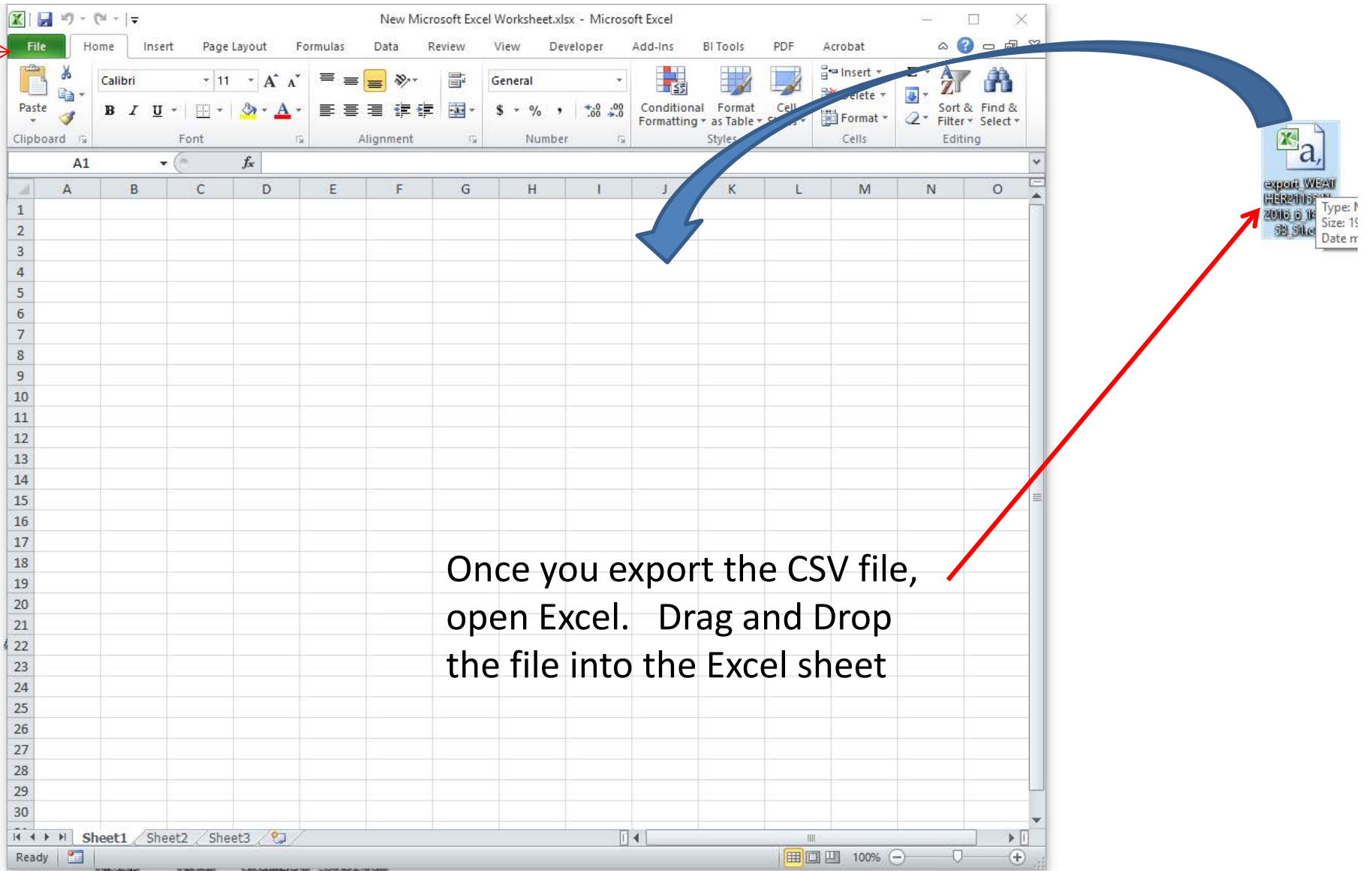


How to Create Graphs from Exported CSV Files using Excel

- This tutorial will show you how to create a graph of the data that you exported from your Kestrel 5000 series or Kestrel DROP using one of the Kestrel LiNK applications.
- This tutorial assumes that you were able to export the CSV file already to your computer and know the location of this file.



Once you export the CSV file, open Excel. Drag and Drop the file into the Excel sheet

If for some reason all the data goes into the first column, then alternatively open Excel and click File-Open and navigate and select the file that way.

Highlight the first column and expand by pulling over the right partition to expand the date and time.

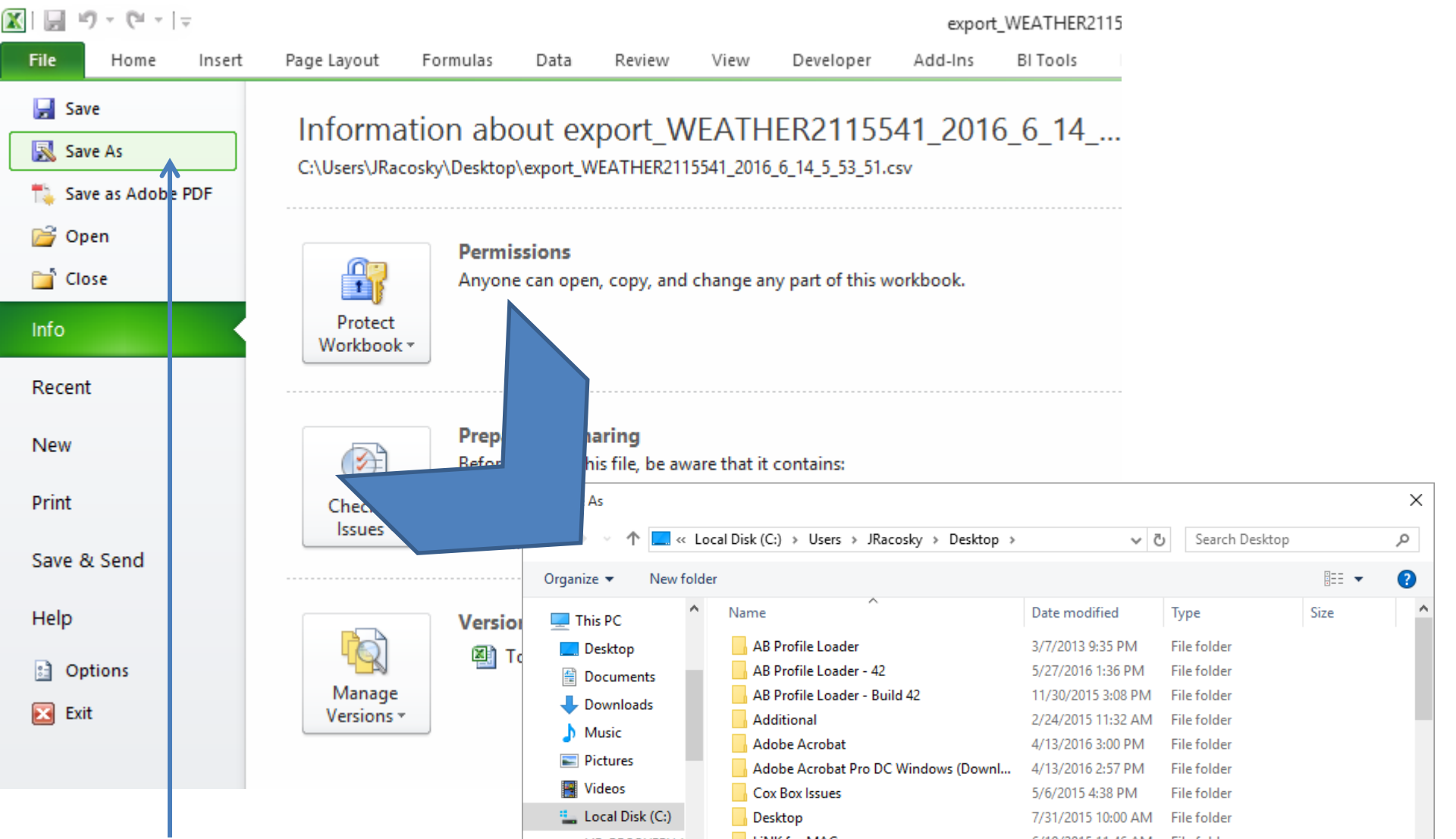
This screenshot shows an Excel spreadsheet with a table. The first column (A) is highlighted with a red box. A red arrow points from the right side of this box towards the right edge of the spreadsheet, indicating the direction of expansion. The table has the following structure:

| Device Name | Direction | Wind Speed | Crosswind Head |
|-------------------|-----------|------------|----------------|
| YYYY-MM-Å° | mph | mph | mph |
| WEATHER - 2115541 | | 0 | |
| 5500L | | 0 | |
| 2115541 | | 0 | |
| | | 0 | |
| | | 0 | |
| | | 7.2 | |
| | | 9.4 | |
| | | 1.6 | |
| | | 6.7 | |
| | | 1.7 | |
| | | 1.3 | |
| | | 3.3 | |
| | | 3.7 | |
| | | 4.1 | |
| | | 1.3 | |
| | | 1.2 | |
| | | 3.5 | |
| | | 7.5 | |
| | | 3 | |
| | | 5.1 | |
| | | 8.1 | |
| | | 1.3 | |
| | | 2 | |
| | | 3.2 | |
| | | 2.2 | |

