

Review Sheet for November Test (50 multiple choice questions)

Here are some clues related to the test questions.

1. How does the National Weather Service determine the location and speed of high altitude winds?
2. Why is it so important to know where the jet streams are?
3. Explain why Livingston can have such incredible winds.
4. Explain what convection is.
5. How does a mercury barometer work?
6. What is the direction of the prevailing winds in our area?
7. How does the atmospheric pressure on Mars compare to the pressure in Denver and Seattle.
8. What is happening to the air in an area where there is a high pressure system?
9. How does rising air affect the pressure and the weather?
10. What are the three factors that cause our global pattern of winds to be what it is?
11. Explain what happened in the can-crush activity.
12. Compare the heating of land and water.
13. What is the Inter-tropical Convergence Zone?
14. What are the (3) steps that cause wind to blow from Canyon Ferry Dam to Cemetery Island on a sunny summer day?
15. What and where are the Doldrums?
16. What is happening in the area called "The Horse Latitudes"?
17. Explain what causes the summer monsoons and tell why they bring rain.
18. Explain how the Coriolis Effect influences wind and ocean currents.
19. **MAP of USA with isobars drawn** . . . You will have to identify the areas of high and low pressure and demonstrate your understanding of wind direction by answering several questions.
20. **MAP of USA with wind barbs** that show wind speed and direction at high altitudes . . . You will have to answer several questions. For example, "What is the wind speed over Spokane?"
21. What happens to dew, frost, fog, or clouds when the air temperature rises above the dew point?
22. Explain what is happening to warmer air along a cold or warm front.
23. Explain why the wet bulb of a psychrometer always gets colder than the dry bulb?
24. In the "recipe for a cloud lab", why did the cloud evaporate when you squeezed the bottle?
25. Why do clouds often form in air that is rising?

26. What are three situations in nature where air is caused to rise?
27. What were the three things, or conditions, (ingredients) needed for a good cloud to form during the lab and demonstrations?
28. Why does dew and fog in Helena usually evaporate before mid-morning?
29. Explain what condensation nuclei are.
30. In the “recipe for a cloud lab” and the cloud demonstrations, what was done to make the temperature of the air in the bottle (or jar) colder?
31. How is sweating supposed to help make your body cooler?
32. The actual amount of water vapor that the air contains (in g/m^3) is called the . . .
33. What kind of air would cause there to be very little difference between the temperatures of a wet-bulb and a dry-bulb?
34. Describe a situation that would cause frost to form.
35. What is the source of heat for the warm Chinook winds that frequent north-central Montana?
36. List three phase changes will cause water molecules to release heat to their surroundings (making the surrounding air warmer)?

How to study . . .

1. Study all of your notebook entries since the last test, starting with November 12.
2. Study your handouts (especially notes handouts), worksheets, and labs. Carefully read them, including the follow-up questions. Don't try to memorize – Try to understand.
3. Look at the resources that are posted on Benson's web site (www.bengalfrosh.com) for the weeks since the last test.
4. Go through the review questions/clues on this sheet. Recall the answers, or find them.

Here is a list of the handouts that you should study for your test.

1. Notes: Humidity Topics
2. Humidity Lab
3. What's the relative humidity today? (Lab)
4. Worksheet: Vapor, Clouds, Precipitation
5. Notes: Cloud Formation
6. Recipe for a Cloud Lab
7. Pressure Worksheet (Can Crush notes on other side)
8. Convection Lab
9. Notes: Global Circulation
10. Map Activity: Prevailing Winds
11. Map Activity: Jet Streams
12. Isobars Map Activity

Honors students: You will have five “level 2” questions to test your understanding of the following: Chinook winds, heat index, relative humidity, psychrometer, monsoons