

Name: _____ Date: _____

Deep Time, High Stakes: A 5th Grade Fossil Record Quest

Stratigraphy, index fossils, and paleoecology — use these analytical tools as a formative assessment or independent station activity to reconstruct ancient worlds.

1. If a paleontologist finds a layer of rock containing fossilized ferns in the middle of a dry, hot canyon, what is the most likely conclusion about that area's past?

- A. The canyon has always been a hot desert environment.
- B. The area was once a lush, moist forest or swamp.
- C. The rock layer was moved there by modern humans.
- D. The ferns evolved to grow in the sand without water.

2. The Law of Superposition states that in undisturbed rock layers, the _____ layers are found at the very bottom.

- A. Thickest
- B. Newest
- C. Oldest
- D. Softest

3. True or False: Every plant and animal that has ever lived eventually becomes a fossil.

- A. True
- B. False

4. Which of these is considered a 'trace fossil' because it shows evidence of an animal's behavior rather than its body?

- A. A petrified shark tooth
- B. An insect trapped in amber
- C. A fossilized burrow or nest
- D. A replaced piece of skull bone

5. True or False: If you find an 'index fossil' in two different states, it means those rock layers are roughly the same age.

- A. True
- B. False

6. When minerals in groundwater seep into the tiny holes of a piece of wood and turn it into stone, the process is called _____.

- A. Freezing
- B. Petrification
- C. Erosion
- D. Decay

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7. Why are fossils of sea shells often found on the tops of tall mountains like the Himalayas?

- A. Birds carried the shells to the mountain tops.
- B. The mountain tops used to be underwater before tectonic plates shifted.
- C. Ancient people left the shells there as jewelry.
- D. Sea shells can grow in the snow if it is cold enough.

8. Scientists who study fossils to learn about the history of life on Earth are known as ____.

- A. Meteorologists
- B. Paleontologists
- C. Astronomers
- D. Botanists

9. When a leaf is pressed between layers of soft mud and leaves behind a thin dark film of carbon, it forms which type of fossil?

- A. A cast fossil
- B. A molds fossil
- C. A carbon film
- D. An amber fossil

10. True or False: We can use the fossil record to see how the complexity of life has changed over billions of years.

- A. True
- B. False