**Procedure:** Follow the links for each question and write down

your responses on the Forecasting the Weather Worksheet.

1. What is an air mass?

[http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/arms/home.rxml](http://ww2010.atmos.uiuc.edu/%28Gh%29/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/%28Gh%29/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/%28Gh%29/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/%28Gh%29/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? 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/%28Gh%29/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 below.

[http://ww2010.atmos.uiuc.edu/(Gh)/wwhlpr/anticyclone\_ani.rxml?hret=/guides/maps/sfc/temp/sfctmpslp.rxml](http://ww2010.atmos.uiuc.edu/%28Gh%29/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/%28Gh%29/guides/mtr/af/frnts/home.rxml)

8. Individual surface weather stations use a standard format to

report date. 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/%28Gh%29/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 below.

[http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/cfrnt/def.rxml](http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/mtr/af/frnts/cfrnt/def.rxml)

10. Watch the animation of a cold front and 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/%28Gh%29/guides/mtr/af/frnts/cfrnt/prcp.rxml)

11. What is a warm front? Describe the characteristics before,

during and after a cold front below.

[http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/wfrnt/def.rxml](http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/mtr/af/frnts/wfrnt/def.rxml)

12. Watch the animation of a warm front and 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/%28Gh%29/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/%28Gh%29/guides/mtr/fcst/prcp/frnt.rxml)

14. 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/%28Gh%29/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/%28Gh%29/wwhlpr/supercell.rxml?hret=/guides/mtr/af/frnts/ofdef.rxml&prv=1)

16. What is the “Jet Stream” and at what altitude is the jet stream

measured?

[http://ww2010.atmos.uiuc.edu/(Gh)/guides/maps/upa/3wndhgt.rxml](http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/maps/upa/3wndhgt.rxml)

17. a. Describe the “trends” method of forecasting. What factors

does a meteorologist using the trends method consider?

b. 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/%28Gh%29/guides/mtr/fcst/mth/trnd.rxml)