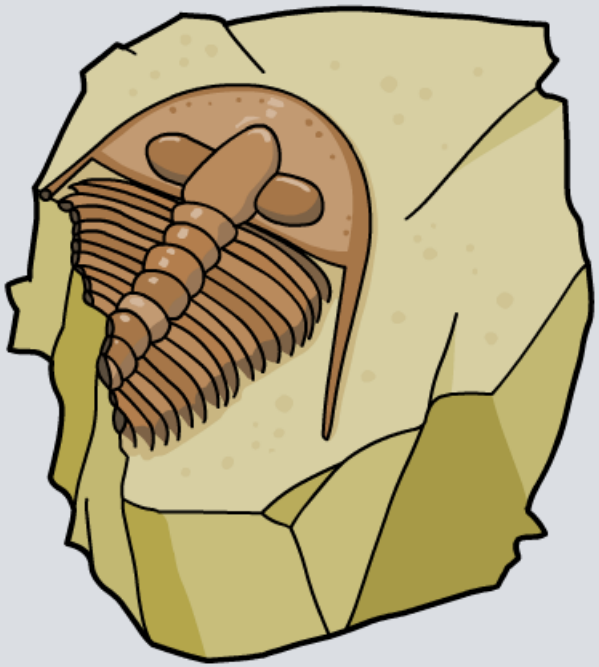
Fossil Record



Looking back in time

The rocks at the top of the Grand Canyon, Arizona, are 250 million years old. Those at the bottom are 2 billion years old.

Why did the rocks form in layers?

Why do so many people want a closer look at them?

What are fossils?

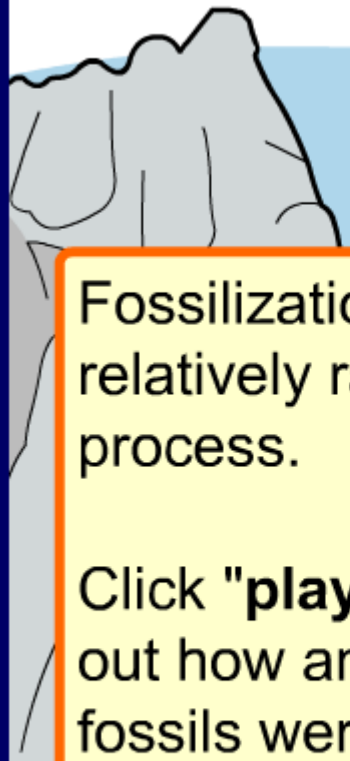
The rocks are formed from sediments and many contain **fossils**.

Fossils are the preserved remains, impressions or traces of animals, plants and other organisms that lived millions of years ago.

Some fossils contain the mineralized remains of the organism. In other cases, the remains have been completely dissolved and what is left is an impression, which may later fill with minerals to produce a cast of the organism.

Fossilization

How were animal fossils formed?

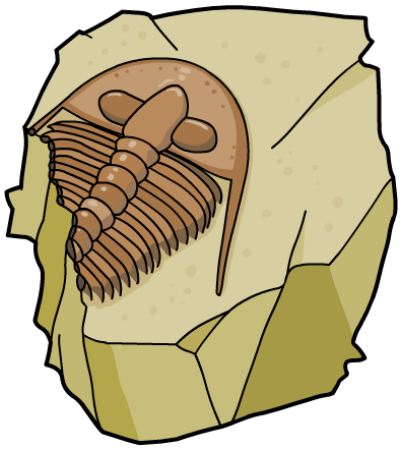


Fossilization is a relatively rare process.

Click "**play**" to find out how animal fossils were formed.

A rare event

Fossilization is a rare event. Different types of fossil form under different conditions and environments.



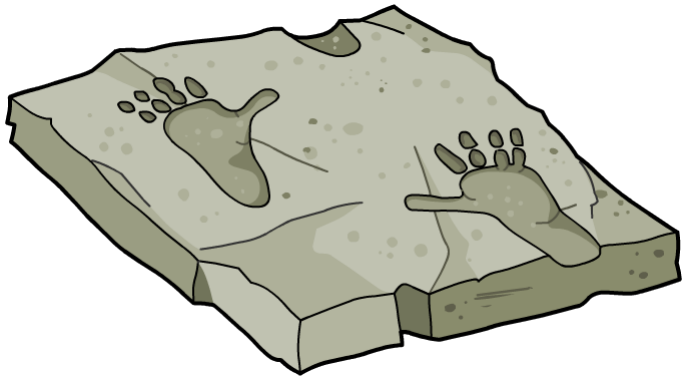
mud

amber

ice and frozen soil

Fossilized remains only form in the absence of microbes, which need food, oxygen, water and warmth.

What type of fossil forms whether there are microbes present or not?



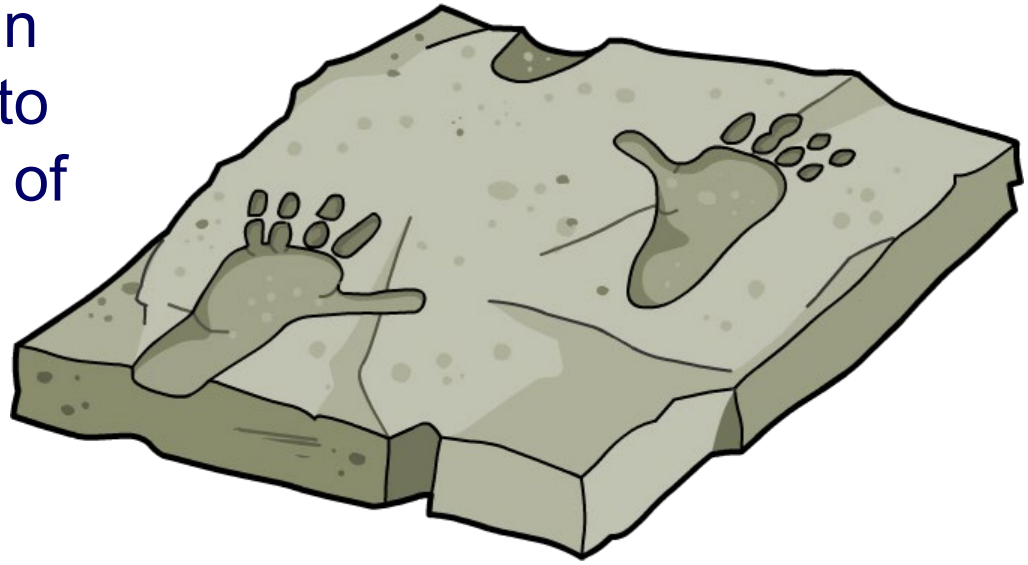
ash/mud

Layers of evidence

What does the fossil record show?

The history of life on Earth as shown by fossils is called the **fossil record**.

Although there are gaps in the fossil record, it helps to tell the evolutionary story of past and present-day organisms. It can show how the changes in an organism were linked to changes in its habitat.



The fossil record can also show how different species evolved from common ancestors.

Gradual changes in fossil records

How did the horse evolve?

Click a date in the timeline to find out how gradual changes in the fossil record show the evolution of the modern horse.





55 million years ago | 40 million years ago | 17 million years ago | 12 million years ago | 4 million years ago | summary