

Name: _____ Date: _____ Hour: _____

Assignment: Weather

Use the following weather terms to answer questions 1 through 9.

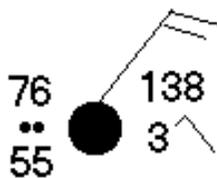
isobars isotherms thermometer barometer psychrometer
hygrometer rain gauge wind vane anemometer

1. and 2. Name the **two** instruments that could be used to measure humidity.

3. Name the instrument used to measure the temperature.
4. Name the instrument used to measure air pressure.
5. Name the instrument used to measure wind speed.
6. Name the instrument used to measure wind direction.
7. Name the instrument used to measure rain fall.
8. Lines connecting points of equal pressure on a weather map are called _____.
9. Lines connecting points of equal temperature on a weather map are called _____.
10. Warm moist rising air is usually associated with
 - a. high pressure.
 - b. low pressure.
 - c. peer pressure.
11. Cold dry sinking air is usually associated with
 - a. high pressure.
 - b. low pressure.
 - c. peer pressure.
12. High pressure areas are associated with
 - a. clockwise and outward winds.
 - b. clockwise and inward winds.
 - c. counterclockwise and outward winds.
 - d. counterclockwise and inward winds.
13. Low pressure areas are associated with
 - a. clockwise and outward winds.
 - b. clockwise and inward winds.
 - c. counterclockwise and outward winds
 - d. counterclockwise and inward winds.
14. If Sheboygan has an air pressure of 30.26 in. Hg, what would the air pressure be in millibars?
(Note 1" = 33.86 millibars so you need to do the math.)
15. When drawing isobars on a weather map, the difference in pressure between two consecutive isobars is?
 - a. 1 millibar
 - b. 4 millibars
 - c. 15 millibars
 - d. 25 millibars
16. When drawing isotherms on a weather map, the difference in temperature between two consecutive isotherms is?
 - a. 1 degree Celsius
 - b. 2 degrees Celsius
 - c. 5 degrees Celsius
 - d. 10 degrees Celsius