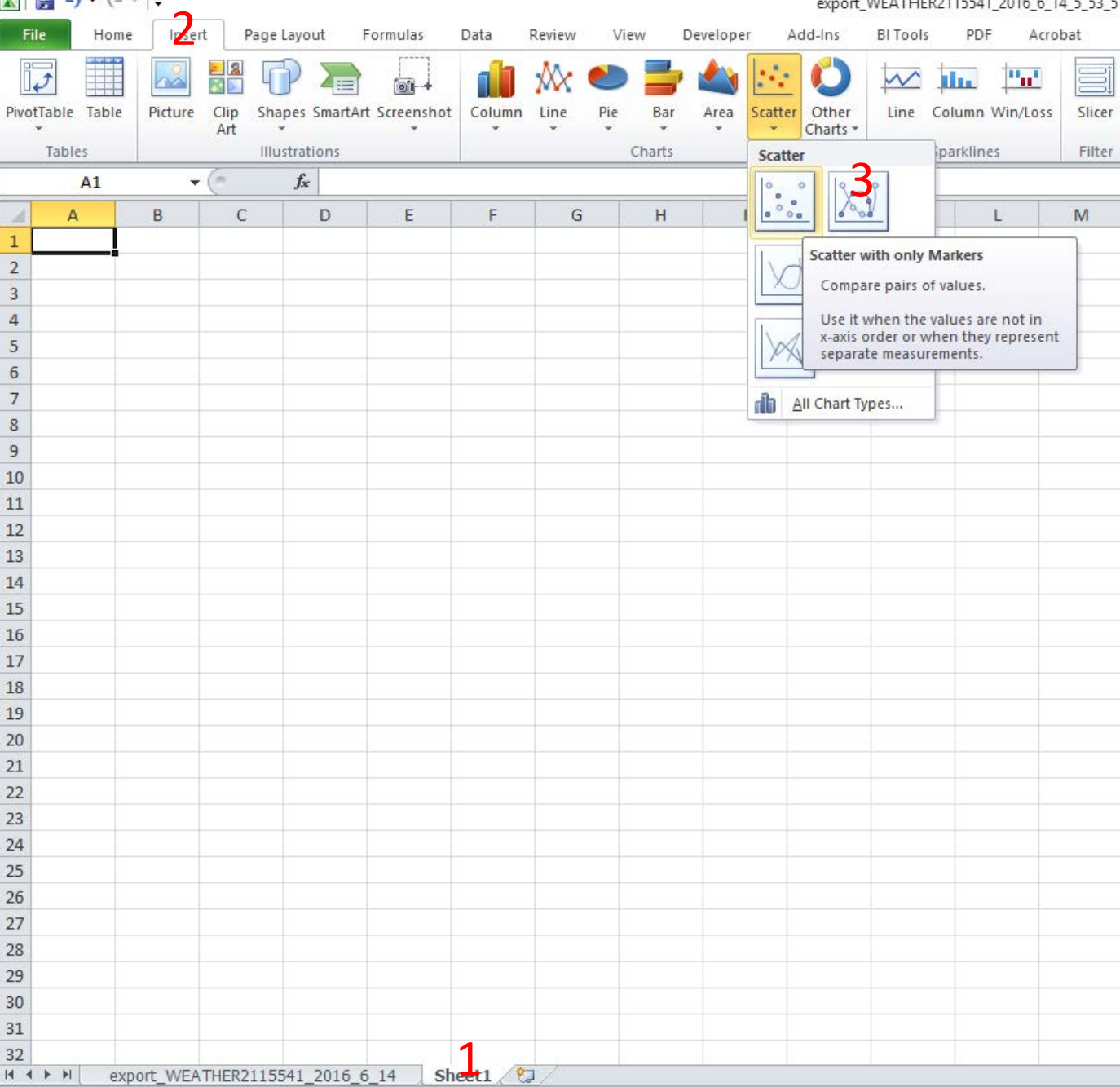


This screenshot shows the same Excel spreadsheet as the first, but with the first column (A) expanded to include date and time. The table now has the following structure:

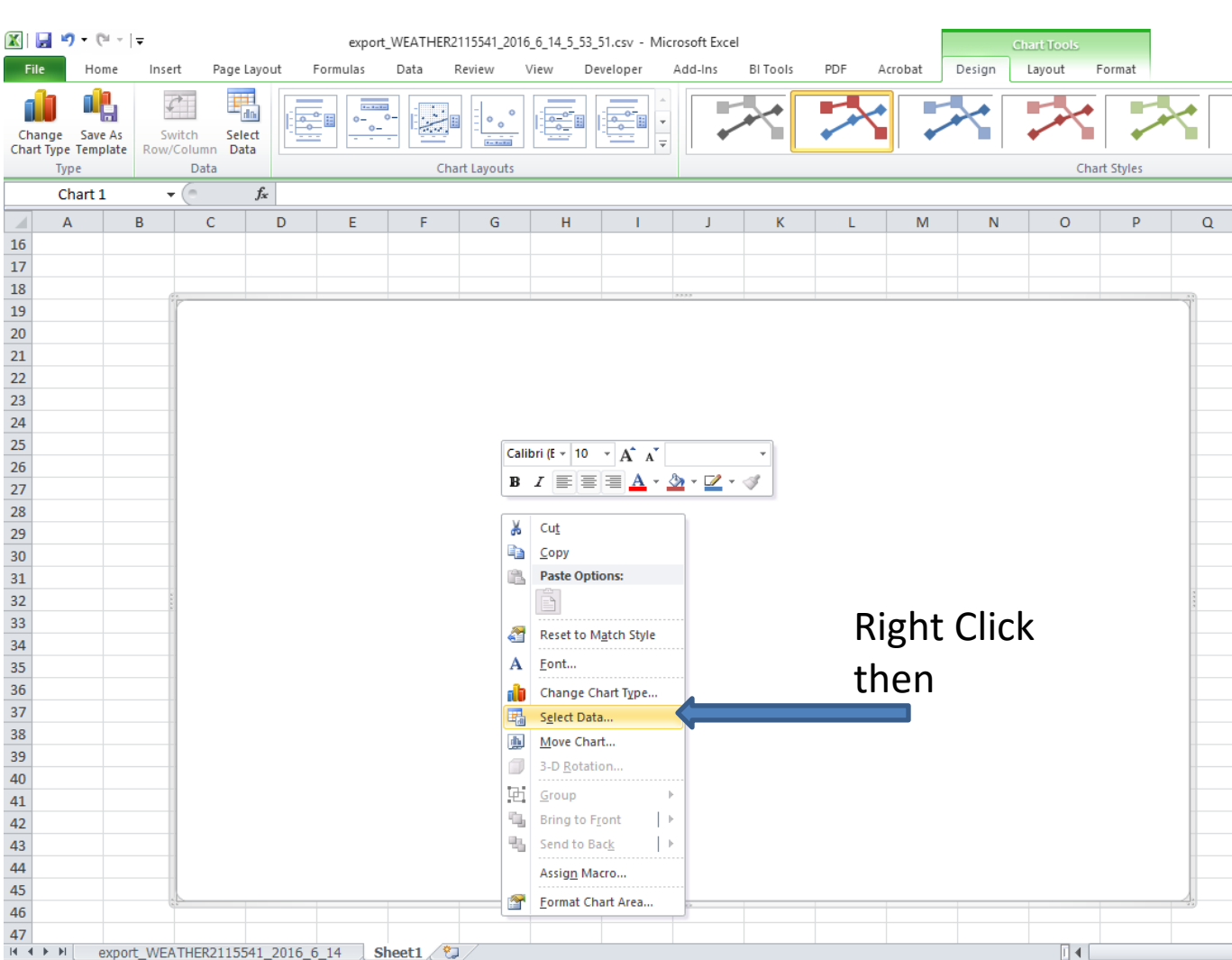
| Device Name | Direction | Wind Speed | Crosswind Head |
|---------------------|-----------|------------|----------------|
| YYYY-MM-DD HH:MM:SS | Å° | mph | mph |
| WEATHER - 2115541 | | 0 | |
| 5500L | | 0 | |
| 2115541 | | 0 | |
| | | 0 | |
| | | 0 | |
| 4/5/2016 21:35 | | 7.2 | |
| 4/5/2016 21:40 | | 9.4 | |
| 4/5/2016 21:45 | | 1.6 | |
| 4/5/2016 21:50 | | 6.7 | |
| 4/5/2016 21:55 | | 1.7 | |
| 4/5/2016 22:00 | | 1.3 | |
| 4/5/2016 22:05 | | 3.3 | |
| 4/5/2016 22:10 | | 3.7 | |
| 4/5/2016 22:15 | | 4.1 | |
| 4/5/2016 22:20 | | 1.3 | |
| 4/5/2016 22:25 | | 1.2 | |
| 4/5/2016 22:30 | | 3.5 | |
| 4/5/2016 22:35 | | 7.5 | |
| 4/5/2016 22:40 | | 3 | |
| 4/5/2016 22:45 | | 5.1 | |
| 4/5/2016 22:50 | | 1.2 | |
| 4/5/2016 22:55 | | 1.3 | |
| 4/5/2016 23:00 | | 3.5 | |
| 4/5/2016 23:05 | | 7.5 | |
| 4/5/2016 23:10 | | 3 | |
| 4/5/2016 23:15 | | 5.1 | |
| 4/5/2016 23:20 | | 8.1 | |
| 4/5/2016 23:25 | | 1.3 | |
| 4/5/2016 23:30 | | 2 | |
| 4/5/2016 23:35 | | 3.2 | |
| 4/5/2016 23:40 | | 2.2 | |
| 4/5/2016 23:45 | | 7.3 | |
| | | 0 | |



Next I would recommend Save As and select a Excel Workbook (*.xlsx) file to preserve any changes that we make.

