

# Directed Reading B

## Section: Time Marches On (pp. 276–283)

### THE GEOLOGIC TIME SCALE

- \_\_\_\_\_ 1. About how many years of Earth's history do geologists study?
- a. 4.6 million years
  - b. 46 million years
  - c. 460 million years
  - d. 4.6 billion years

2. What is the geologic time scale?

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Match the correct description with the correct term. Write the letter in the space provided.

- |  |           |
|--|-----------|
| _____ 3. the largest division of the geologic time scale | a. epoch  |
| _____ 4. the second-largest division of geologic time    | b. period |
| _____ 5. the third-largest division of geologic time     | c. era    |
| _____ 6. the smallest division of geologic time          | d. eon    |

7. What are three ways the boundaries between geologic time intervals are defined?

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8. What are two types of changes that can cause a dramatic increase or decrease in the number of different kinds of organisms?

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9. What is *extinction*?

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**Directed Reading B** *continued*

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**10.** What are two types of gradual changes that can cause mass extinctions?

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**11.** What is one type of catastrophic change that can cause a mass extinction?

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**PRECAMBRIAN TIME—LIFE DEVELOPS**

\_\_\_\_\_ **12.** About how long did the Precambrian time last?

- a. 4.6 billion years ago to 542 million years ago
- b. 542 million years ago to 251 million years ago
- c. 251 million years ago to 65 million years ago
- d. 65 million years ago to the present

\_\_\_\_\_ **13.** Organisms first appeared in Earth's oceans about

- a. 4.6 billion years ago
- b. 3.6 billion years ago
- c. 542 million years ago
- d. 4.6 million years ago

**14.** Oxygen gas was released into Earth's early oceans and air by

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**15.** How did the formation of ozone in the upper atmosphere help life survive on land?

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**16.** Organisms composed of many cells may have evolved from

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**THE PALEOZOIC ERA**

\_\_\_\_\_ **17.** When did the Paleozoic Era begin?

- a. about 2.6 billion years ago
- b. about 430 million years ago
- c. about 542 million years ago
- d. about 4.5 million years ago

**18.** Why do scientists know less about organisms before the Paleozoic Era than about organisms during the Paleozoic Era?

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**Directed Reading B** *continued*

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**19.** What was the Cambrian explosion?

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**20.** What are three types of marine animals that left fossils from the Paleozoic Era?

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**21.** What type of forests covered much of Earth at the end of the Paleozoic Era?

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**22.** What indicates that arthropods such as scorpions were the first land animals?

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**23.** What was the largest known mass extinction?

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**24.** What was the largest group of animals that became extinct during the Permian extinction?

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**25.** According to the fossil record, what are two groups of animals that survived the Permian extinction?

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**THE MESOZOIC ERA**

\_\_\_\_\_ **26.** When did the Mesozoic Era begin?

- a.** about 2.6 billion years ago
- b.** about 251 million years ago
- c.** about 542 million years ago
- d.** about 430 million years ago

**27.** The Mesozoic Era is also known as the \_\_\_\_\_.

**28.** The best-known reptiles that lived during the Mesozoic Era are \_\_\_\_\_.

**Directed Reading B** *continued*

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**29.** The most important plants during the early Mesozoic Era were

\_\_\_\_\_.

**30.** What happened during the Cretaceous-Tertiary extinction?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**31.** What fossil evidence do scientists have for the Cretaceous-Tertiary extinction?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**32.** How could an object from our solar system have caused the Cretaceous-Tertiary extinction?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**THE CENOZOIC ERA**

\_\_\_\_\_ **33.** When did the Cenozoic Era end?

- a. 40 million years ago
- b. 3.6 million years ago
- c. 542 million years ago
- d. The Cenozoic Era has not ended.

\_\_\_\_\_ **34.** The Cenozoic Era is sometimes called the

- a. Age of Humans.
- b. Age of Fossils.
- c. Age of Mammals.
- d. Age of Insects.

\_\_\_\_\_ **35.** Mastodons, camels, horses, and humans first appeared

- a. during the Cenozoic Era.
- b. during the Mesozoic Era.
- c. during the Paleozoic Era.
- d. during the Archean Era.