

Name: _____

Date: _____

Reading: Fossil Formation

How do fossils form?

The formation of fossils, or fossilization, occurs in a variety of ways depending on the type of organism and where it lives. As you've already seen in the video, often times after an organism dies, the softer tissues that make up the body decay through a process called decomposition. Once the soft tissues decay, only the bones remain, and when calcium in the bone is replaced by other minerals, the bone hardens. As time passes, sediments continue to settle on the hardened bones through sedimentation, eventually preserving them as fossils.



How do we get fossils from soft-bodied (boneless) organisms?

When a dead organism is exposed to the air, it decays quickly, leaving very little soft tissue behind. However, if the organism is buried quickly (like in sediment at the bottom of a pond, lake, or ocean) then the air does not reach the dead organism, and decay is slowed down. This allows more of the soft tissue to be buried and preserved by the minerals in the sediment. Thus, we still sometimes find fossils from boneless organisms (such as jellyfish, octopus, and sea plants) preserved in the rock layers of Earth's upper crust near the surface.



Where are fossils from soft-bodied organisms commonly found?

Fossils of soft-bodied organisms form in places where they can be buried quickly, such as in soft mud on the land or the soft floor of a pond, lake, or ocean. Limestone is one type of rock that forms as layers of soft sediments and the remains of dead organisms mix together. Therefore, fossils, especially fossils from sea organisms, are commonly found in limestone. In fact, limestone is sometimes used as an indicator of an ancient sea floor that may no longer exist.

What's the difference between rocks and fossils?

Though both rocks and fossils may feel hard to the touch and appear similar, they are not the same. Rocks are formed from minerals during a variety of natural processes occurring beneath the Earth's surface. The minerals making up rocks are generally inorganic, meaning they do not come from living organisms.



Fossils come from living organisms, and therefore contain significant amounts of elements such as carbon, hydrogen, oxygen, and nitrogen--elements not always found together in rock. Since fossils and rocks are made of different materials, they have different properties and behave differently when exposed to the environment.

Did you know?

Scientists who study fossils, paleontologists, say that sometimes the quickest way to know if what you have found is a fossil or a rock, is to lick it! If the object sticks to your tongue slightly then it is likely a fossil. This is because many of the minerals in fossils form salts that become slightly sticky when wet. If it doesn't stick to your tongue, then you just licked the dust off of a rock.