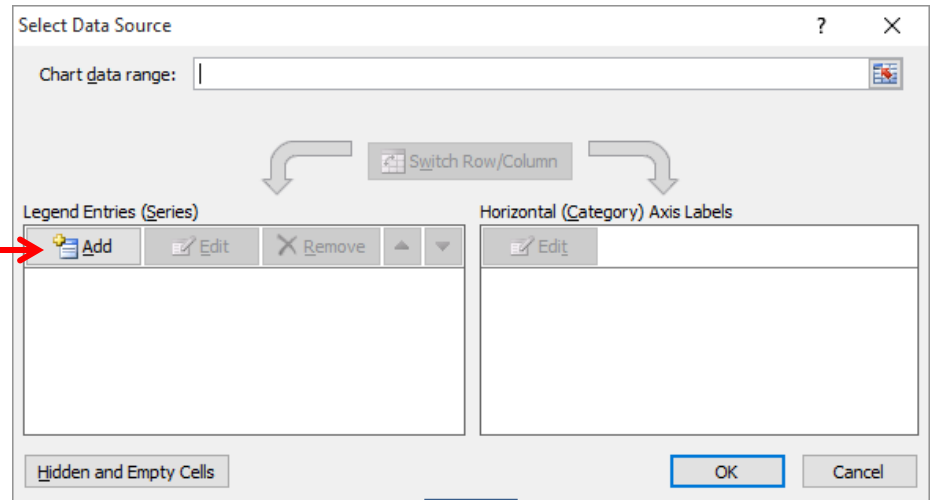


Now we want to select a new Sheet to Insert a Graph. So select a new sheet (1) and go to the Insert tab (2) and then go to the Scatter Plot for the type of graph (3)



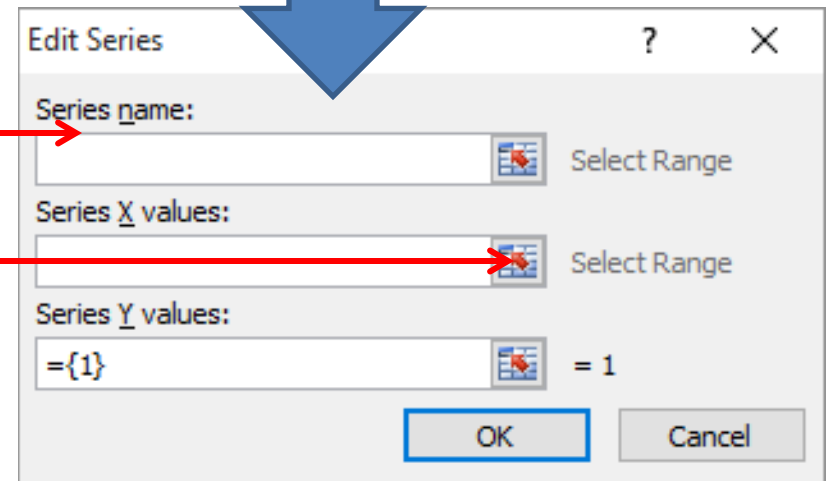
Next you will want to Right Click on the empty graph that appears on the screen and choose SELECT DATA.

When this window appears,
click on Add.



You can enter the name of the graph
here

Next we need to select the range for the X
Values. Click here



export_WEATHER2115541_20

File Home Insert Page Layout Formulas Data Review

Change Chart Type Save As Template Switch Row/Column Select Data

Type Data Chart Layouts

A6

| | A | B | C | D | E |
|----|---------------------|-------------------|----------|-----------|--------------|
| 1 | Device Name | WEATHER - 2115541 | | | |
| 2 | Device Model | 5500L | | | |
| 3 | Serial Number | 2115541 | | | |
| 4 | FORMATTED DATE-TIME | Direction | Wind Spe | Crosswind | Headwind Ten |
| 5 | YYYY-MM-DD HH:MM:SS | Â° | mph | mph | mph Â°F |
| 6 | 4/5/2016 21:35 | | 0 | | |
| 7 | 4/5/2016 21:40 | | 0 | | |
| 8 | 4/5/2016 21:45 | | 0 | | |
| 9 | 4/5/2016 21:50 | | 0 | | |
| 10 | 4/5/2016 21:55 | | 0 | | |
| 11 | 4/5/2016 22:00 | | 7.2 | | |
| 12 | 4/5/2016 22:05 | | 9.4 | | |
| 13 | 4/5/2016 22:10 | | 1.6 | | |
| 14 | 4/5/2016 22:15 | | 6.7 | | |
| 15 | 4/5/2016 22:20 | | 1.7 | | |
| 16 | 4/5/2016 22:25 | | 1.3 | | |
| 17 | 4/5/2016 22:30 | | 3.3 | | |
| 18 | 4/5/2016 22:35 | | 3.7 | | |
| 19 | 4/5/2016 22:40 | | 4.1 | | |
| 20 | 4/5/2016 22:45 | | 1.3 | | |
| 21 | 4/5/2016 22:50 | | 1.2 | | |
| 22 | 4/5/2016 22:55 | | 3.5 | | |
| 23 | 4/5/2016 23:00 | | 7.5 | | |
| 24 | 4/5/2016 23:05 | | 3 | | |
| 25 | 4/5/2016 23:10 | | 5.1 | | |
| 26 | 4/5/2016 23:15 | | 8.1 | | |
| 27 | 4/5/2016 23:20 | | 1.3 | | |
| 28 | 4/5/2016 23:25 | | 2 | | |
| 29 | 4/5/2016 23:30 | | 3.2 | | |
| 30 | 4/5/2016 23:35 | | 2.2 | | |
| 31 | 4/5/2016 23:40 | | 7.3 | | |
| 32 | 4/5/2016 23:45 | | 0 | | |

export_WEATHER2115541_2016_6_14 Sheet1

You will need to click on the previous sheet (1) and highlight the data that you intend to graph. For the X-axis, you should be selecting the Date-Time column (2)

Edit Series ? X

=export_WEATHER2115541_2016_6_14!\$A\$6:\$A\$30

Once you have highlighted the data you wish to graph, press return and select the Y value button.

Edit Series ? X

Series name: Temperature = Temperature

Series X values: =export_WEATHER2115541_2016_6_14!\$A\$6:\$A\$30 = 4/5/2016 21:35...

