



Forecasting the Weather Webquest

Introduction: How do meteorologists forecast the weather? In this web quest we will explore air masses, fronts, weather stations and weather forecasts and a lot of other really cool weather terminology.

Directions: Some of the questions will contain links to videos, animations or websites that you will be using. Others will involve you "Googling an answer." Follow the direction for each of the questions and write down your responses on the Weather Webquest Sheet below. When completed please print and submit or if you are using Showbie use the PDF version of the file provided and submit through Showbie.

1. Google: What is an air mass?

2. Describe the temperature, moisture and air pressure associated with a Continental Polar air mass. [LINK](http://www.weatheronline.co.uk/reports/wxfacts/Air-masses-and-their-sources.htm) to information. <http://www.weatheronline.co.uk/reports/wxfacts/Air-masses-and-their-sources.htm>

3. Describe the temperature, moisture and air pressure associated with a Maritime Tropical air mass. [Link](http://www.britannica.com/science/tropical-air-mass) to information. <http://www.britannica.com/science/tropical-air-mass>

4. What is a cyclone? What direction do winds flow in cyclones in the Northern Hemisphere? In the Southern Hemisphere? [Watch video on Cyclones and Hurricanes.](#)

5. What is the definition of a front?

6. Individual surface weather stations use a standard format to report data. Draw the weather station symbols for a hurricane, 50-54 Mph wind speed, 70-80% cloud cover and the symbol for fog. Draw the symbols in the boxes below. You can find a symbol key here: [Symbol Key](#). Link: <http://www.oocities.org/stjoegrade6/weatherstationkey.gif>

7. What is a cold front? Watch the [animation of a cold front](#) and describe the characteristics before, during and after a cold front below. Link: <https://www.youtube.com/watch?v=tsD6zkBMmck>

8. What is a warm front? Watch the [animation of a warm front](https://www.youtube.com/watch?v=7FgXvKx5Weg) and describe the characteristics before, during and after a warm front. Link: <https://www.youtube.com/watch?v=7FgXvKx5Weg>

9. Google: What factors lead to an increased probability (chance) of precipitation?

10. What is the importance of temperature in the formation of rain, freezing rain, sleet or snow? [Link](http://ww2010.atmos.uiuc.edu/(G1)/guides/mtr/cld/prcp/zr/fcst/fcst.xml): [http://ww2010.atmos.uiuc.edu/\(G1\)/guides/mtr/cld/prcp/zr/fcst/fcst.xml](http://ww2010.atmos.uiuc.edu/(G1)/guides/mtr/cld/prcp/zr/fcst/fcst.xml)

11. What is a Supercell Storm? What dangerous conditions may develop during supercell storms? Watch the [Discovery Education Video on Supercell storms](#) to answer these questions.

12. Google: What is the “Jet Stream” and at what altitude is the jet stream measured?

13. Describe the [“trends” method of forecasting](#). What factors does a meteorologist using the trends method consider? [Link](http://www.ux1.eiu.edu/~cfjps/1400/forecasting.html): <http://www.ux1.eiu.edu/~cfjps/1400/forecasting.html>

14. List two things you learned and one you think you would like to learn about forecasting weather.

Things I learned:

- 1) _____
- 2) _____

I would like to learn:
