

## Chapter 12 Test Study Guide: The Atmosphere

**Describing the layers of the atmosphere** Name: \_\_\_\_\_

1. If Earth had no atmosphere, the days would be \_\_\_\_\_ and the nights would be \_\_\_\_\_.
2. The most abundant gas in the atmosphere is \_\_\_\_\_.
3. The uppermost layer of the atmosphere is the \_\_\_\_\_.
4. Ozone is located in the \_\_\_\_\_. Ozone supports life on Earth by \_\_\_\_\_ radiation.
5. If the mass of an object is 10 gr and its volume is 5 cm<sup>3</sup>, then its density would be \_\_\_\_\_.
6. As altitude increases, air density \_\_\_\_\_.
7. Meteors are chunks of stone and metal from space. The layer of the atmosphere that protects Earth from meteors is the \_\_\_\_\_.
8. As you rise upwards in the atmosphere, air pressure \_\_\_\_\_.
9. The layer of our atmosphere in which weather occurs is the \_\_\_\_\_.
10. The thermosphere is the outermost layer of the atmosphere and is divided into two layers:  
\_\_\_\_\_ - \_\_\_\_\_

11. The temperature in the troposphere \_\_\_\_\_ as altitude increases.

### *Energy transfer in the atmosphere*

12. Scientists call greenhouse gases the following: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. Energy transfer from the sun that heats the Earth, is in the form of \_\_\_\_\_

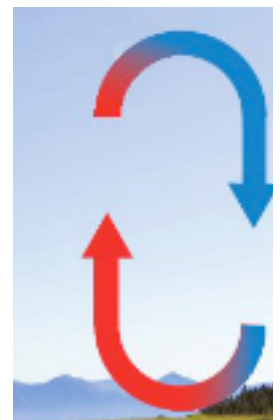
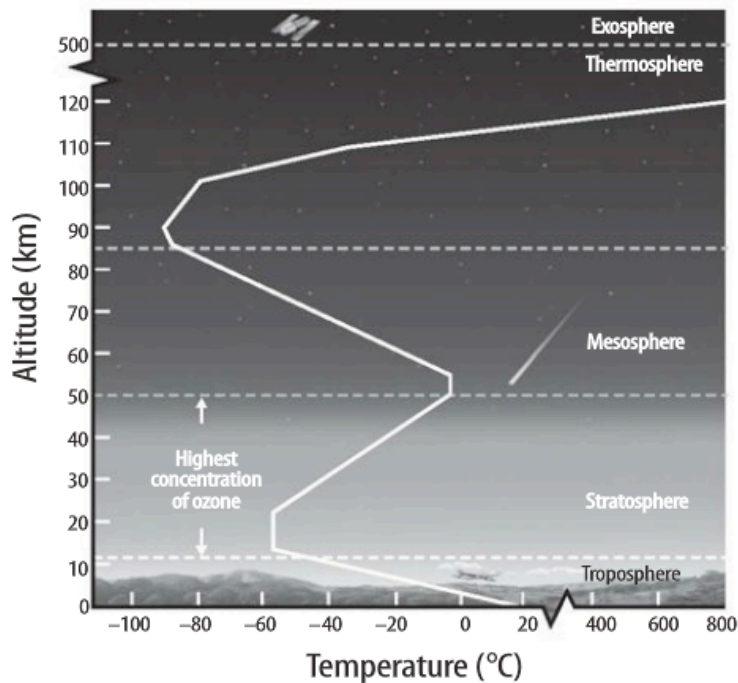
14. Heat transfer in the troposphere happens by \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

15. Energy from the sun that reaches Earth is mostly in the form \_\_\_\_\_ of visible light, infrared radiation, and \_\_\_\_\_ radiation.

16. Uneven heating of the atmosphere leads to differences in \_\_\_\_\_, which causes wind

17. \_\_\_\_\_ The greenhouse effect of Earth's atmosphere is where Earth's surface radiant energy is trapped by the roof of the greenhouse, causing the air inside to become \_\_\_\_\_

18. The troposphere contains gases that are commonly referred to as "greenhouse gases." The



presence of these gases affects the troposphere because they \_\_\_\_\_ heat radiation from Earth's surface.

