

**What should I already know?**

Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties  
 Describe in simple terms how fossils are formed when things that have lived are trapped within rock  
 Recognise that soils are made from rocks and organic matter

**Enquiry Question**

How have fossils changed over time and does this provide evidence for evolution?

**Vocabulary**

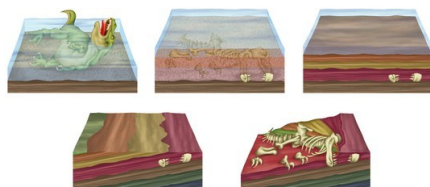
Fossil	the imprint in a rock of a living thing that lived a long time ago
Rocks	a natural material found on or underneath the Earth's crust
Decompose	a process of a material breaking down
Skeleton	a framework of bones
Evolution	the process where descendants develop different characteristics to their ancestors, creating new species
palaeontologist	a scientist who studies fossils
Charles Darwin	an English naturalist and biologist who proposed a theory of how new species came to exist

**Fossil Formation**

Fossils are the imprint in a rock of an organism that lived a long time ago. We have found fossils of animal's remains that are now extinct and proof that they walked the earth. Some fossils are formed from the imprint of softer parts of living things, such as the leaves of plants.

Fossils are formed during fossilisation.

1. First, an organism dies in a watery environment.
2. Sediment covers the organism.
3. The soft parts decompose, leaving a skeleton.
4. The hard parts are buried by layers of sediment.
5. Over time, the sediment compacts and turns into rock.
6. Water enters the rock.
7. The skeleton is replaced by minerals found in the water.
8. The layers of rock erode, exposing the fossil.



Scientists can work out if an organism shares any common ancestors. Charles Darwin proposed a theory that modern day organisms share common ancestors. In the 'Theory of Evolution' he suggested that plants and animals change their characteristics over a long period of time so they can adapt to their environment.



A Sarcosuchus is an ancestor of the crocodile. Sarcosuchus was a giant, ancient reptile that looked like a crocodile and was the "emperor of crocodiles".

**Mary Anning**

Mary Anning was a pioneering English fossil hunter. She lived in Lyme Regis, an area of England is often called the Jurassic coast as the cliffs here contain lots of fossils from the Jurassic period. In 1810, she found many dinosaur fossils such as *ichthyosaurus* (fish lizard).

Mary Anning was the first person to discovered the fossilised remains of a *Plesiosaurus* (meaning close-to-lizard).

