

Weather - Study Guide

- I. weather vs. climate
- II. weather instruments (thermometer, barometer, wind vane, rain gauge, anemometer)
- III. water cycle
- IV. seasons (earth's tilt, uneven heating of Earth, ...)
- V. heat transfer (convection/convection currents, conduction, radiation)
- VI. land vs. sea breezes & heating/cooling of Earth
- VII. Clouds
- VIII. winds
- IX. Air pressure (rising air = moistening, sinking air = drying)

*Make sure to check notes, reading passages, etc. for additional information on the above topics.

*Use your notes, vocabulary worksheets, activities, etc.

Review Questions

1. As water vapor rises into the sky it is cooled and formed into a cloud. What is this called?
2. Which substance is a form of precipitation?
3. When white, fluffy clouds appear in the sky, the weather that day will most LIKELY be
a. rainy b. foggy c. stormy d. fair
4. The Earth has varied winds, rain, and weather conditions because of
a. clouds b. night air c. temperature d. the sun
5. Which of the following can cool the land? a. wind b. sunlight c. steam d. fire
6. A large amount of water covering a normally dry area is called
a. precipitation b. a flood c. a drought d. condensation
7. All of the following may affect our weather EXCEPT
a. temperature b. meteorologist c. wind d. sun
8. How are clouds formed?
9. Which type of cloud forms in horizontal layers?
10. A cloud that forms just above the surface of the earth is called?
11. As the elevation above sea level in the Earth's atmosphere increases, the measured atmospheric pressure will: a. remain same b. Increase c. decrease d. fluctuate
12. What is the weight of air? a. air mass b. air pressure c. humidity
13. What is the boundary between air masses? a. air pressure b. precipitation c. front
14. What is the average of weather conditions through all seasons over a period of time?

16. Explain how elevation affects temperature?

17. All of the following may affect our weather EXCEPT: a. the Sun b. wind c. temperature

18. Write 3 things you know about pressure systems (check your notes):

High pressure

Low pressure

-
-
-

19. Why do globes lean sideways?

20. What happens to the area in which you live tilts away from the sun?

21. How are evaporation and condensation similar?

- a. Both cause decreases in air temperature
- b. Both cause increases in air temperature
- c. Both are caused by the warming of the atmosphere
- d. Both are caused by changes in heat energy

22. Which is an example of a different substance being formed?

- a. Glass breaking
- b. Metal melting
- c. Water freezing
- d. Wood burning

23. A pot is heated on a stove. Which process causes the metal handle of the pot?

24. Which describes why winds at the beach change direction between day and night?

- a. Because the temperatures over land and over water change
- b. Because warm air over land sinks and stays in place over land
- c. Because cool air rises and is replaced by warm air from the ocean
- d. Because cool air sinks and stays in place over land

25. If 10 grams of water are added to 5 grams of salt, how much salt water will be made?

26. How can you feel the heat from a campfire with out touching it?

27. When standing in a swimming pool, Jan notices the water around his feet is a lot cooler than near the surface. Which process causes that? A. Convection b. Evaporation c. Radiation

28. Fred lives in the southern hemisphere. What season does he MOST LIKELY experience in August?

29. On a cold, cloudy day, the forecaster predicts that a high-pressure system will be moving into the area in the next 24 hours. Which weather conditions will this system MOST LIKELY bring to the area?

- a. stormy
- b. sunny
- c. snowy
- d. hot

30. The weather forecast indicates a warm front will move into our area. What type of weather will MOST LIKELY result? a. clear skies/cold temps b. clear skies/hot temps c. cloudy skies/rain