

How to Create a Data Table and Bar Graph in Microsoft Excel

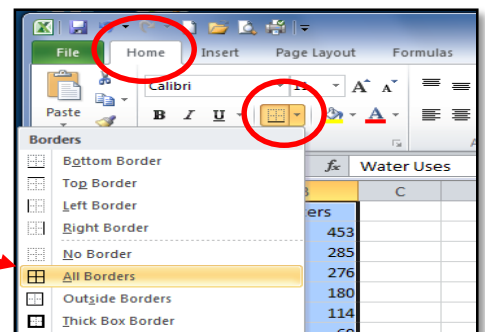
First, make sure that a bar graph is the correct type of chart for your data. **Bar graphs are best used for comparing different sets of data**, such as displaying total populations in different countries, the number of hurricanes that each state typically gets, or height of students in a class.

Log on and **add the Color Printer** to your computer by following the directions posted in the room

A. Create the Data Table

1. Open Microsoft Excel and enter your two headings for your data table:
 - In **cell A1** type in what group of data that you are recording the data for. This is your independent variable that will show up on the X-axis.
*examples – *Country, State, Student Name*
 - In **cell B1** type in what the data is that you are measuring, including your units of measure. This is your dependent variable that will show up on the Y- axis.
*examples – *Population (in millions), # of Hurricanes, Height (in inches)*
2. Resize Column A:
 - Place your pointer in the gray area in between Column A and Column B until a line with an arrow through it appears
 - Drag Column A to the right until it is the size you want
3. If necessary, resize Column B too
4. In Column A, underneath your independent variable header (in cell A1), type all of your data groups that you are comparing. *examples – *France, Japan, USA...* or *CT, MA, NJ...* *Amy, Brad, John, Sarah...*
5. In Column B, underneath your dependent variable header (in cell B1), type in all of your recorded data measurements for *each* of your data groups/types. *examples – *5, 10, 15, etc.* or *38, 57, 62, etc.* Do not type in the units of measure, just the actual values.

6. Highlight (select) all of your data in Column A and B:
 - select the **Home** tab
 - select the drop down arrow next to the **Borders** button
 - choose **All Borders**

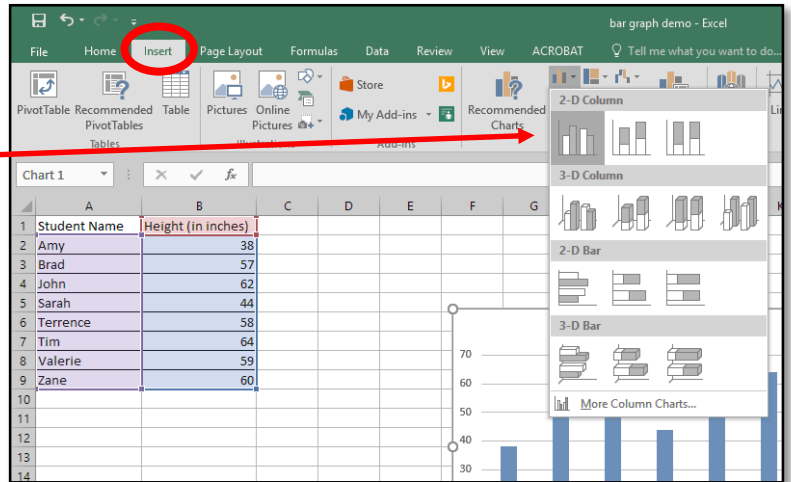


7. **SAVE** and **NAME** the file in the appropriate class folder in your H drive: select the **File** tab > **Save As**. Select **Browse** and navigate to your **H drive, current grade, current class folder**, type the project name in the **File name** box, select **Save**

B. Create the Bar Graph (Column Chart)

1. Highlight all of your data in Column A and B

2. Select the **Insert** tab, then from the **CHARTS** section, choose **Column/Bar Chart** and select either the **2-D Clustered** or the **3-D Clustered** type

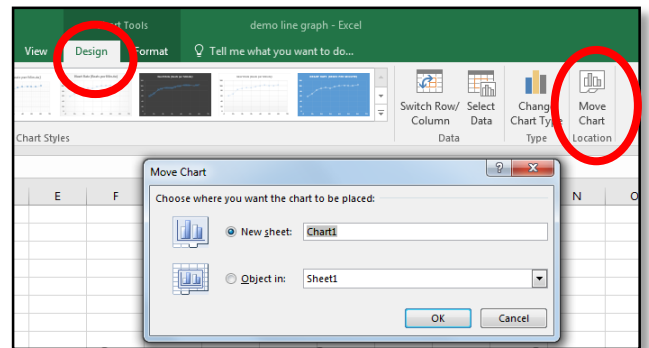


Your bar graph will appear on your worksheet

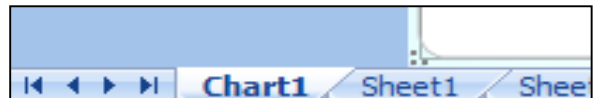
3. Select the **Design** tab, then click on the **Move Chart Location** button from the top right of the screen.

