

TEST NAME: **Earth History 1**  
TEST ID: **2194365**  
GRADE: **08 - Eighth Grade**  
SUBJECT: **Life and Physical Sciences**  
TEST CATEGORY: **My Classroom**

Student: \_\_\_\_\_

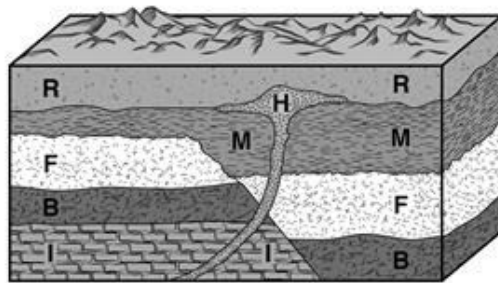
Class: \_\_\_\_\_

Date: \_\_\_\_\_

1. Why is petrified wood considered to be a fossil?

- A. It was once living matter.
- B. It is composed of hardened wood.
- C. It is made entirely of rock material.

2. The diagram shows different layers of sedimentary rock. Each layer is labeled with a letter.

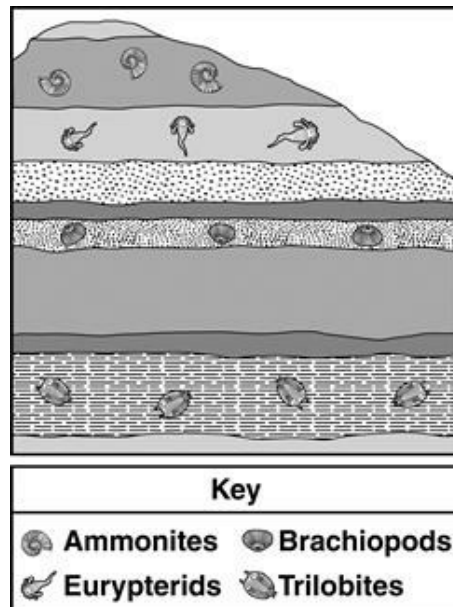


**Which statement correctly describes the relative ages of the rock layers shown in the diagram?**

- A. The left part of Layer B is younger than the right part.
  - B. The left part of Layer F is the same age as Layer M.
  - C. Layer R is older than Layer M.
  - D. Layer I is older than Layer B.
3. Which conclusion can be made when observing multiple undisturbed layers of rock?
- A. The shallow layers are older than the deeper layers.
  - B. The deeper layers are older than the shallow layers.
  - C. The deeper layers are younger than the shallow layers.
  - D. The shallow layers are the same age as the deeper layers.

4. To calculate the relative age of rocks, geologists use the rate of radioactive decay of isotopes present in their samples. What is the term used for the original amount of the elemental isotopes being investigated?
- A. rare earth isotopes
  - B. son isotopes
  - C. daughter isotopes
  - D. parent isotopes
5. Fossilized dinosaur eggs have been found in the third of five rock layers during a fossil dig. Based on the law of superposition, which **best** represents the age of the eggs?
- A. The eggs are older than all of the rock layers.
  - B. The eggs are younger than all of the rock layers.
  - C. The eggs are about the same age as the third rock layer.
  - D. The eggs are about the same age as the fifth rock layer.
6. Which method of radioactive dating would be **most** useful in determining the age of a human fossil?
- A. carbon-14 method
  - B. uranium-lead method
  - C. potassium-argon method
  - D. rubidium-strontium method

7. A section of a rock layer is shown.

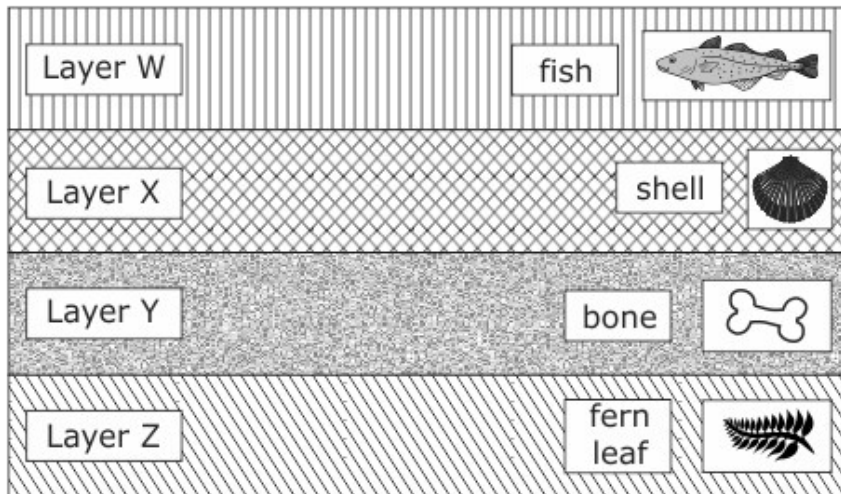


The evidence in these rock layers BEST supports which conclusion?

