

Skills Worksheet

Directed Reading A

Section: Time Marches On GEOLOGIC TIME

- _____ 1. How much geologic time do the layers of rock exposed at Grand Canyon National Park represent?
- a. 10 million years
 - b. 6 million years
 - c. 2 billion years
 - d. 6 billion years

THE GEOLOGIC TIME SCALE

- _____ 2. How many years of Earth's history do geologists study?
- a. 150 million years
 - b. 10 million years
 - c. 4.6 billion years
 - d. 10.2 billion years

3. Why have geologists created the geologic time scale?

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

- | | |
|---|----------------|
| _____ 4. the eon during which the earliest known rocks formed on Earth | a. Hadean |
| _____ 5. the eon in which we live | b. Archean |
| _____ 6. the eon from which scientists have found rocks and meteorites only from the moon | c. Proterozoic |
| _____ 7. the eon in which the first organisms with well-developed cells appeared | d. Phanerozoic |
8. What do the boundaries between geologic time intervals represent?

Directed Reading A *continued*

9. Number the following divisions of geologic time from largest to smallest.

_____ epoch

_____ eon

_____ era

_____ period

10. What is extinction?

11. What kinds of catastrophic events can cause extinction?

12. Describe the beginning of the Paleozoic era.

13. How did the Paleozoic era end?

14. Why is the Mesozoic era called the Age of Reptiles?

Directed Reading A *continued*

15. Why is the Cenozoic era called the Age of Mammals?

16. What probably caused the extinction of dinosaurs?

17. What unique traits probably helped mammals survive?

Section Review

Time Marches On

USING KEY TERMS

1. Use each of the following terms in the same sentence: *era*, *period*, and *epoch*.

UNDERSTANDING KEY IDEAS

- _____ 2. The unit of geologic time that began 65.5 million years ago and continues to the present is called the
- a. Holocene epoch.
 - b. Cenozoic era.
 - c. Phanerozoic eon.
 - d. Quaternary period.

3. What are the major time intervals represented by the geologic time scale?

4. Explain how geologic time is recorded in rock layers.

5. What kinds of environmental changes cause mass extinctions?

Section Review *continued*

CRITICAL THINKING

6. Making Inferences What future event might mark the end of the Cenozoic era?

7. Identifying Relationships How might a decrease in competition between species lead to the sudden appearance of many new species?

INTERPRETING GRAPHICS

8. Look at the illustration below. On the Earth-history clock shown, 1 h equals 383 million years, and 1 min equals 6.4 million years. In millions of years, how much more time is represented by the Proterozoic eon than the Phanerozoic eon?