4. Check the button next to **New sheet**, then select **OK**

5. Your chart will then appear in a new sheet



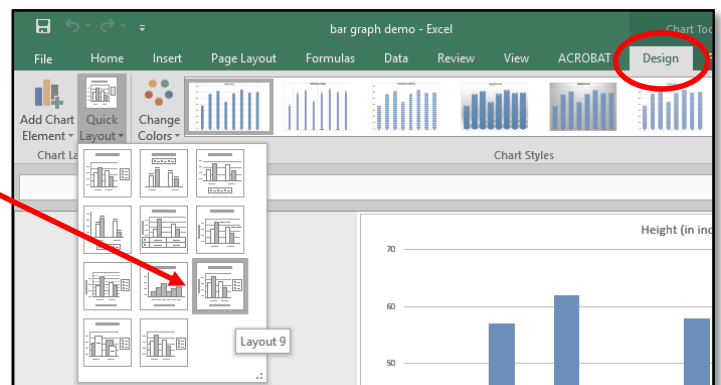
You can move between your data table and bar graph (chart) by selecting either the "Chart 1" tab (for your bar graph) or the "Sheet 1" tab (for your data table).



6. Select your chart by clicking in the white space just outside of your plot area. Little white boxes will appear around the edges of the box around the chart. These are called handles.

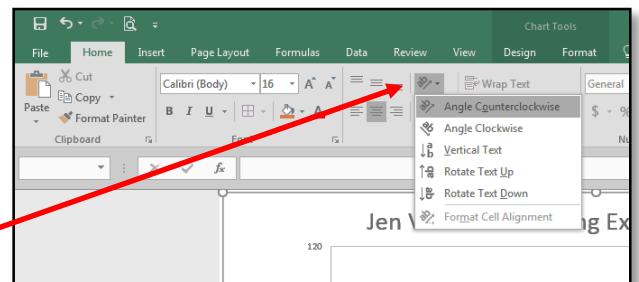
7. With your chart selected, choose the **Design** tab > **Quick Layout** > **Layout 9**

You'll now have a graph with a chart title, an x-axis title, a y-axis title and a legend



C. Format the Bar Graph (Column Chart)

1. **DELETE** the legend: Since you are only graphing one group of data, you don't need a legend. Click on the legend box, press **DELETE** on your keyboard.
2. Select your Chart Title, highlight the text, and rename it to an appropriate name
*example - *Height of Students in Mrs. Vilenski's Period 2 Class*
3. Change your title to font size 24 or 22: **RIGHT CLICK** on your chart title, select **Font**, choose **Size 24**, select **OK**
4. Repeat steps 2 and 3 to appropriately rename your x-axis title (example – *Student Name*, or *Country*), then resize the x-axis title to font **Size 14** or **Size 16**
5. **ROTATE the y-axis title** so it's easier to change the title name:
 - Select the **y-axis title**, then select the **HOME** tab
 - From the **ALIGNMENT** section on the top menu ribbon, select the **ORIENTATION** button. It has an ab with an arrow under it, as shown at right
 - Click on the **ANGLE COUNTERCLOCKWISE** option two times, until the y-axis title reads straight across, like the x-axis title



6. Repeat steps 2 and 3 to appropriately rename your y-axis title (example – *Height, in inches* or *Population, in millions*), then resize the y-axis title to font **Size 14** or **Size 16**
7. Repeat step 5 to **ROTATE your y-axis title back** so it is going vertically up (**ROTATE TEXT UP**). This orientation will take up less title space, and leave more room for your graph.
8. **RIGHT CLICK** on one of your bars in your bar graph, then select **FORMAT DATA SERIES**. You'll see a **FORMAT DATA SERIES** menu appear on the right side of the chart.
9. Select the **FILL AND LINE button** (paint bucket), then change the **FILL** options (color, pattern) and **LINE** options (type, color, width, border) as desired.

D. Preview, Assess, Print and Save the Bar Graph (Column Chart)

1. **BEFORE** you print your chart, complete the self-assessment for this project to ensure you did everything correctly
2. **PRINT** your file: select the **File tab > Print**, make sure that the correct printer shows up in the **Printer** box, **PREVIEW** the chart on the right side of the screen to ensure it looks ok, then select the **Print** button
3. **SAVE** the document to your **H drive** as you did in step A7. You're all done!

