

“Forecasting the Weather” Webquest

Click the links below each question to find out more about weather forecasting. Write your answers on sheet of notebook paper.

1. What is an air mass?

[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/arms/home.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/arms/home.rxml)

2. Describe the temperature, moisture and air pressure associated with a Continental Polar air mass.

[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/arms/artc.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/arms/artc.rxml)

3. Describe the temperature, moisture and air pressure associated with a Maritime Tropical air mass.

[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/arms/trp.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/arms/trp.rxml)

4. Describe a high pressure center. What is another name for a center of high pressure?

[http://ww2010.atmos.uiuc.edu/\(Gh\)/wwhlpr/anticyclone.rxml?hret=/guides/mtr/af/arms/artc.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/wwhlpr/anticyclone.rxml?hret=/guides/mtr/af/arms/artc.rxml)

5. What is a cyclone? What direction do winds flow in cyclones in the Northern Hemisphere? What direction do winds flow in cyclones in the Southern Hemisphere?

[http://ww2010.atmos.uiuc.edu/\(Gh\)/wwhlpr/cyclone.rxml?hret=/guides/mtr/af/arms/artc.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/wwhlpr/cyclone.rxml?hret=/guides/mtr/af/arms/artc.rxml)

6. Watch this animation on how winds flow around cyclones (pressure lows) and anticyclones (pressure highs) in the Northern Hemisphere. Draw and describe what you observe.

[http://ww2010.atmos.uiuc.edu/\(Gh\)/wwhlpr/anticyclone_ani.rxml?hret=/guides/maps/sfc/temp/sfctmpslp.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/wwhlpr/anticyclone_ani.rxml?hret=/guides/maps/sfc/temp/sfctmpslp.rxml)

7. What is the definition of a front?

[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/frnts/home.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/home.rxml)

8. Individual surface weather stations use a standard format to report data. Review the weather stations symbols for temperature, weather symbol, dew point, cloud cover, sea level pressure and wind. Draw and label the station symbol in this example.

[http://ww2010.atmos.uiuc.edu/\(Gh\)/wwhlpr/sfcobs.rxml?hret=/guides/mtr/af/arms/trp.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/wwhlpr/sfcobs.rxml?hret=/guides/mtr/af/arms/trp.rxml)

9. What is a cold front? Describe the characteristics before, during, and after a cold front.
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/frnts/cfrnt/def.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/cfrnt/def.rxml)
10. Watch the animation of a cold front. Describe the type of precipitation associated with cold front movement.
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/frnts/cfrnt/prcp.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/cfrnt/prcp.rxml)
11. What is a warm front? Describe the characteristics before, during, and after a cold front.
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/frnts/wfrnt/def.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/wfrnt/def.rxml)
12. Watch the animation of a warm front. Describe the type of precipitation associated with a warm front.
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/af/frnts/wfrnt/prcp.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/wfrnt/prcp.rxml)
13. What factors lead to an increased probability (chance) of precipitation?
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/fcst/prcp/frnt.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/fcst/prcp/frnt.rxml)
14. What is the importance of temperature in the formation of rain, freezing rain, sleet or snow?
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/cld/prcp/zr/fcst/fcst.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/cld/prcp/zr/fcst/fcst.rxml)
15. What is a Supercell Storm? What dangerous conditions may develop during supercell storms? What wind and cloud conditions are prevalent in supercell storms?
[http://ww2010.atmos.uiuc.edu/\(Gh\)/wwhlpr/supercell.rxml?hret=/guides/mtr/af/frnts/ofdef.rxml&prv=1](http://ww2010.atmos.uiuc.edu/(Gh)/wwhlpr/supercell.rxml?hret=/guides/mtr/af/frnts/ofdef.rxml&prv=1)
16. What is the “Jet Stream”? At what altitude is the jet stream measured?
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/maps/upa/3wndhgt.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/maps/upa/3wndhgt.rxml)
17. Describe the “trends” method of forecasting. What factors does a meteorologist using the trends method consider?
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/fcst/mth/trnd.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/fcst/mth/trnd.rxml)
18. If a line of thunderstorms is located 60 miles to your northwest and moving southeast at 30 miles per hour, how long will it take to reach your location? Show your calculation.
[http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/mtr/fcst/mth/trnd.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/fcst/mth/trnd.rxml)
19. Discuss **two** things you learned from completing this webquest.
20. Describe **one** thing you would still like to learn about forecasting weather.