Series Y values: = {1} = 1

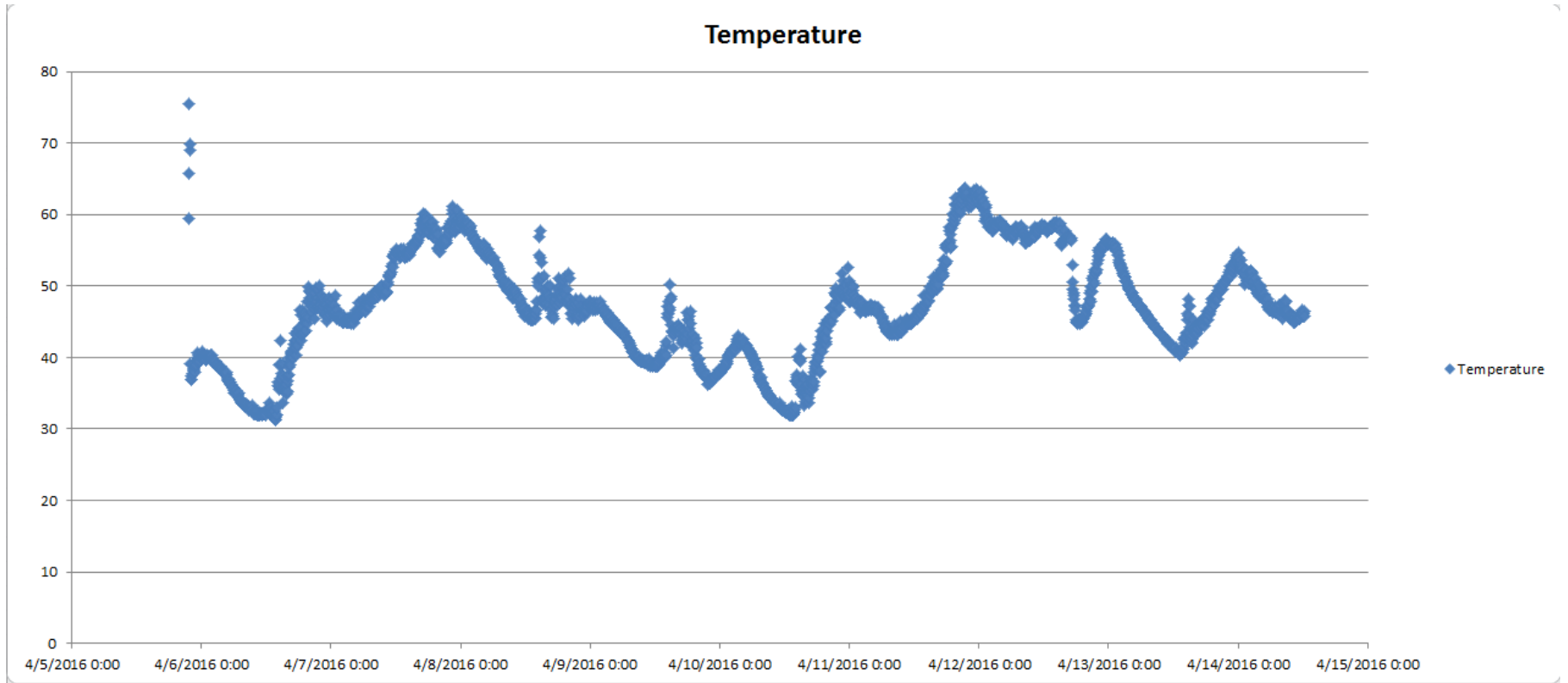
OK Cancel

| 1 | Device Name | WEATHER - 2115541 | | | | | |
|----|---------------------|-------------------|-----------|-----------|----------|----------|-----------|
| 2 | Device Model | 5500L | | | | | |
| 3 | Serial Number | 2115541 | | | | | |
| 4 | FORMATTED DATE-TIME | Direction | Wind Spee | Crosswinc | Headwind | Temperat | Wind Chil |
| 5 | YYYY-MM-DD HH:MM:SS | Â° | mph | mph | mph | Â°F | Â°F |
| 6 | 4/5/2016 21:35 | | 0 | | | 75.5 | 75.4 |
| 7 | 4/5/2016 21:40 | | 0 | | | 59.4 | 59.3 |
| 8 | 4/5/2016 21:45 | | 0 | | | 65.7 | 65.7 |
| 9 | 4/5/2016 21:50 | | 0 | | | 69 | 68.9 |
| 10 | 4/5/2016 21:55 | | 0 | | | 69.8 | 69.8 |
| 11 | 4/5/2016 22:00 | | 7.2 | | | 39.1 | 32.4 |
| 12 | 4/5/2016 22:05 | | 9.4 | | | 36.9 | 28.2 |
| 13 | 4/5/2016 22:10 | | 1.6 | | | 37.4 | 37.4 |
| 14 | 4/5/2016 22:15 | | 6.7 | | | 36.9 | 30.2 |
| 15 | 4/5/2016 22:20 | | 1.7 | | | 37.7 | 37.6 |
| 16 | 4/5/2016 22:25 | | 1.3 | | | 39 | 38.8 |
| 17 | 4/5/2016 22:30 | | 3.3 | | | 38.4 | 34.9 |
| 18 | 4/5/2016 22:35 | | 3.7 | | | 38.2 | 34.2 |
| 19 | 4/5/2016 22:40 | | 4.1 | | | 38.1 | 33.6 |
| 20 | 4/5/2016 22:45 | | 1.3 | | | 37.9 | 37.8 |
| 21 | 4/5/2016 22:50 | | 1.2 | | | 38.8 | 38.7 |
| 22 | 4/5/2016 22:55 | | 3.5 | | | 38.8 | 35.1 |
| 23 | 4/5/2016 23:00 | | 7.5 | | | 39 | 32 |
| 24 | 4/5/2016 23:05 | | 3 | | | 39 | 36 |
| 25 | 4/5/2016 23:10 | | 5.1 | | | 40.6 | 35.8 |
| 26 | 4/5/2016 23:15 | | 8.1 | | | 39.5 | 32.2 |
| 27 | 4/5/2016 23:20 | | 1.3 | | | 39.9 | 39.7 |
| 28 | 4/5/2016 23:25 | | 2 | | | 39.8 | 39.7 |
| 29 | 4/5/2016 23:30 | | 3.2 | | | 40 | 36.9 |
| 30 | 4/5/2016 23:35 | | 2.2 | | | 40.3 | 38.3 |
| 31 | 4/5/2016 23:40 | | 7.3 | | | 39.7 | 32.9 |
| 32 | 4/5/2016 23:45 | | 0 | | | 40 | 39.9 |

You will then highlight the corresponding column that you want plotted on the graph.

In this case we are going to graph the temperature so we highlight this section. Then press return.

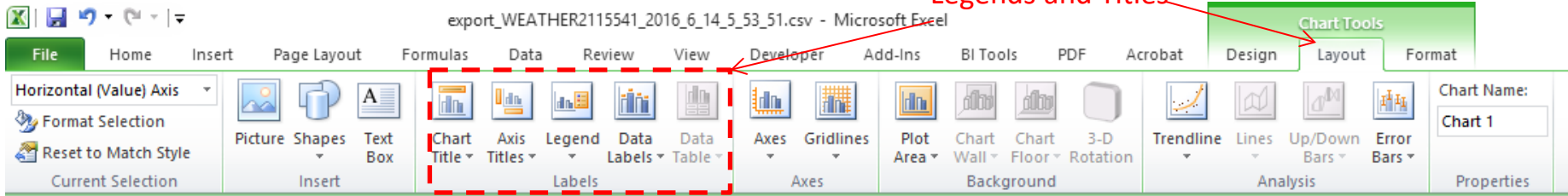
You should ensure that the columns line up with the same amount of data cells or else the data may become skewed.



