

## Looking back to plan ahead!

**Important:** You will require a password to extract data from the e-RA database – contact the e-RA curators in advance by email to obtain a password (res.era@rothamsted.ac.uk)

In this exercise, we are looking at the advantages of keeping good information about our experiments. Rothamsted has developed e-RA, the electronic Rothamsted Archive, to keep the results of **the long term experiments** and other information like **weather data**. A state of the art Web Application helps scientists and the public find information stored in e-RA. Computer scientists make programs to analyse the information.

### Collecting weather information every day: Select a date from 'SCHOOLMETDAY (perhaps your birthday!)

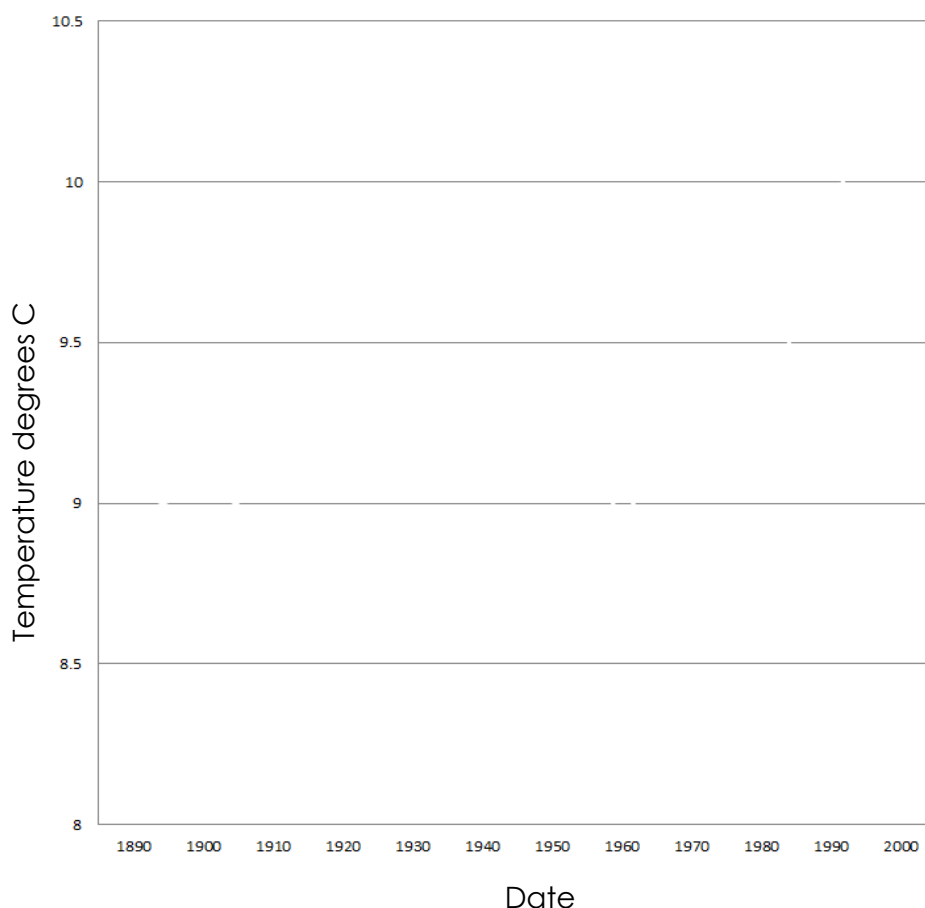
1) On this day \_\_\_\_\_

at its coldest it was \_\_\_\_\_ and at its hottest it was \_\_\_\_\_.

The mean was: \_\_\_\_\_. There were \_\_\_\_\_mm of rain.

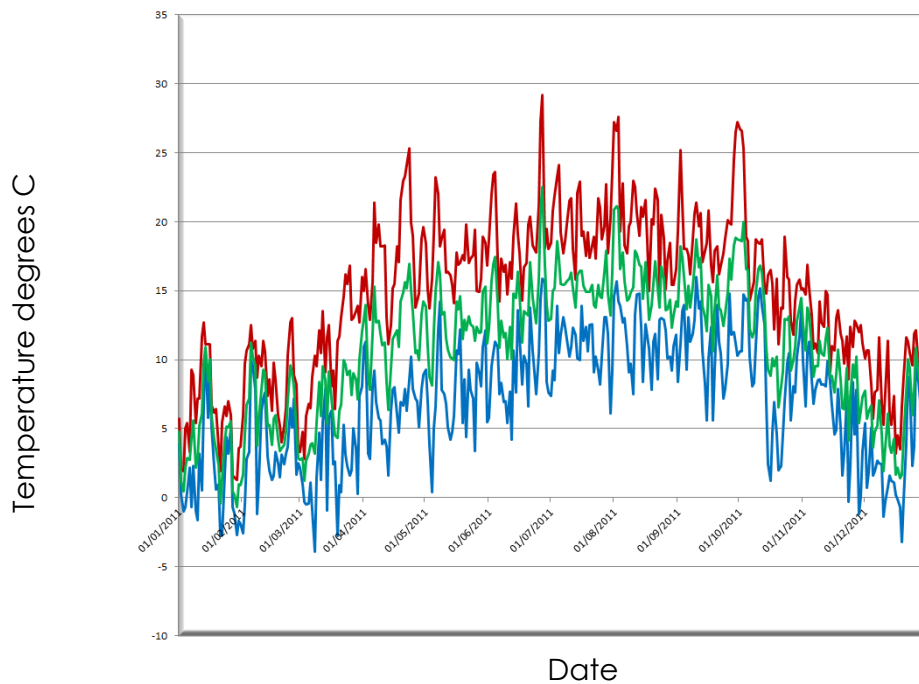
2) In my day, those of my parents and grandparents... Let's see what happens in sets of 10 years over the last 120 years: complete the graph by plotting the data in the table.

1890-99	9.04
1900-09	8.94
1910-19	9.07
1920-29	9.02
1930-39	9.24
1940-49	9.36
1950-59	9.32
1960-69	8.95
1970-79	9.25
1980-89	9.22
1990-99	9.93
2000-	10.4



### 3) Weather for a whole year: **2011**

**Graph showing the daily T-max, T-min and mean temperature for 2011  
(data extracted from the dataset for schools called 'SCHOOLMETDAY')**



The blue line represents the **coldest** temperature every day,

the red line: the **hottest**,

and the green line the **mean**.

The average temperature for that year would be the average of all the means. (That is a good enough approximation). Average: **10.84 °C**

#### **4) Your turn.....!**

Now you extract data for one year from e-RA dataset 'SCHOOLMETDAY' and use excel to analyse it...

<b>Year</b>	2011		
<b>Hottest day</b>	27 June: 29.2°C		
<b>Coldest day</b>	8 March:-3.9°C		
<b>Average temp</b>	10.84° C		
<b>Wettest day</b>			
<b>Driest day</b>			
<b>Sunniest day</b>			
<b>Windiest day</b>			