

# Producing a Climate Graph in Excel 2007

Save a copy of the **Barcelona Climate Data Spreadsheet** (find it at the web address in the header – go into the Geography section) and use this to work through your chart production.

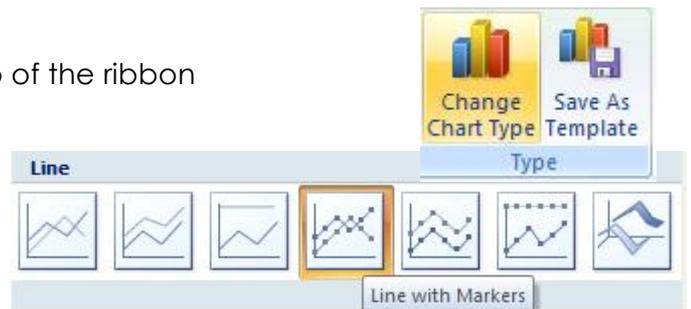
## Step 1 – Basic column chart

1. **Highlight** cells A4 to C16 - the area shown on the screenshot
2. Click **Insert** and choose **Column** from the Charts section on the ribbon.
3. Choose a normal **Clustered Column** chart (you really don't want to be using 3D charts...)

	A	B	C	D
1	<b>Climate Data for Barcelona</b>			
2				
3		<b>Barcelona</b>		
4		Temperature (deg C)	Rainfall (mm)	
5	Jan	9.5	31	
6	Feb	10.5	39	
7	March	12.5	48	
8	April	14.5	43	
9	May	17.5	54	
10	June	21.5	37	
11	July	24.5	27	
12	Aug	24.5	49	
13	Sept	22	76	
14	Oct	18	86	
15	Nov	13.5	52	
16	Dec	10.5	45	
17				

Now let's get a line for the temperatures.

4. Click one of the **temperature** columns to select them. You'll see them get selected.
5. Click **Change Chart Type** on the **Design** tab of the ribbon
6. Choose the **Line** type and then select the **Line with Markers** option > **OK**

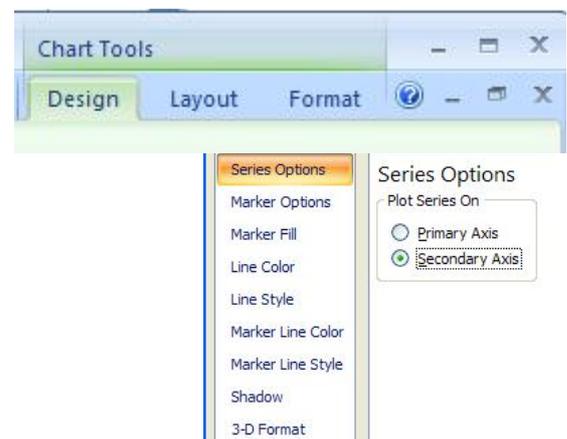


The temperatures will now be shown as a line. To get a **smooth line** instead see the note at the end of page 3 of this document!

**Word 2011 (Mac version) & Word 2010 (probably...)** – it's simpler to get the line with these versions. Just click on one of the temperature bars to select them and choose a line chart from the charts section of the ribbon (you'll notice that it says "Change chart type" above the chart types now. An improvement over 2007 I think.

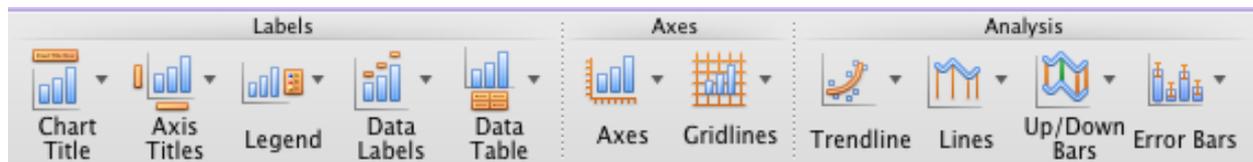
## Step 2 – Temperature axis

1. Click to select the **temperature** line
2. Click the **Layout** tab at the top
3. Choose **Format Selection** from the left
4. Choose the **Secondary Axis** button > **OK**



### Step 3 – Titles and Labels

Click the **Layout** tab. From here we can then add a **Chart Title** and **Axis Titles**. The options are fairly obvious from the ribbon.



I went with:

- Chart title (choose **Above chart**): Climate Graph for Barcelona
- Primary Horizontal Axis: Months
- Primary Vertical Axis (choose **Rotated**): Precipitation (mm) (or Rainfall)
- Secondary Horizontal Axis: leave blank
- Secondary Vertical Axis (choose **Rotated**): Temperature (deg C)

### Step 4 – Put the chart on its own page

You don't **have** to do this, but personally I prefer it.

1. Click the **Design** tab
2. Choose **Move Chart** and select a **New Sheet > OK**

If you don't want the chart on it's own page then you might need to resize it at some point.

### Step 5 – Showing the data table

You might need to show the actual climate data underneath the chart. This is easy to do.

1. Click the **Layout** tab
2. Choose **Data Table > Show Data Table**

You probably don't want to choose the Show Data Table with Legend Keys option.

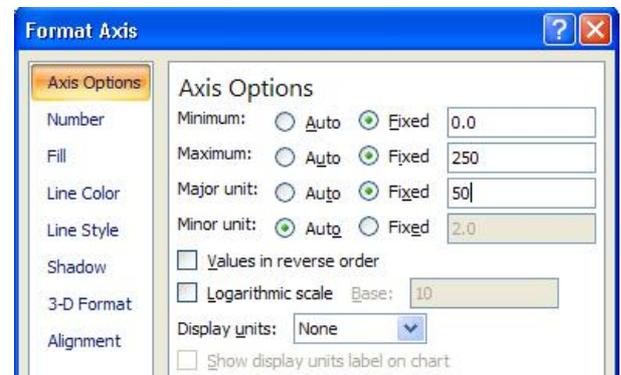
You might find the data is a little tricky to read. This is where a full page chart becomes much easier to cope with.

## Step 6 – Formatting Axes

You might need to change the maximum and minimum values on the axes of the graphs. This is particularly useful if you need to compare two climate graphs with very different values.

To do this:

1. **Right click** on the axis you want to change (it's easiest to click on one of the numbers)
2. Choose **Format Axis**
3. Click the radio buttons and enter the values you need as the max or min. You can also deal with the major and minor units at this point - these determine where gridlines appear.



You can do this on both vertical axes.

## Step 7 – Remove Gridlines

On the **Layout** tab click the **Gridlines** button on the ribbon

Choose the individual gridlines and set the gridlines options to **None** (assuming you want no gridlines) If you do want gridlines then choose the options appropriate to you.

## Step 8 – Move the Legend:

You might want to put the Legend underneath the chart rather than on the right.

1. Click on the **Layout** tab
2. Click the **Legend** button on the ribbon and choose **Show Legend at Bottom**

## To get a smooth line:

Rather than selecting **Line** choose **X Y (Scatter)** and then select the **Scatter with Smooth Lines and Markers** option

You can change the markers as before.

You'll see that a random axis appears at the top of the graph. To get rid of this (and you really don't want it there!) go to the **Layout** tab and click **Axes > Secondary Horizontal Axis > None**

On the plus side you don't need to deal with the secondary vertical axis as Excel will do it by itself.