

Skills Worksheet

# Directed Reading

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## Section: Precambrian Time and the Paleozoic Era

1. Where is the geologic history of Earth recorded?

\_\_\_\_\_

2. What kind of information can scientists get from the types of rock and the fossils in a rock layer?

\_\_\_\_\_

### EVOLUTION

3. The gradual development of new organisms from other organisms since the beginning of life is called \_\_\_\_\_.

4. In what year was the theory of evolution by natural selection proposed, and by whom?

\_\_\_\_\_

5. Climatic and geologic changes could affect an organism's ability to \_\_\_\_\_.

6. What do scientists study to learn why some organisms survived over long periods and others became extinct?

\_\_\_\_\_

\_\_\_\_\_

### PRECAMBRIAN TIME

\_\_\_\_\_ 7. What is a nebula?  
a. the newly formed sun  
b. a large cloud  
c. a star  
d. a planet

\_\_\_\_\_ 8. When did the Earth form?  
a. about 540 million years ago  
b. about 4.6 billion years ago  
c. after Precambrian time  
d. before Precambrian time

**Directed Reading** *continued*

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- \_\_\_\_\_ **9.** The time interval that began with the formation of Earth is called
- a.** the Cenozoic Era.
  - b.** the Mesozoic Era.
  - c.** the Paleozoic Era.
  - d.** Precambrian time.
- \_\_\_\_\_ **10.** When did Precambrian time begin?
- a.** about 4.6 billion years ago
  - b.** about 540 million years ago
  - c.** about 10 billion years ago
  - d.** about 88 million years ago
- \_\_\_\_\_ **11.** Approximately when did Precambrian time end?
- a.** 3 million years ago
  - b.** 540 million years ago
  - c.** 1 million years ago
  - d.** 10,000 years ago
- \_\_\_\_\_ **12.** About how much of Earth's history occurred during Precambrian time?
- a.** 20%
  - b.** 40%
  - c.** 50%
  - d.** 88%
- \_\_\_\_\_ **13.** We know little about Precambrian time because
- a.** no rocks exist from that time.
  - b.** Earth did not exist.
  - c.** no organisms existed so there are no fossils.
  - d.** Precambrian rocks were damaged and therefore could not be identified.
- 14.** A large area of exposed Precambrian rocks is called a \_\_\_\_\_.
- 15.** Name four things that cause the formation of shields.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- 16.** How much of the world's minerals occur in the rocks of Precambrian shields?
- \_\_\_\_\_
- \_\_\_\_\_

**Directed Reading** *continued*

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**17.** What valuable minerals are found in the rocks of Precambrian shields?

\_\_\_\_\_

**18.** Name three possible reasons why fossils are rare in Precambrian rocks.

\_\_\_\_\_

\_\_\_\_\_

**19.** Precambrian fossils consisting of reeflike deposits formed by blue-green algae are called \_\_\_\_\_.

**20.** Where do stromatolites form today?

\_\_\_\_\_

**21.** What does the presence of stromatolite fossils in Precambrian rocks indicate?

\_\_\_\_\_

**THE PALEOZOIC ERA**

\_\_\_\_\_ **22.** When did the Paleozoic Era occur?

- a. before Precambrian time
- b. after Precambrian time
- c. before Earth was formed
- d. after the Mesozoic Era

\_\_\_\_\_ **23.** Approximately when did the Paleozoic Era begin?

- a. 540 thousand years ago
- b. 248 million years ago
- c. 540 million years ago
- d. 3.9 billion years ago

\_\_\_\_\_ **24.** Approximately when did the Paleozoic Era end?

- a. 540 thousand years ago
- b. 5,000 years ago
- c. 5 million years ago
- d. 248 million years ago

\_\_\_\_\_ **25.** When the Paleozoic Era began, Earth's landmasses were

- a. arranged much as they are today.
- b. located in a single region of the world.
- c. unstable due to tectonic activity.
- d. scattered around the world.

