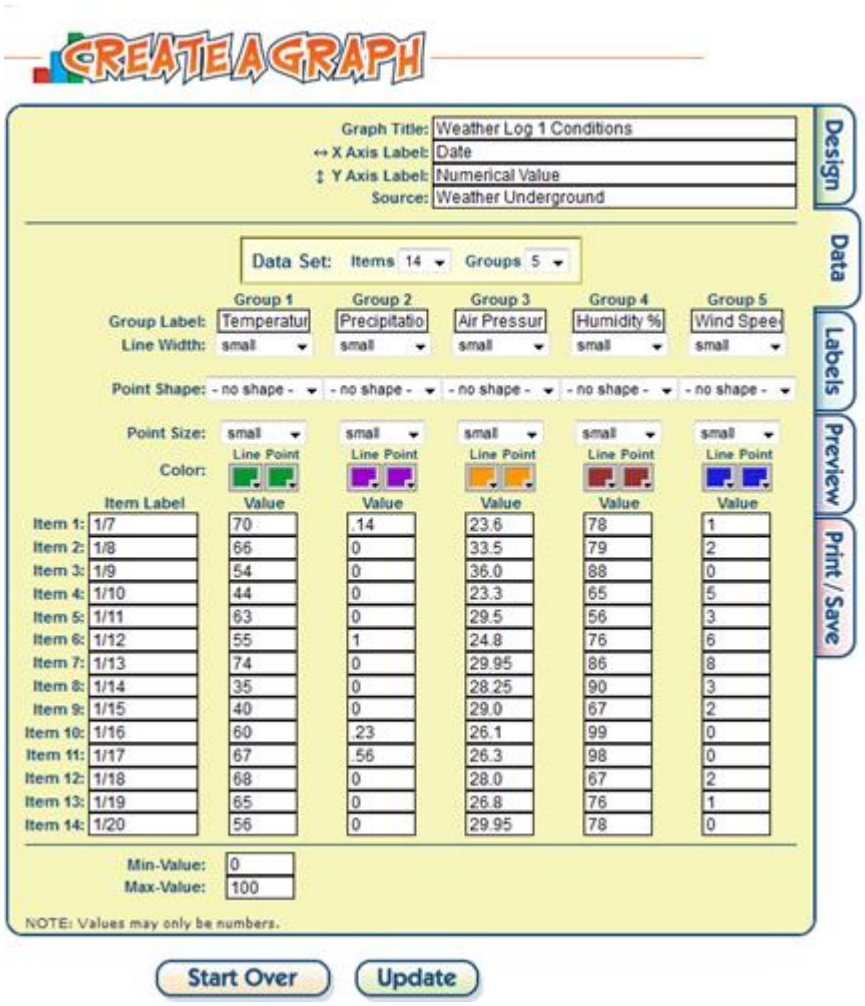
Students will access this website to create their line graphs illustrating the data collected through daily and hourly monitoring and documentation of local weather conditions on their weather logs. No two classes will have the same weather data as each class period saw different weather conditions throughout the day. Students used this site for their soil profile pie charts, so they are familiar with the use of the site.

http://nces.ed.gov/nceskids/createagraph/default.aspx

Once you access the website, chose the line graph option and click on the data tab. This is the information you will need to put into the graph to create the appropriate line graph. The numbers used here are fictitious. You will need to use your data from your weather log to complete the graph. You may use other colors if you wish, but this is the design and format required to create the desired graph.



The group labels are as follows:

