

FOSSILS AND WHAT THEY TELL US

Fossils are the remains of ancient animals and plants (or their tracks and traces) that have been preserved in stone. Typically, only the hard parts like bones and shells are all that now remain. The soft parts usually rot away with the passing of time. Only in very rare and very special conditions do we get a glimpse of what the soft parts were once like. We never get to see the colour of the animal or plant when it has been fossilised.

Many fossils that we find in the rocks are from animals that no longer can be found alive on Earth, like dinosaurs and trilobites. These animals died out many millions of years ago and long before man ever walked on the Earth.

The bits and pieces that are preserved **HOWEVER** give us clues about what the animal was like and how it once lived. We compare the bones and shells to creatures that are still alive today. Their shapes and structures are often specialised for the environment in which they live, for example creatures that live in the dark may have no eyes, or creatures that swim in the seas are often very smooth and streamlined. Fossil shells and bones may have the same shapes and structures and so we can be pretty sure that they lived in a similar way and in a similar environment.

Below are two fossils of animals that are extinct. How do you think that they lived? What do you think that they ate?



Fossils tend to be found in rocks like clay, sandstone or limestone. These rocks were once wet mud on a seabed, by a river or in a lake or pool, loose wet sand on a beach or seabed around a river or limy shell sand on a warm coral sea bed. Usually the animal or plant dies, sinks to the seabed or riverbed and gets covered by mud or sand that washes over them. As they lie buried in this wet sediment, the shell or bone gets slowly replaced by minerals washing through the ground in the groundwater. Millions of years later we break open the rocks and find the fossilised remains of the animal or plant.