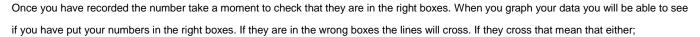# Maximum and Minimum Temperatures

A maximum and minimum thermometer can record the current temperature, and can also show what the highest and lowest temperatures were since the thermometer was reset. See more about these thermometers on the Sixes Thermometer web page (http://www.weatherforschools.me.uk/html/maxmin.html).

When you record your data from your Sixes thermometer you will record three numbers. These are;

- the maximum, which will be the highest number. This shows the warmest temperature since the last reading.
- the minimum temperature, which will be the lowest number. This shows the coldest it has been since the last reading.
- the current temperature. This reading will usually be somewhere in between the other two readings. It could be the same number as one of the other readings. The weather data is recorded at 9 o'clock GMT or local time, so it sometimes is the coldest point in the 24 hours.

Once you have recorded the number take a moment to check that they are in the right boxes. When you graph your data you will be able to see if you have put your numbers in the right boxes. If they are in the wrong boxes the lines will cross. If they cross that mean that either;

- The maximum is lower than the minimum or current temperature. That cannot happen.
- The minimum is higher than the maximum or the current temperature. That cannot happen.
- The current temperature is lower than the minimum or higher than the maximum. That cannot happen.

What can happen occasionally is that two of the temperatures are the same. This means that once in a while two lines will touch.

Activities

These include only whole numbers. For those with one decimal place, or just .5 see the other files.

Maximum? Minimum? Current?

Load up the spreadsheet file (http://www.weatherforschools.me.uk/docs/max_min_sorting_a.xls) linked on the right. You are given three numbers for each day which you need to type into the right columns. These are numbers for the maximum temperature, the minimum temperature and the current temperature. Which is which? Put them into the right columns. You can then scroll down and look at the graph. It will mark your work for you! If none of the lines cross you have got all of them right. If any cross, check that day's temperatures and correct the ones in the wrong columns. (NB – sometimes the lines may touch, but not cross)

Error Checking

Click on the image on the right to load a file of weather data. (http://www.weatherforschools.me.uk/docs/max_min_quiz_a.xls) See if you can spot the three mistakes in the data where the numbers have been recorded in the wrong boxes. Swap them to correct them. Here is a hint if you need it, and here is the answer file.

Data Recording

Record your own weather data and enter into a spreadsheet. Try to record at least the data for a week. You will need a maximum and minimum thermometer. (Template files can be downloaded from the Your Data pages.)

Remember to reset the thermometer each time after you have done your readings. This will make all of the readings the same until the temperature goes up or down to make new maximum and minimum readings.

If you have not got a Sixes thermometer you could use a digital maximum and minimum thermometer. Read the instructions to see how to reset it when you have taken your readings. See more about these on the Using ICT page.