

Skills Worksheet

Directed Reading

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 preexisting 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 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*

- _____ 9. The time interval that began with the formation of Earth is called
- the Cenozoic Era.
 - the Mesozoic Era.
 - the Paleozoic Era.
 - Precambrian time.
- _____ 10. When did Precambrian time begin?
- about 4.6 billion years ago
 - about 540 million years ago
 - about 10 billion years ago
 - about 88 million years ago
- _____ 11. Approximately when did Precambrian time end?
- 3 million years ago
 - 540 million years ago
 - 1 million years ago
 - 10,000 years ago
- _____ 12. About how much of Earth's history occurred during Precambrian time?
- 20%
 - 40%
 - 50%
 - 88%
- _____ 13. We know little about Precambrian time because
- no rocks exist from that time.
 - Earth did not exist.
 - no organisms existed so there are no fossils.
 - Precambrian rocks were severely deformed, making the original rock record difficult to identify.
14. A large area of exposed Precambrian rocks is called a _____
15. List four things that cause the formation of shields.
- _____
- _____
- _____
- _____
16. How much of the world's valuable mineral deposits occur in the rocks of Precambrian shields?
- _____

Directed Reading *continued*

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 cyanobacteria are called _____.

20. Where do stromatolites form today?

21. What does the presence of stromatolites 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. 250 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*

- _____ 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. Into how many periods is the Paleozoic Era divided?
- a. four
 - b. six
 - c. seven
 - d. three
- _____ 29. What is the first period of the Paleozoic Era?
- a. the Permian Period
 - b. the Cambrian Period
 - c. the Silurian Period
 - d. the 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*

35. Little evidence of what type of organism has been found in Cambrian rocks?

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

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

- | | |
|-------------------------------|--|
| _____ 43. rhipidistian | a. early amphibians |
| _____ 44. <i>Ichthyostega</i> | b. an air-breathing fish with strong fins that could crawl on land |
| _____ 45. lungfish | c. 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*

48. Briefly describe the landscape during the Carboniferous Period.

49. What does the word *carboniferous* mean?

50. In North America, into what periods is the Carboniferous Period divided?

51. Which organism from the Carboniferous Period is thought to be the ancestor of the modern sea lily?

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

53. What period marks the end of the Paleozoic Era?

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

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

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

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

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