Group 1: Temperature F

Group 2: Precipitation Inches

Group 3: Air Pressure Millibars

Group 4: Humidity %

Group 5: Wind Speed mph

Data Set items: 14. Groups: 5

Line Width: small

Point shape: no shape

Point size: small

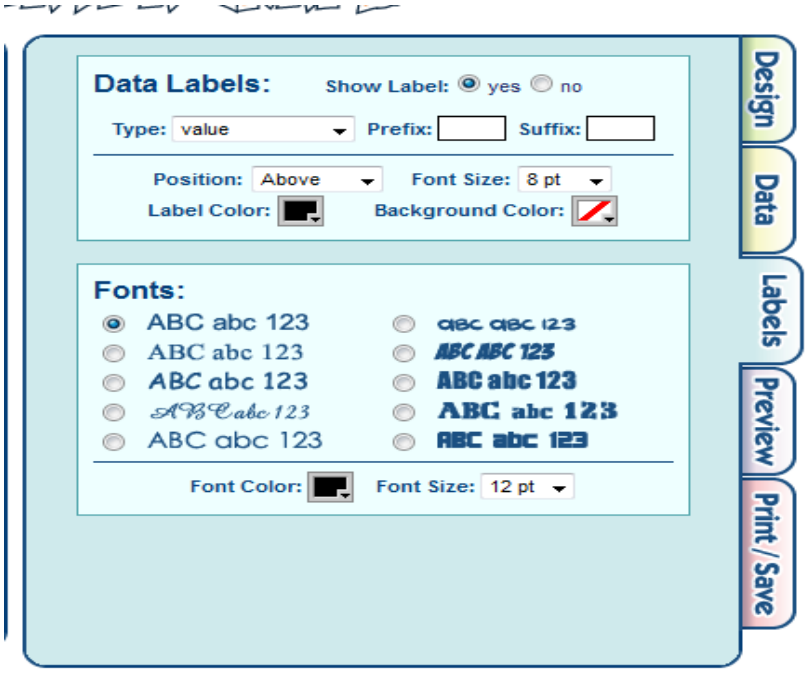
Colors are your choice. Make sure they are distinctive.

Cannot show wind direction and cloud cover numerically. You will have to add this in at a later time manually.

Item labels are the dates you used on your weather log.

The minimum value is 0 and the maximum is 100.

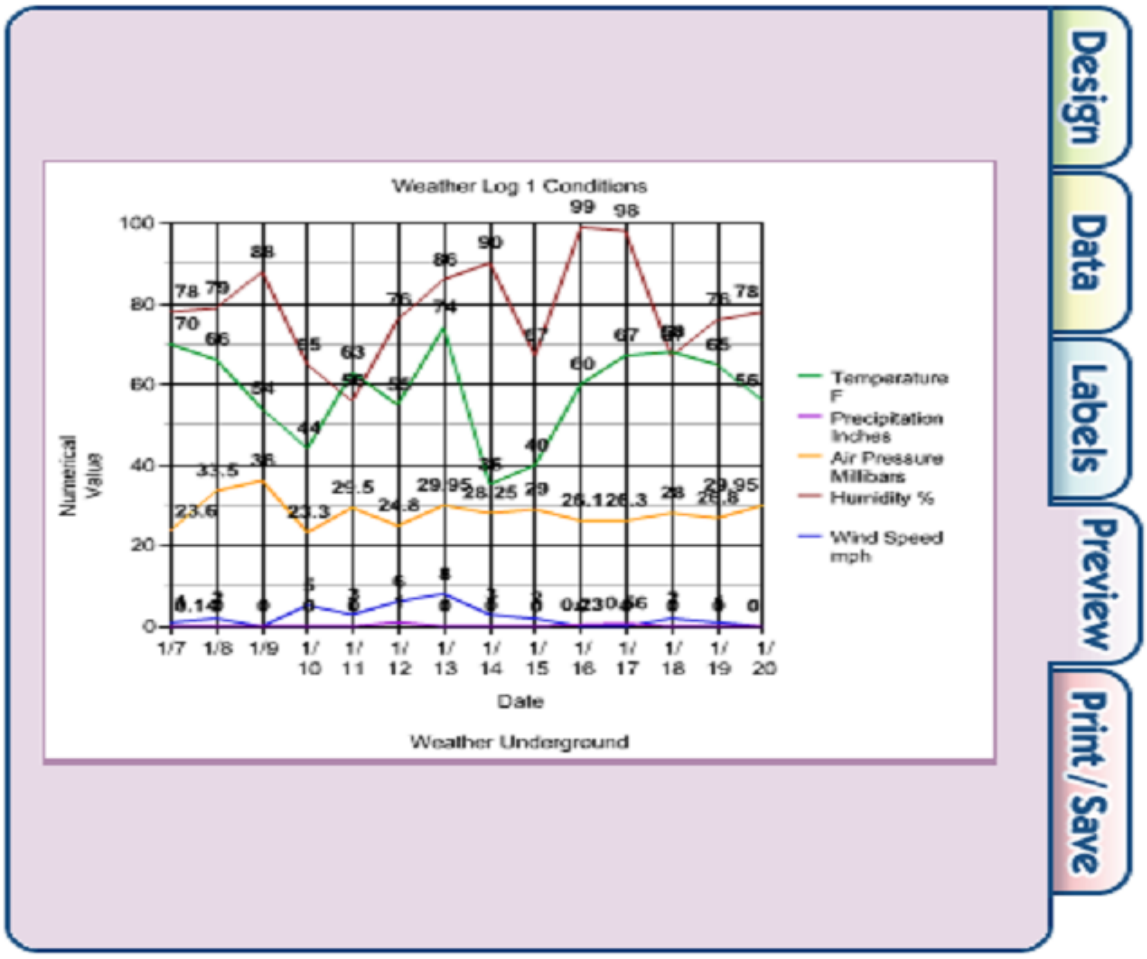
You can click on the preview tab to look at your work as you go. Just remember you have only one class period to create this first one. If you do not use your time wisely or did not come to class prepared with your materials, you will be starting over on your own time. You will need to create the graphs from your other weather logs independently.