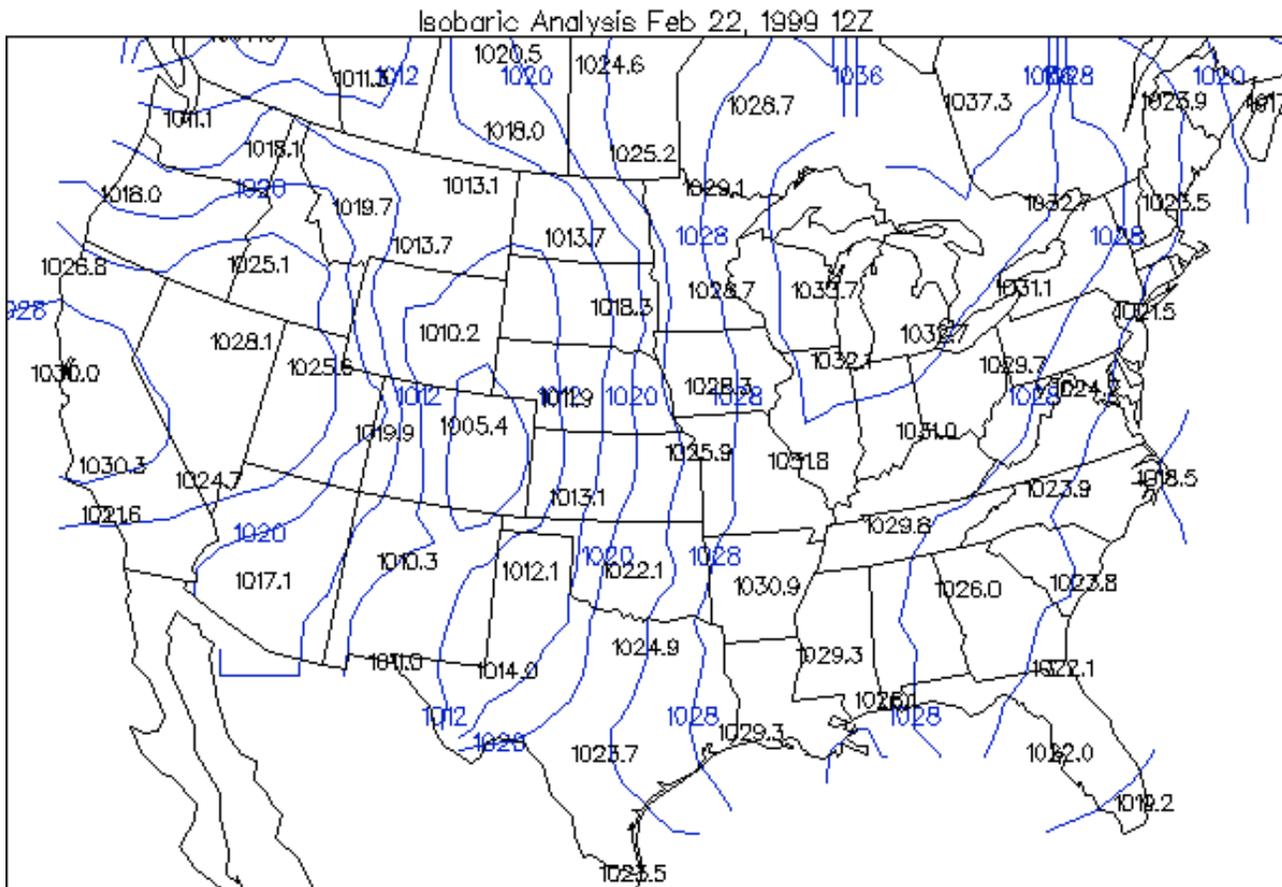
17. Roughly, _____ inch(es) of snow equals _____ inch(es) of rain.
- 1,1
 - 10,1
 - 1,10
 - 100,1
18. Hurricanes are given names in alphabetical order. If the hurricane season were to end with your first name being the name of the last hurricane, how many hurricanes would the season end with?
19. What category would a hurricane with 115 mph winds be given?
20. What is the minimum wind speed in mph for a storm to be classified as a hurricane?
21. What is a Category 3 hurricane's expected surge height in feet?
22. What is the word that can describe the kind of damage would be expected from a hurricane with 160 mph?
23. What is the name of the part of the hurricane which has the downward winds in a hurricane's center?
24. What is it about the water in Lake Michigan which is the reason there are no hurricanes in it?
25. What is the rating of the worst possible tornado?
26. List at least 2 examples of damage you could expect from a tornado.
27. What rating would a tornado with 200 mph winds receive?
28. What is the relative humidity of the air if the dry-bulb temperature is 25.0 degrees Celsius and the wet-bulb temperature is 22.0 degrees Celsius (use the relative humidity chart)?
29. What is the wet-bulb temperature if the relative humidity is 88% and the dry-bulb temperature is 10.0 degrees Celsius (use the relative humidity chart)?

Look at the weather station model below for question 30 through 33.



30. What is the wind direction?
31. What is the current temperature?
32. What is the dew point?
33. What weather is occurring based on the two dots next to this weather station model?

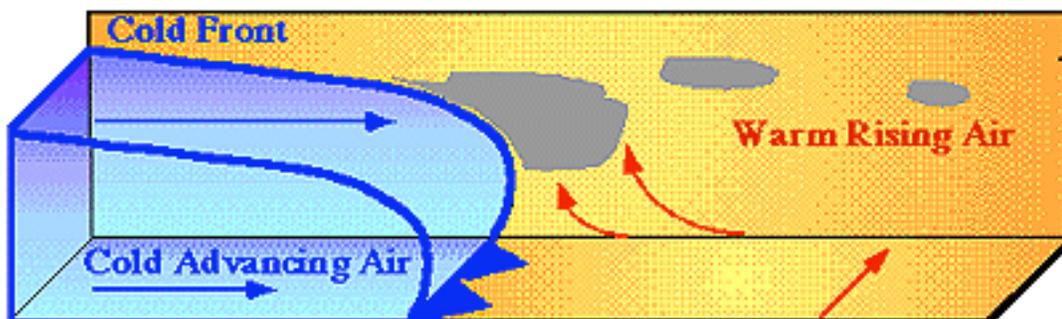
Use the U.S. weather map below to answer questions 34 - 35.



