected these data, which means that you can't make a graph right from this spreadsheet. To get around this, you need to copy and paste data from the original spreadsheet into a new Excel workbook. Once you have opened the data file:

1. Click on the top, left-most square, found at the intersection between the top row of lettered columns and the left-most column of numbered rows. This is much less confusing than it sounds! Clicking on this square will select the entire spreadsheet page.
2. Copy data.
3. Open a new spreadsheet by clicking on a new tab.
4. Click in the cell A1.
5. Hit 'paste' and the copied information should appear.
6. Rename the tab for this spreadsheet, save changes.
7. Now you can proceed to graph the data.

Note about Line Graphs in Excel: Line graphs are used to look at data over a period of time. Unfortunately, making a line graph in Excel is more complicated than it should be. If you have line-graph appropriate data, it is actually easier to use the scatter graph option. However, by definition, a scatter would not be the correct graph to choose, as scatter graphs are used to examine cause and effect relationships between two variables (or to examine the relationship of two variables with an unknown third factor). Directions for making both kinds of graphs follow.

To make a scatter plot in Excel:

1. Highlight the two columns of data and click on the **Insert** tab. Click on **Scatter** and choose "Scatter with Straight Lines" (bottom left).
2. The graph will appear before you. Check to see if things are making sense.
3. You will need to change the Chart Title and add x- and y- axis labels:
 - a. Click on **Chart Tools** and on the **Layout** tab.
 - b. To add title, click on **Chart Title** and choose whether you want a **Centered Overlay Title** or a title **Above Chart**. Enter a descriptive, correctly capitalized title and hit 'enter.'
 - c. To add x-axis label, click on **Axis Titles**, then **Primary Horizontal Axis Title**, then **Title Below Axis**. Enter a descriptive, correctly capitalized label and hit 'enter.'
 - d. To add y-axis label, click on **Axis Titles**, then **Primary Vertical Axis Title**, then **Rotated Title**. Enter a descriptive, correctly capitalized label and hit 'enter.'
 - e. You can edit these titles at any time by clicking once to highlight the appropriate textbox and then clicking again to make changes to the text.

To make a line graph in Excel:

The process isn't as simple when making a line graph. If you simply highlight your data as described above, your graph doesn't come out right! Follow these directions instead:

1. Click on **Insert** and then on **Line**, choose the first 2-D Line.
2. Right click in the blank graph 'canvas.'
3. Choose **Select Data**: click in **chart data range box** and then highlight the 'Depth (inches)' column of data, including the title of the column.
4. Click **Edit** in the Horizontal (Category) Axis Labels window; the axis labels dialog box appears. Now highlight the Years column of data *without* including the title ('Year') and click **OK**.
5. Now click **OK** to close the Select Data Source box.
6. You will need to change the Chart Title and add x- and y- axis labels:
 - a. Click on **Chart Tools** and on the **Layout** tab.
 - b. To add title, click on **Chart Title** and choose whether you want a **Centered Overlay Title** or a title **Above Chart**. Enter a descriptive, correctly capitalized title and hit 'enter.'
 - c. To add x-axis label, click on **Axis Titles**, then **Primary Horizontal Axis Title**, then **Title Below Axis**. Enter a descriptive, correctly capitalized label and hit 'enter.'
 - d. To add y-axis label, click on **Axis Titles**, then **Primary Vertical Axis Title**, then **Rotated Title**. Enter a descriptive, correctly capitalized label and hit 'enter.'
 - e. You can edit these titles at any time by clicking once to highlight the appropriate textbox and then clicking again to make changes to the text.

General directions for making graphs using Excel (version 2007) on a PC are as follows:

- a. Highlight the data you wish to graph. Include the column headings as you highlight.
- b. Under **Insert** in the toolbar go to **Charts**.
- c. Choose the type of graph you wish to make. Subtype choices sometimes appear: select the most appropriate choice.
- d. The graph is produced as you soon as graph subtype has been selected. Check to see if things are making sense.
- e. To label chart title, and x- and y-axes, make sure the graph you are labeling (not the spreadsheet with the numbers) is active by clicking on it. Go up to Chart Tools at the top of the screen and click on the Layout tab. Notice the 'Chart Title' and 'Axis Titles' boxes. Give your chart a title and label each axis by clicking on the appropriate box and then typing your labels.
- f. By default, the graph background should be set to white, but to save printer ink, be certain of this before printing. If background is not white, click in chart area, right click, and choose "Format Chart Area." You will see a toolbar: click on the 'paint bucket' icon and choose white.
- g. Be sure to click on the chart before you print, or you will end up printing the chart with the spreadsheet of data in the background.

General directions for making graphs using Excel (version 2008) on a Mac are as follows:

1. Highlight the data you wish to graph. Include the column headings.
2. Under **Insert** in the toolbar, select **Chart**.
3. A horizontal ribbon appears under the main toolbar. At the top of this ribbon are 12 small ovals with the main graph types (bar, bubble, column, scatter, etc). Choose the type of graph you wish to make.
4. Subtype choices sometimes appear: select the most appropriate choice.
5. The graph is produced as you soon as graph subtype has been selected. Check to see if things are making sense.
6. To edit things like the title, use the right-hand sidebar, called the "Formatting Palette." Inside this palette are the "Chart Options." (If you don't see this, look in the 'Toolbox' tab at the top of the spreadsheet.) The chart title, x-axis, and y-axis labels all appear in one drop down menu near the top of the Chart Options section, under the label "Titles."
7. You can choose to either imbed your graph in the current sheet or to place it in a separate sheet. You have to click on the chart and then press control and click at the same time. Now select "Move Chart." A dialog box appears asking if you want it inside an existing sheet or if you want the chart to occupy a new sheet all by itself.