

Handout 2 (3-2) yellow

Name _____ Period _____

Weather Fronts and Severe Weather

Standard 3 Objective 2 Indicators a, b, c, and d

Chapter 24 Section 2: Directed Reading Pages 605-610

Section: Fronts (page 605)

- _____ 1. When two unlike air masses meet, what usually keeps them separate?
a. temperature differences b. moisture differences
c. differences in density d. differences in pressure
- _____ 2. The boundary that forms between two air masses when they meet is called a
a. front. b. storm line. c. squall line. d. midlatitude

TYPES OF FRONTS (page 605)

- _____ 3. cold front a. a front of air masses that moves either very slowly or not at all
b. the front edge of a moving mass of cold air that pushes
beneath a warmer air mass like a wedge
- _____ 4. warm front c. the front edge of an advancing warm air mass that replaces
colder air with warmer air
- _____ 5. stationary front d. a front that forms when a cold air mass overtakes a warm air
mass and lifts the warm air mass off the ground and over
another air mass
- _____ 6. occluded front
7. Describe the storms that form along a cold front.
8. What kind of weather does a warm front generally produce?

SEVERE WEATHER (page 608)

9. List three weather events that are considered severe weather.

Use the terms from the list below to complete the sentences that follow. Each term may be used only once. Some terms may not be used.

tornado storm surge cumulonimbus cloud bands
eyewall eye water vapor hurricane latent heat

10. A severe storm that develops over tropical oceans and whose winds of more than 120 km/h spiral in toward the intensely low-pressure storm center is called a(n) _____.
11. During a hurricane, large amounts of _____ are released, increasing the force of the rising air.
12. A fully developed hurricane consists of a series of thick _____ that spiral upward around the center of the storm.
13. Winds increase toward the calm, clear _____ of the storm and may reach speeds of 275 km/h.
14. The most dangerous aspect of a hurricane is a rising sea level and large waves, called a _____.

TORNADOES (page 610)

15. Explain how a tornado forms.

16. What happens when a tornado funnel touches ground?

17. When and where do most tornadoes occur?

18. What makes a tornado so destructive?

Chapter 24 Section 3: Weather Instruments Pages 611-614

19. Name five measurements on which weather observations are based.

MEASURING LOWER ATMOSPHERIC CONDITIONS (page 611)

In the space provided, write the letter of the definition that best matches the term or phrase.

- | | |
|-----------------------|---|
| _____ 20. thermometer | a. an instrument that measures atmospheric pressure |
| _____ 21. barometer | c. an instrument that measures wind speed |
| _____ 22. anemometer | d. an instrument that measures and indicates temperature, often in the form of a sealed glass tube filled with mercury or alcohol |
| _____ 23. wind vane | e. an instrument that determines the direction of wind with an arrow shaped device that turns freely as the tail catches the wind |

24. Why do scientists use barometers to help them predict the weather?

25. Explain how an anemometer works.

MEASURING UPPER-ATMOSPHERIC CONDITIONS (page 613)

26. Why do meteorologists study upper-atmospheric conditions?

27. How does radar track a storm?

28. Explain what Doppler radar can tell meteorologists.

29. What important purpose do weather satellites serve?

30. How do weather satellites measure the direction and speed of the wind at the level of the clouds?