- A. The oldest fossils in this section of rock are trilobites.
  - B. Eurypterids are related to modern-day scorpions and crabs.
  - C. Eurypterids were the least common type of organism in this section of rock.
  - D. There is some overlap in the presence of brachiopods and ammonites on Earth.
8. Which is the **most accurate** method used in determining the age of a fossil?
- A. relative dating
  - B. geologic column
  - C. radioactive dating
  - D. law of superposition

9. An undisturbed rock column contains a fossil of a reptile species in the lowest rock layer, an index fossil that was present 1 million years ago in the middle rock layer, and a fossil of a clam species in the top rock layer. Which statement is **most likely** correct?
- A. The index fossil formed when a desert habitat made rock layers in the column.
  - B. There was a marine habitat over one million years ago that formed rock layers in the column.
  - C. There was a desert habitat before a marine habitat that formed the rock layers in the column.
  - D. There was a desert habitat more recently than one million years ago that formed rock layers in the column.
10. Which method would be **BEST** for scientists to use to determine the absolute age of a **Precambrian igneous rock**?
- A. index fossils
  - B. law of superposition
  - C. radiometric dating
  - D. law of original horizontality
11. Which is the **most** accurate method scientists can use to estimate Earth's age?
- A. relativism
  - B. superposition
  - C. relative dating
  - D. radioactive dating
12. Scientists studying rock layers classify the top layer as the most recent, followed by older layers that are uncovered as they dig deeper. Which law explains this method of relative dating?
- A. law of geologic continuity
  - B. law of universal position
  - C. law of lateral continuity
  - D. law of superposition

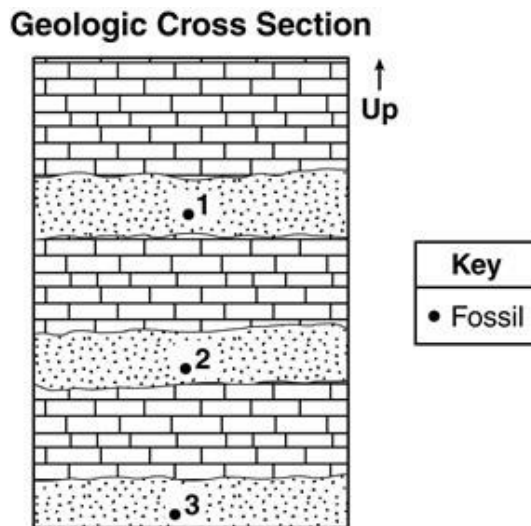
13. Four fossils were discovered and identified according to the rock layer in which each was found.



Which is the youngest fossil?

- A. fish
  - B. shell
  - C. bone
  - D. fern leaf
14. Which characteristic of carbon-14 dating helps scientists determine the approximate time a species became extinct?
- A. Carbon-14 is not present in more recent fossils.
  - B. Carbon-14 increases at a constant rate over time.
  - C. Carbon-14 decreases at a constant rate over time.
  - D. Carbon-14 can only be found in fossils of a certain period.

15. Which generalization can be made about the relative age of a fossil found in a sedimentary rock bed?
- A. The fossil is younger than the rock layer above it.
  - B. The fossil was formed before the rock layer that contains it.
  - C. The fossil and the rock were formed in different environments.
  - D. The fossil was formed around the same time as the rock that contains it.
16. Several different fossils were found in rock layers in a geologic column. Above these rock layers, the fossils were almost nonexistent. Which **most likely** explains these observations?
- A. A nonconformity occurred.
  - B. All the organisms migrated.
  - C. A period of mass extinction occurred.
17. Use this geologic profile to answer the following question.



Which of the following **BEST** describes the fossil at Point 3 when compared with the fossils at Points 1 and 2?

- A. The fossil at Point 3 is less common.
- B. The fossil at Point 3 is smaller.
- C. The fossil at Point 3 is older.
- D. The fossil at Point 3 is more complex.

























