

How fossils are formed

Outstanding Science Year 3 - Rocks - OS3C004

National Curriculum Statutory Requirements

3C2 - describe in simple terms how fossils are formed when things that have lived are trapped within rock

Learning Objective



I can explain how fossils are formed.



Me:   

Teacher:   

Fossils

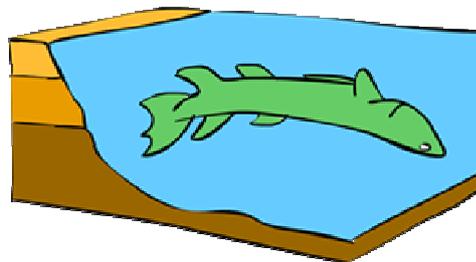
Fossils are the remains of **organisms** that lived millions of years ago. Fossils are formed when an organism dies and is covered by **sediment**. Over millions of years, the shape of the organism is preserved in the rock.



Fossils are important to **palaeontologists** because they give us clues about organisms that lived millions of years ago, many of which are now **extinct**.

How fossils are formed

1. The organism dies.
2. The organism is covered with layers of sediment. This needs to happen soon after the organism's death or no fossil will be formed.
3. Over millions of years, the sediment is compressed and forms new layers of sedimentary rock. The shape of the organism creates a shape in the rock. The organism might decay completely, leaving a hole or mould.
4. The rock is broken either naturally or deliberately, and the fossil is discovered.



Glossary

Organism (noun)

A living thing, such as an animal or a plant.

Sediment (noun)

Loose materials that settle and form new layers of rock.

Palaeontologist (noun)

A scientist who studies the ancient past. When you go to university you can learn how to become a palaeontologist.

Extinct (adjective)

Has no living examples - there are none of them left alive.

Activity

Carefully cut out the pictures and descriptions. Place them in the right order to create an explanation text showing how fossils are formed. For an extra challenge, draw some of your own pictures and write some of your own descriptions.

How fossils are formed

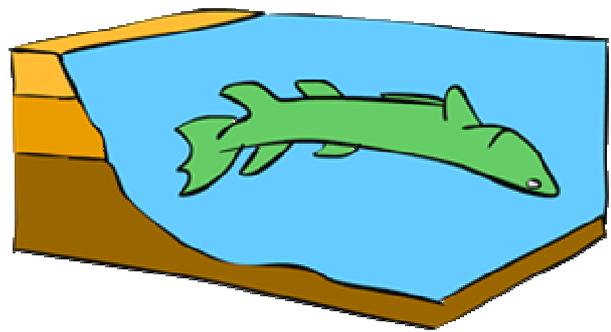
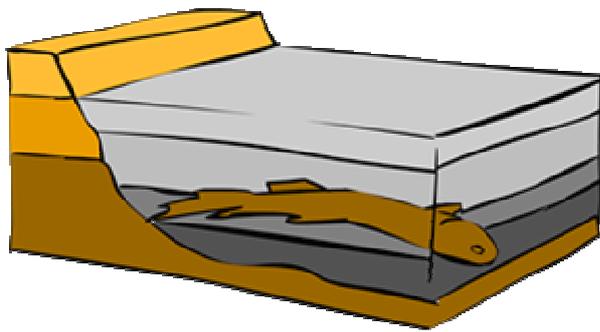
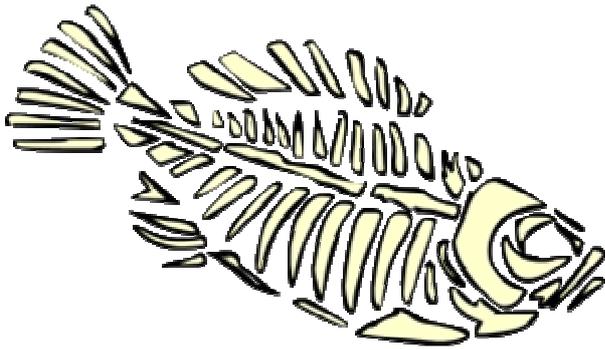
1

2

3

4





The rock containing the fossil is exposed, either naturally or deliberately. This might be caused by erosion (rain, wind or sea wearing away the rock). The fossils are used by humans to help them find out about animals that lived millions of years ago.

The organism is buried by layers of loose material, called sediment. This needs to happen soon after the organism's death or a fossil will not be formed. This process is rare, and only a small fraction of dead organisms end up as fossils.

The organism (animal or plant) dies. If it is on land, it falls to the ground. If it is in the sea, it falls through the water and lands on the sea bed.

Over millions of years, the sediment is gradually compressed (squashed) by layers of material that form above it. It forms new rock, called sedimentary rock. The shape of the animal is preserved inside the rock. Sometimes all of the animal material is lost, leaving an empty mould-like shape. Sometimes the empty shape is filled with other solid material.