

M O D E R N E A R T H S C I E N C E

Chapter 28

Choose the best response. Write the letter of that choice in the space provided.

- ____ **11.** Compared with the size of the present-day planets, the protoplanets were
a. much smaller. b. slightly smaller. c. similar. d. larger.
- ____ **12.** The first atmosphere of the earth had a high percentage of
a. helium. b. oxygen. c. nitrogen. d. water vapor.
- ____ **13.** In the process of photosynthesis, cyanobacteria and green plants give off
a. oxygen. b. carbon dioxide. c. hydrogen. d. helium.
- ____ **14.** Water vapor began to condense into oceans about
a. 1 million to 1.5 million years ago. b. 1 billion to 1.5 billion years ago.
c. 3 billion to 3.5 billion years ago. d. 15 billion to 15.5 billion years ago.

Critical Thinking

Read each question or statement and answer it in the space provided.

- 1.** Explain how the transfer of energy in a pan of hot water is similar to the transfer of energy in the sun's convective zone.

- 2.** Predict what would happen to the number of sunspots if the sun's magnetic field suddenly increased in strength.

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Read each question or statement and answer it in the space provided.

3. If the earth’s magnetosphere shifted, what would happen to the area where auroras are most often visible?

4. How would the layers of the earth be different if the planet had never been hotter than it is today?

5. How would the atmosphere of the earth be different if the earth had formed from a much larger protoplanet?

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Application

Read each question or statement and answer it in the space provided.

1. You are asked to explain the following statement to an elementary school class: Solar hydrogen is responsible for life existing on the earth. What would you say?

2. A group of senior citizens has decided to head north to view the northern lights. When would you advise them to go in order to see the most frequent displays?

3. Using the new terms listed on page 586 of your textbook, construct a **concept map** that, among other things, illustrates the path of energy from the core of the sun to the far side of the earth.

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