

Characteristics of the Atmosphere

Standard 3 Objective 1 indicator e

Chapter 22: Section 1: Directed Reading Pages 547-554

Section: Characteristics of the Atmosphere (page 547)

1. Define *atmosphere*:

2. Describe two important functions served by Earth's atmosphere.

COMPOSITION OF THE ATMOSPHERE (page 547)

_____ 3. The two most abundant compounds in air are the gases carbon dioxide and
_____ a. carbon monoxide. b. smog. c. water vapor. d. hydrocarbons.

_____ 4. In addition to containing gaseous elements and compounds, the atmosphere carries various

kinds of tiny solid particles such as dust and

_____ a. pollution. b. pollen. c. insects. d. rocks.

_____ 5. How much of Earth's atmosphere is composed of nitrogen?

_____ a. 26% b. 78% c. 52% d. 87%

_____ 6. The process by which nitrogen moves from air to the soil and then to plants and animals and

eventually returns to the air is called the

_____ a. life cycle. b. atmospheric cycle. c. earth cycle. d. nitrogen cycle.

7. What percentage of Earth's atmosphere is made up of oxygen? _____

8. Identify six ways oxygen is removed from the atmosphere.

9. Explain how oxygen is returned to the atmosphere.

10. As water evaporates from oceans, lakes, streams, and soil, it enters air as _____.

11. What is ozone? How does it differ from oxygen?

12. What purpose does the ozone layer serve?

13. Describe the effect of chlorofluorocarbons (CFCs) on the ozone layer.

14. What are particulates?

LAYERS OF THE ATMOSPHERE (page 552)

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

- | | |
|------------------------|---|
| _____ 15. troposphere | a. the layer of atmosphere between the troposphere and the mesosphere, in which temperature increases as altitude increases |
| _____ 16. stratosphere | b. the uppermost layer of atmosphere, in which temperature increases as altitude increases |
| _____ 17. mesosphere | c. the coldest layer of the atmosphere, between the stratosphere and the thermosphere, in which temperature decreases as altitude increases |
| _____ 18. auroras | d. phenomena caused by interactions between solar radiation and the ionosphere |
| _____ 19. thermosphere | e. the lowest layer of the atmosphere, in which temperature drops at a constant rate as altitude increases |

TEMPERATURE INVERSIONS (page's 547 - 554)

20. What is an air pollutant?

21. How do fossil fuels cause air pollution?

22. What is a temperature inversion?

23. What is smog?

24. Identify five main components of the atmosphere.

25. Identify the layer of the atmosphere in which weather occurs.