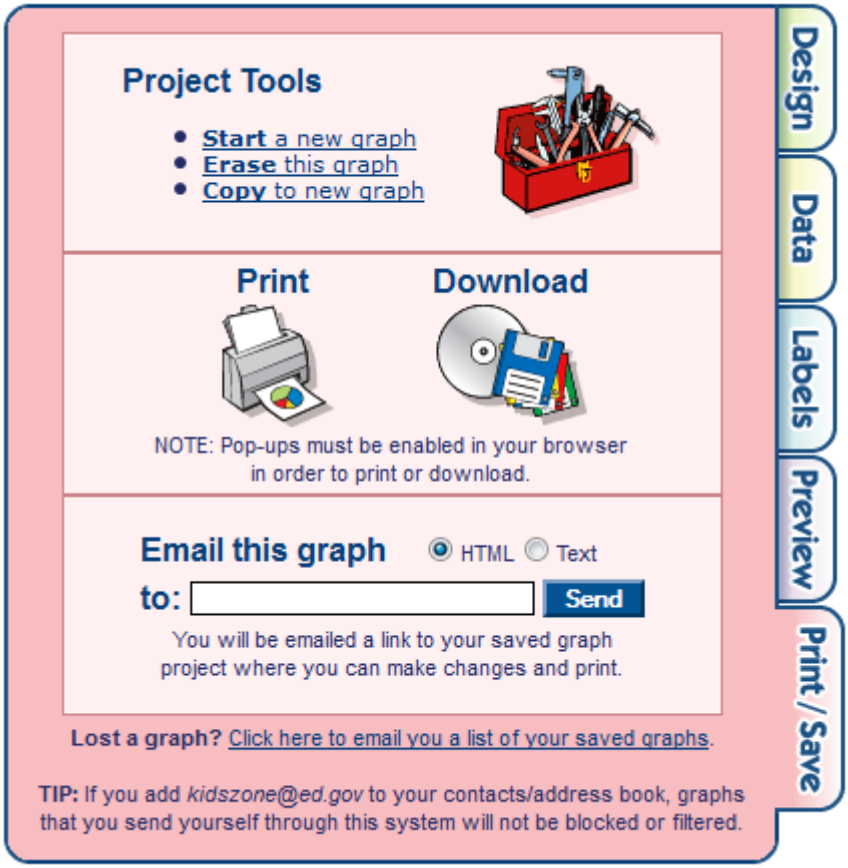


This is how your Data Labels screen should be set up. You want your data to be 8pt font, label color black and background color white. This way your graph will not become too crowded to read clearly.

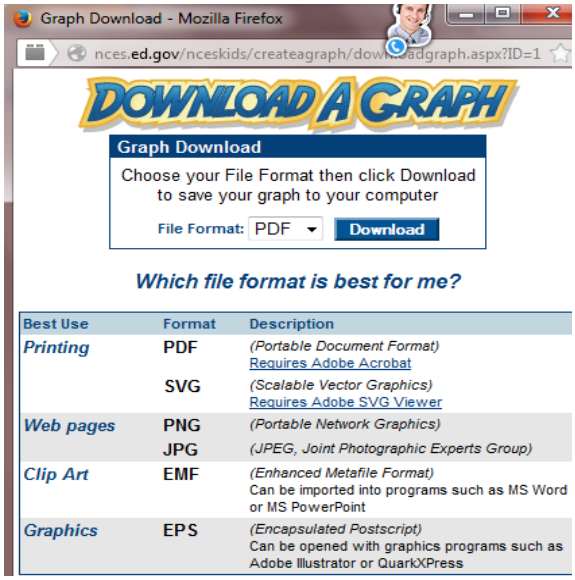
The Fonts box designs your text for your x and y axis and your information key. Keep it legible and simple. Cursive or odd script is too hard to read. 12 font makes it easily distinguished from your graph.