34. Show where the high pressure and the low pressure areas are with capital letters L and H. Draw these letters on the above map in the proper places.

35. What units are used to measure the barometric pressures on the above map?

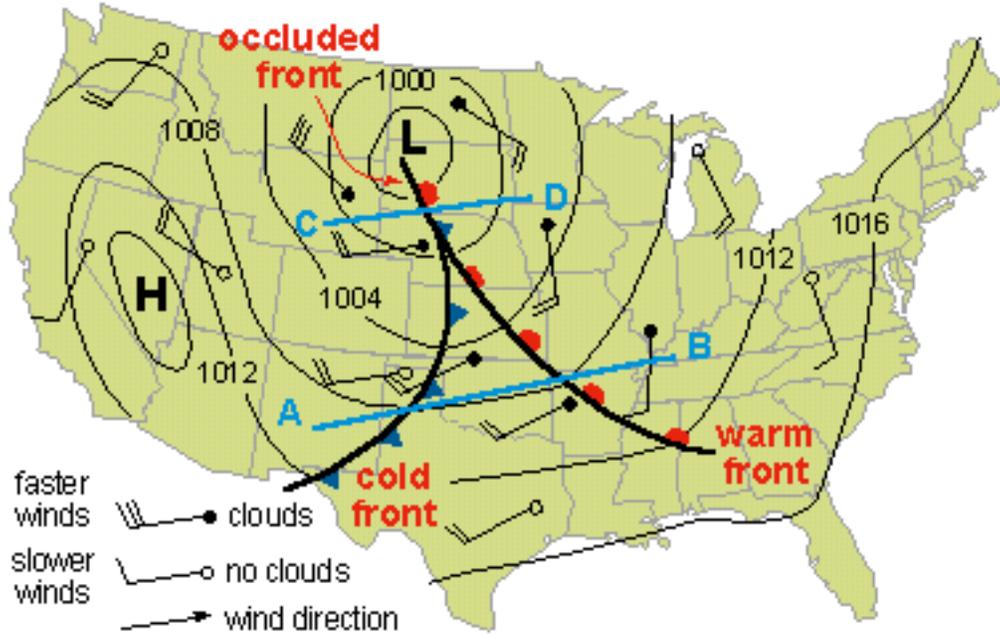
Use the diagram below to answer questions 38 - 40.



36. What type of front is on the above diagram?

37. What is the name of the huge clouds that will form at this front?

38. Which air is more dense in the above diagram?



39. What is the barometric pressure along the eastern edge of Wisconsin on the above map? Make sure to include the units along with your answer.
40. What are the “wiggly circle” lines called on the above map?

Standards addressed by this activity:

E. Earth and Space Science Content Standard: Students in Wisconsin will demonstrate an understanding of the structure and systems of earth and other bodies in the universe and of their interactions.
 E.12.2 Analyze* the geochemical and physical cycles of the earth and use them to describe* movements of matter.

Websites that may be helpful for ASSIGNMENT WEATHER packet:

- [http://ww2010.atmos.uiuc.edu/\(Gh\)/home.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/home.rxml)
 (note: there are only 2 w's and no . after the w's) (this site has tons of information)
- <http://www.usatoday.com/weather/resources/basics/measurements.htm>
 (has info about how to measure different aspects of weather such as temperature, humidity, etc.)
- <http://schoolscience.rice.edu/duker/weatherindex.html>
 (note: this does not have www) (this has some general weather info such as about hurricanes)
- <http://66.208.12.20/amsedu/dstreme/>
 (has items such as weather map symbols)
- http://www.atmos.uiuc.edu/courses/atmos100/all_exercises.html
 (has links for topics such as cyclones, coriolis effect, greenhouse effect, hurricane characteristics, etc.)

Also use the information in your book and your notes or look for more sites if you have time. If you choose to look for other sites, make sure that you consider the quality of the sites you find and keep in mind the amount of time you have to complete this assignment.