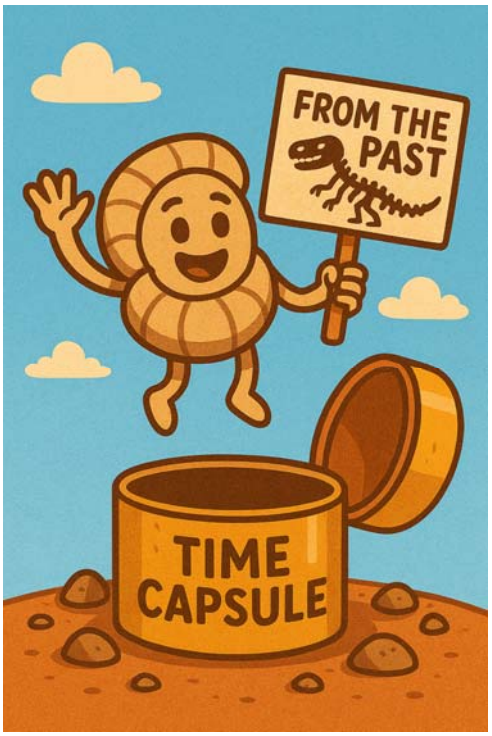
Name _____

How Do Fossils Help Scientists Build the Timeline of Life on Earth?



Fossils are like time capsules from the past. They are the remains or imprints of plants and animals that lived long ago. Most fossils are found in rocks, buried under layers of Earth. They help scientists understand what life on Earth looked like millions of years ago.

When a plant or animal dies, it usually breaks down quickly. But sometimes, it gets buried in mud, sand, or other materials before it decays. Over time, the soft parts disappear, but the hard parts—like bones, shells, or leaves—can leave marks or turn into rock. These are fossils.

Scientists called paleontologists study fossils. They use clues from fossils to learn about extinct creatures—ones that no longer live on Earth. Fossils show what animals looked like, how big they were, and even what they ate. For example, sharp teeth might mean the animal was a meat-eater, while flat teeth might mean it ate plants.

Fossils are also helpful for placing events in order. This is called building a timeline of life. Older fossils are usually found in lower layers of rock, while newer ones are found in higher layers. By studying which fossils appear in which layers, scientists can figure out when different types of plants and animals lived.

Fossils can also show how life has changed. They help scientists see how animals evolved—or changed over time. For example, the fossil of a small horse from millions of years ago looks very different from the large horses we know today. By comparing fossils, scientists can tell how animals adapted to their environment.

Sometimes fossils even show how Earth itself has changed. Shells found in mountain rocks tell us that area was once underwater. Fossils are like puzzle pieces that help us see the big picture of Earth's history.

Thanks to fossils, scientists have discovered that Earth is over 4 billion years old and full of incredible life that has come and gone. Every fossil helps us learn more about the long, amazing story of life on our planet.