**Directed Reading** *continued*

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- \_\_\_\_\_ 26. By the end of the Paleozoic Era, Earth's landmasses had
- a. collapsed and dropped below sea level.
  - b. collided to form a supercontinent called Pangaea.
  - c. disappeared as a result of tectonic activity.
  - d. lost all of their mineral deposits.
- \_\_\_\_\_ 27. How do Paleozoic rocks differ from Precambrian rocks?
- a. Paleozoic rocks contain many fossils.
  - b. Paleozoic rocks are much older.
  - c. Paleozoic rocks were formed by tectonic activity.
  - d. Paleozoic rocks are found only in North America.
- \_\_\_\_\_ 28. How many periods is the Paleozoic Era divided into?
- a. four
  - b. six
  - c. seven
  - d. three
- \_\_\_\_\_ 29. What is the first period of the Paleozoic Era called?
- a. Permian Period
  - b. Cambrian Period
  - c. Silurian Period
  - d. Carboniferous Period
- \_\_\_\_\_ 30. Which of the following organisms appeared during the Cambrian Period?
- a. primitive organisms
  - b. mammals
  - c. marine life-forms
  - d. marine vertebrates

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

- |                        |   |
|------------------------|---|
| _____ 31. brachiopod   | a. a fossil that scientists use to date rocks         |
| _____ 32. invertebrate | b. the most common Cambrian invertebrate              |
| _____ 33. index fossil | c. a shelled animal common during the Cambrian Period |
| _____ 34. trilobite    | d. an animal that does not have a backbone            |

**Directed Reading** *continued*

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**35.** Evidence of what type of organism has NOT been found in Cambrian rocks?

\_\_\_\_\_

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

- |                                     |  |
|-------------------------------------|--|
| _____ <b>36.</b> vertebrate         | <b>a.</b> one of the dominant invertebrate life-forms during the Ordovician Period |
| _____ <b>37.</b> cephalopod mollusk | <b>b.</b> an animal that has a backbone  |
| _____ <b>38.</b> graptolite         | <b>c.</b> a tiny invertebrate that lived in the ocean during the Ordovician Period |

**39.** How did Ordovician fish differ from modern fish?

\_\_\_\_\_

**40.** A scorpion-like sea creature that lived during the Silurian Period was the \_\_\_\_\_.

**41.** In what period did the first land plants and land animals evolve?

\_\_\_\_\_

**42.** Another name for the Devonian Period is the \_\_\_\_\_.

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

- |                               |   |
|-------------------------------|---|
| _____ <b>43.</b> rhipidistian | <b>a.</b> the first amphibians  |
| _____ <b>44.</b> Ichthyostega | <b>b.</b> an air-breathing fish with strong fins that could crawl to land |
| _____ <b>45.</b> lungfish     | <b>c.</b> a fish with the ability to breathe air                          |

**46.** Name three types of plants that began to develop during the Devonian Period.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**47.** Briefly describe the climate during the Carboniferous Period.

\_\_\_\_\_

\_\_\_\_\_

**Directed Reading** *continued*

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**48.** Briefly describe the landscape during the Carboniferous Period.

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**49.** What does the word *carboniferous* mean?

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**50.** Into what periods is the Carboniferous Period divided in North America?

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**51.** What organism from the Carboniferous Period is thought to be the modern ancestor of the sea star?

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**52.** What did the vertebrates that appeared at the end of the Pennsylvanian Period look like?

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**53.** Which period marks the end of the Paleozoic Era?

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**54.** What event occurred at the end of the Permian Period that affected a large number of Paleozoic life-forms?

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**55.** What had happened to the continents by the end of the Permian Period?

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**56.** What environmental changes had occurred by the end of the Permian Period?

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**57.** Name two marine invertebrates that became extinct as a result of the environmental changes at the end of the Permian Period.

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**58.** What animals survived the environmental changes at the end of the Permian Period?

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