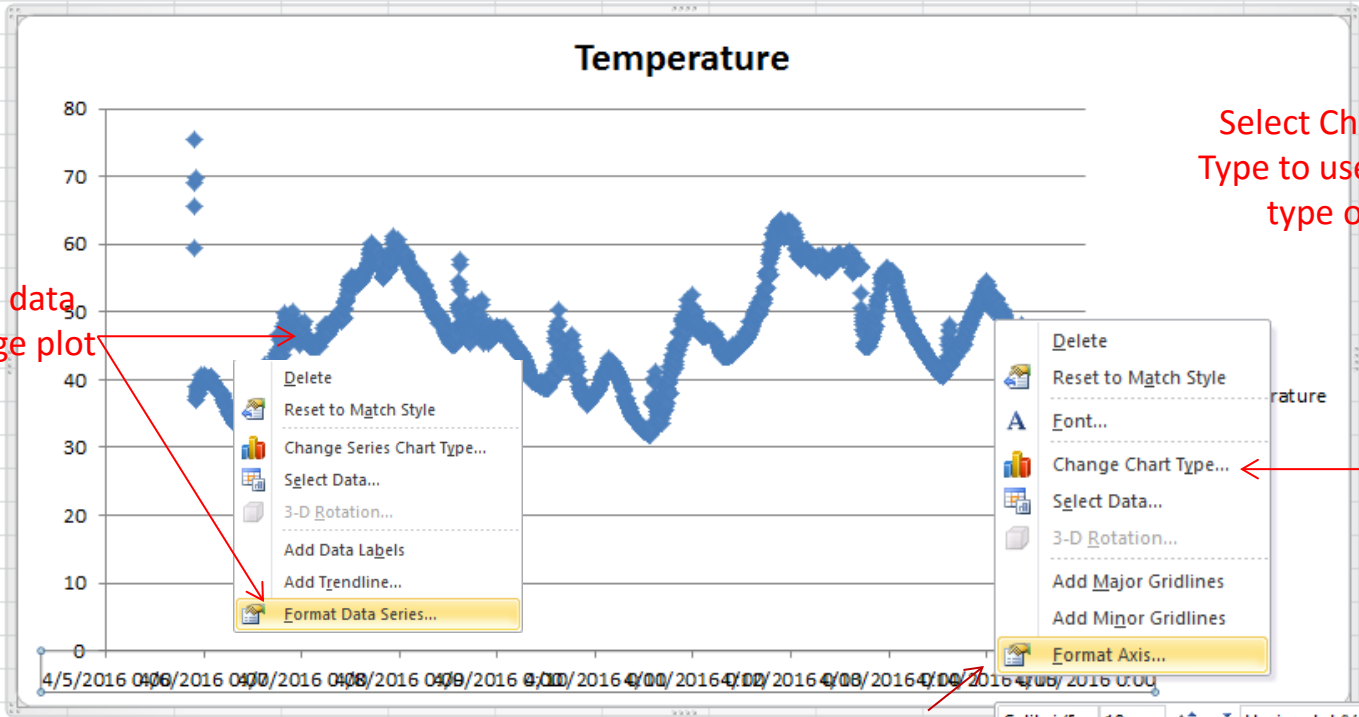
You should now have a graph that shows the measurement on the Y-axis and the time/date across the X-Axis.

There are many different formatting options you can choose to do now to better format the data.

Choose Layout to add
Legends and Titles

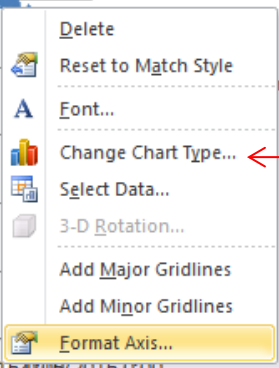
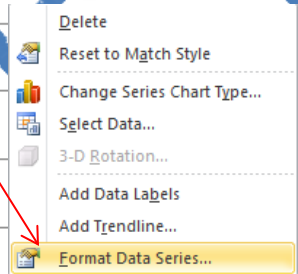


Click on a corner to
make Graph bigger or
smaller



Select Change Chart
Type to use a different
type of graph

Right Click on data
points to change plot
options



Right Click on Axis to
change Axis options