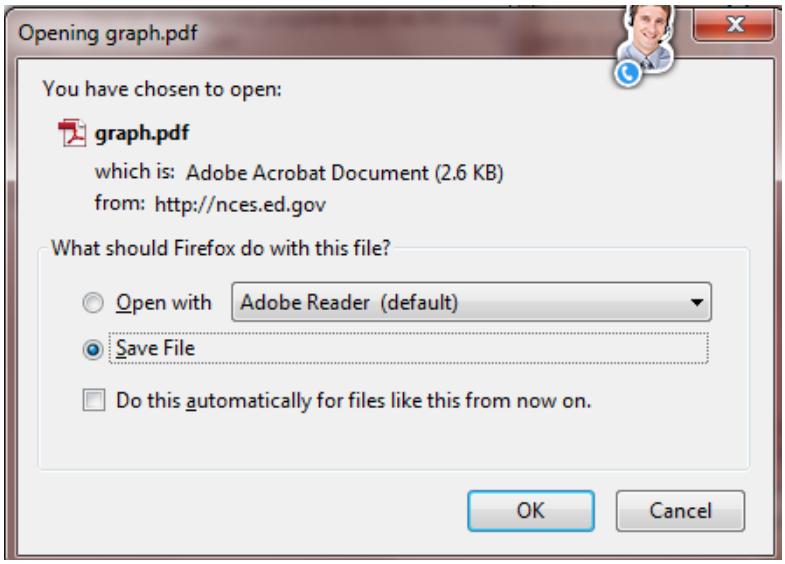
Below is an example of what your graph should look like, but with your own data the graph trends WILL be different.





Now you will save this to your flash drive. MAKE SURE YOU SAVE IT WITH YOUR FULL NAME – FIRST AND LAST – as the name of the file. You will click the download section of the screen choose the pdf option of saving. Then click the download tab.





Here when you choose save file, click ok and then at the right hand top of your screen will show a green arrow for downloads. At that point click on this green arrow and open the file. Then choose save as pdf and safe it to your flash drive. (This may vary by the browser or computer you use. May have to ←choose open with Adobe Reader option and then follow the prompts to save it from there to your flash drive you identify from the computer.)

Then download the file from your flash drive onto one of the laptop computers into the class period lab file that applies to you. Be sure to answer the analysis questions based upon your data, your graph, and your weather/climate intelligence.

Analysis Questions

Name_____Date_____Period_____

Answer the following questions based upon your data to demonstrate your understanding of how weather conditions are related and how over time they create the climate of an area.

1. Define temperature. **5pts.** Define humidity. **5pts.**

2. What is the relationship between the temperature and humidity in the data you collected? **5pts.** Explain how that is shown on your graph. **5pts.**

3. Explain how the time of day your data is collected is relevant to the temperature and humidity data you documented. **5pts.**

4. Define air pressure. **5pts.**

5. What is the relationship between temperature and air pressure in the data you collected? **5pts.** Explain how that is shown on your graph. **5pts.**

6. Explain how the time of day your data is collected is relevant to the temperature and air pressure data you documented. **5pts.**

7. Define wind. **5pts.**

8. What is the relationship between temperature and wind speed? **5pts.** Explain how that is shown on your graph. **5pts.**

9. Explain how the time of day your data is collected is relevant to the temperature and wind speed data you documented. **5pts.**

10. What was the most common wind direction you documented during the time period you were collecting data? **5pts.**

11. What type of climate do we live in? State it in terms of proximity to water/land and temperature. **5pts.**

12. Describe the amount of rainfall indicated on your graph. **5pts.** Is this amount typical for the climate of our area and the time of year in which you collected the data? Explain. **5pts.**

13. What was the most common type of cloud coverage you observed during the time period you collected data? **5pts.**

14. Look at graphs in each class period. Note changes in data at each time of day. How does the data change from the beginning of the school day to the end of the school day? Give your answer in terms of changes in temperature, humidity, air pressure, wind speed. You will need to ask someone in other classes what their wind direction and cloud cover data is. **30pts.**