18. Which **best** describes the relationship between rock layers and index fossils?
- A. Different rock layers contain only specific species of index fossils.
  - B. Different rock layers can be compared to determine the exact age of index fossils.
  - C. Different rock layers can be determined to be the same exact age if they contain the same index fossils.
  - D. Different rock layers can be determined to be the same relative age if they contain the same index fossils.
19. Which is used to find the relative age of a rock?
- A. composition of rock layers
  - B. position of rock layers
  - C. carbon-14 dating
  - D. uranium dating
20. How are trilobite fossils helpful in understanding the distribution of living things throughout Earth's history?
- A. Trilobites lived in all the ancient oceans and in varying depths of water.
  - B. Trilobites were found worldwide and are signature creatures of the Paleozoic Era.
  - C. The soft tissue of trilobites preserved well and began the expansion of biological diversity.
  - D. There were many different species of trilobites, and they existed in varying shapes and sizes.
21. What is the relative age of an igneous rock intrusion between domed layers of sedimentary rock?
- A. It is older than the sedimentary rock.
  - B. It is younger than the sedimentary rock.
  - C. It is the same age as the sedimentary rock.



22. **Scientists are able to conclude that a forested ecosystem existed in Antarctica millions of years ago by studying**
- A. the current climate.
  - B. the fossil record.
  - C. glacial movement.
  - D. seafloor spreading.
23. **The ichthyornis was a type of bird that lived over 65 million years ago. It lived near the sea and hunted for fish over the water. Fossils have been found in Kansas, many miles from the present-day ocean. Which cause of extinction is MOST likely to be found in the fossil record along with ichthyornis fossils?**
- A. changes in the environment
  - B. diseases causing illness
  - C. changes in the weather
  - D. predator animals
24. What can ice cores **most** accurately tell you about Earth's history for a given location?
- A. the climate at that time
  - B. the plants that grew at that time
  - C. the animals that lived at that time
25. Which **best** explains the significance of the trilobite as an index fossil?
- A. They were the first fossils to be discovered.
  - B. They are fossils that represent many different life-forms.
  - C. They were the only fossils found outside the United States.
  - D. They are fossils that indicate a certain era in geologic time.
26. **Which of the following eras is known as the "Age of Mammals"?**
- A. Precambrian
  - B. Paleozoic
  - C. Mesozoic
  - D. Cenozoic

27. Which theory does evidence found in sedimentary rocks **best** support?
- A. Most organisms from Earth's history still exist.
  - B. Organisms have not changed significantly over time.
  - C. All organisms from Earth's history have become extinct.
  - D. Organisms have evolved from simple to complex forms.
28. How are igneous rocks formed?
- A. by hardening and cementing of layers of sediments
  - B. by cooling and hardening of molten rocks from inside the Earth
  - C. when existing rocks change by heat and pressure into new kinds of rocks
29. How are sedimentary rocks formed?
- A. by hardening and cementing of layers of sediment
  - B. by fossils getting buried in various layers of sediment
  - C. by cooling and hardening of hot molten rock from inside the Earth
30. **Paleontologists are scientists who study evidence of past life on Earth. Which method do paleontologists MOST likely use to determine the forms of life that existed millions of years ago?**
- A. examine current species of plants and animals
  - B. research past species in the library
  - C. interview older scientists
  - D. examine fossils records

31. Scientists estimate that if index fossils were deposited during a certain time frame, then the entire rock layer was also deposited at the same time.

<b>Cenozoic Era</b>	Quaternary Period	Neptunea  Pecten 
	Tertiary Period	Calyptrophorus  Venericardia 
<b>Mesozoic Era</b>	Cretaceous Period	Scaphites  Inoceramus 
	Jurassic Period	Perisphinctes  Nerinea 
	Triassic Period	Trophites  Monotis 
<b>Paleozoic Era</b>	Permian Period	Leptodus  Parafusulina 
	Pennsylvanian Period	Dictyoclostus  Lophophyllidium 
	Mississippian Period	Cactocrinus  Prolecanites 
	Devonian Period	Mucrospirifer  Palmatolepus 
	Silurian Period	Crystiphyllum  Hexamoceras 
	Ordovician Period	Bathyrus  Tetragraptus 
	Cambrian Period	Paradoxides  Billingsella 
<b>Precambrian</b>	—	

