

Name: _____ Date: _____

Answer Key: Glimpses into Geologic Giants: 8th Grade Fossil Quiz

Imagine peering through a dusty lens into the Devonian Era as you distinguish between cast fossils and ancient carbon films left by prehistoric life.

1. Which of the following is an example of an index fossil, used by geologists to determine the relative ages of rock layers?

Answer: B) A species that lived for a very short period over a wide area

Index fossils must be geographically widespread and represent organisms that existed for a geologically short timeframe to provide accurate dating.

2. True or False: The Law of Superposition states that in undisturbed sedimentary rock, the oldest layers are found at the bottom.

Answer: A) True

Superposition is a fundamental principle of relative dating where newer sediment is deposited on top of existing, older layers.

3. A fossil consisting of a thin, dark coating of atoms on a rock surface is known as a _____.

Answer: C) Carbon film

Carbon films form when organisms are compressed, leaving behind a thin layer of carbon that outlines their shape.

4. If a geologist finds a fossil of an ancient fern in an area that is currently a frozen tundra, what can they conclude about the area's history?

Answer: B) The area once had a much warmer, tropical climate

Fossils serve as indicators of past environments; ferns typically require warm, moist climates, suggesting the climate has changed over time.

5. True or False: Coprolites, which are fossilized animal droppings, are considered a type of body fossil.

Answer: B) False

Coprolites are trace fossils because they provide evidence of an organism's behavior or diet rather than being part of the organism's physical body.

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6. Which geologic time division is the longest, covering about 88% of Earth's history?

Answer: C) The Precambrian Time

Precambrian time encompasses the vast majority of Earth's history, from the planet's formation until the explosion of complex life.

7. Fossilized tree sap that often traps and preserves ancient insects is called _____.

Answer: C) Amber

Amber is hardened tree resin that can preserve delicate biological structures in incredible detail for millions of years.

8. What occurs when minerals seep into the pores of an organism's remains and turn them into stone?

Answer: A) Permineralization

Permineralization is a specific process where mineral-rich water deposits chemicals into the empty spaces of organic tissue.

9. An empty space in the shape of an organism left in a rock is a mold; a _____ is formed when sediment fills that mold.

Answer: B) Cast

A cast is a 3D replica of an organism created when minerals or sediment harden inside a mold fossil.

10. True or False: Geologists use the Geologic Time Scale to divide Earth's history based on major changes in life forms and geologic events.

Answer: A) True

The divisions of the scale (eras, periods, etc.) are typically marked by significant biological or physical shifts, such as mass extinctions.