**Identifying air masses, jet streams and global wind patterns and other atmospheric phenomena and how they relate to weather.**

19. The doldrums are located at about \_\_\_\_\_ and \_\_\_\_\_ latitude.

20. Cool air tends to be more \_\_\_\_\_ and flow under warm air.

21. The cold winds that blow from the east to the west near the North Pole and the South Pole are called polar easterlies

22. Local winds differ from global winds because they are caused by \_\_\_\_\_ heating within a \_\_\_\_\_ area.

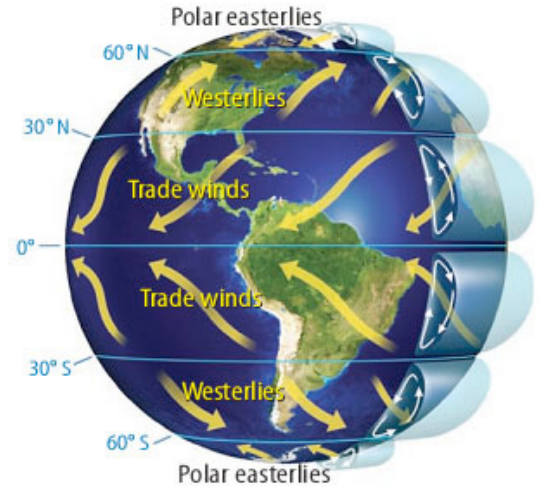
23. Earth's rotation makes global winds curve. This is called the \_\_\_\_\_.

24. The primary cause of global wind patterns on Earth is \_\_\_\_\_.

25. The wind that blows from the land to the sea due to local temperature and pressure differences is called \_\_\_\_\_.

26. The type of wind that moves at very high speeds and high altitude is the \_\_\_\_\_.

27. The weather of the continental United States is affected by global winds known as the \_\_\_\_\_.

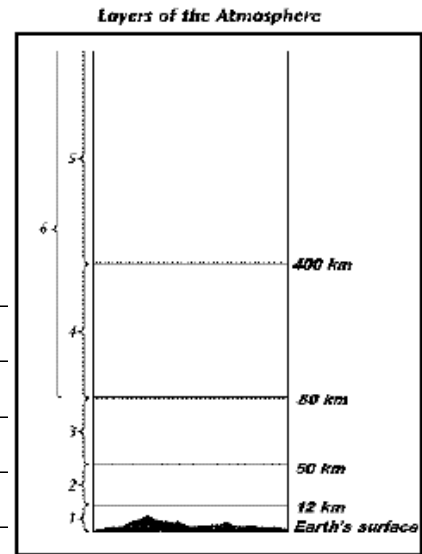


**Using Science Skills**

Use the figure on the right to answer the following question.

28. What are the names of the six layers of the atmosphere shown starting from Earth's surface?

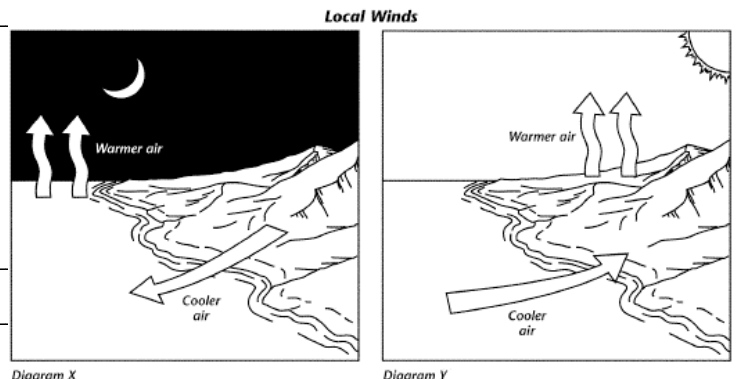
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_



29. Explain why military aircraft pilots must wear masks that provide oxygen when they fly at high altitudes.

30. In diagram X and Y, which way does the wind blow? Why?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



31. Explain why the region near the equator has little or no wind.