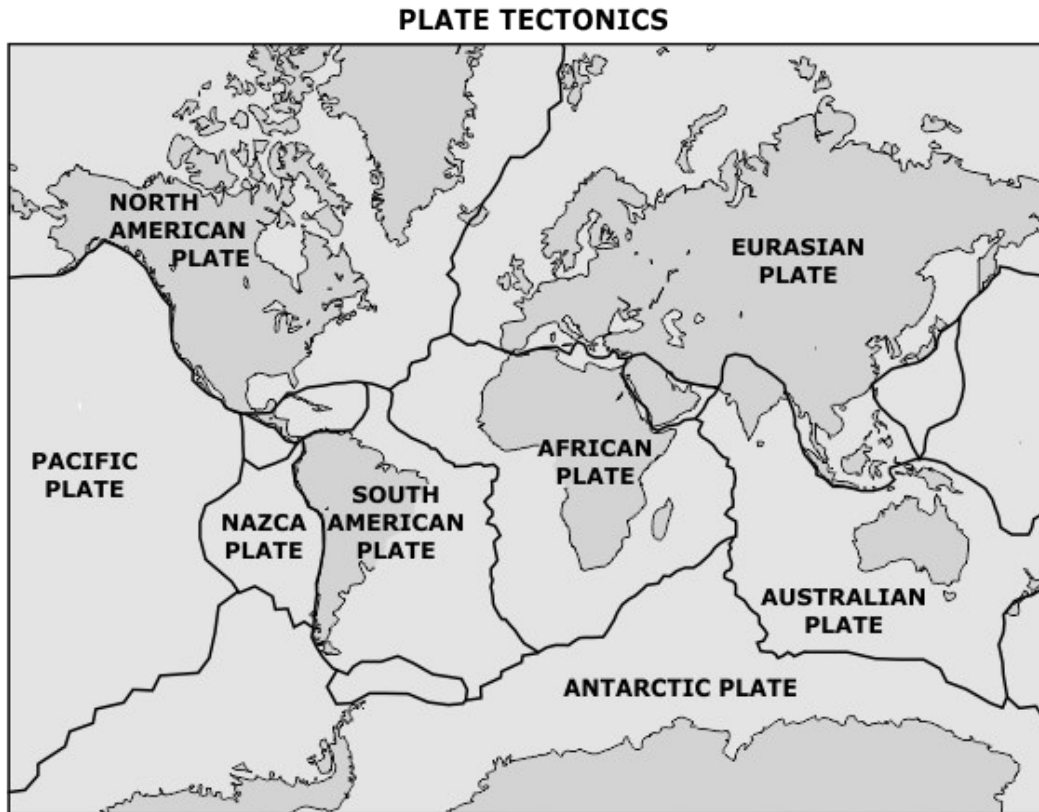
A scientist finds Trophite fossils. According to the chart above, in what era and period was this rock layer deposited?

- A. Cenozoic era; Tertiary period
- B. Mesozoic era; Triassic period
- C. Paleozoic era; Permian period
- D. Paleozoic era; Mississippian period

32. Two layers of sedimentary rock are exposed on the side of a hill. Only one of the layers has fossils. The lack of fossils in one layer of sedimentary rock is MOST likely due to

- A. changing environments.
- B. volcanic activity.
- C. changing rates of erosion.
- D. evaporation of seawater.

33. Which is the **best** example of an index fossil?
- A corals found in rock layers worldwide
  - B. dinosaur bones found only in Australia
  - C. footprints of different types of dinosaurs
  - D. casts of bird feathers found in all layers of rock in an area
34. The diagram below shows the Earth's crustal plates.



Which is true about geologic evolution in reference to plate tectonics?

- A. The plates of Earth have settled and finished moving.
- B. The movement of plates has caused the formation and break-up of continents over time.
- C. The movement of the plates is responsible for all geologic changes that occur on Earth.

35. Which of these provides the BEST evidence that the distribution of Earth's oceans has changed over time?
- A. hot spots on ocean floors
  - B. seismic activity along plate boundaries
  - C. sediment buildup on continental slope
  - D. marine fossils found on land masses
36. Paleontologists have found hundreds of fossils of tropical plants in cool, dry areas of North America. Which is MOST likely indicated by fossil discoveries like these?
- A. Glacial movement carried fossils to different places.
  - B. Some tropical plants can grow in moderate climates.
  - C. The climate in different areas on Earth has changed over time.
  - D. Ancient people carried plants with them as they traveled to new locations.
37. Which environmental condition MOST likely existed at the time a fossil formed?
- A. Organism remains were deposited in an area of open space.
  - B. Organism remains were covered by lava flow.
  - C. Organism remains were buried with little oxygen.
  - D. Organism remains were buried in an area where a lot of erosion occurred.
38. Where is evidence **most often** found to represent a record of Earth's history?
- A. air, lava, and fossils
  - B. water, air, and rocks
  - C. lava, water, and ice cores
  - D. rocks, fossils, and ice cores