



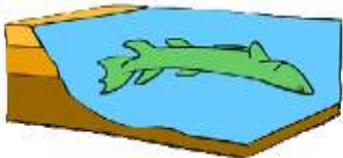
# Rocks and Soils Year 3

## What I need to know

- Rock is a naturally occurring, solid material and different types of rocks have different properties. The three types of rock are igneous, sedimentary and metamorphic.
- Rocks can be hard or soft. They can have different sized grains or crystals. They may be able to absorb water. They can be different shapes and sizes. For example, stones, pebbles or boulders.
- Soils are made up of pieces of ground down rock which are often mixed with plant and animal material (organic matter). The type of rock, size of rock pieces and the amount of matter affect what the soil is like.
- Some rocks contain fossils, which were formed millions of years ago. Fossils are the remains of organisms that lived millions of years ago.

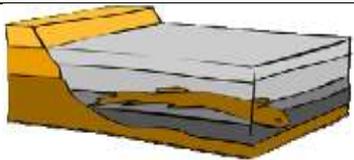
Sometimes the empty space is filled with other material

## How fossils are formed.



1. The organism (plant or animal) 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 seabed.

2. The organism is buried by layers of loose material called sediment. This needs to happen soon after the organism dies otherwise a fossil will not be formed. The formation of fossils is very rare.



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

4. Over a long period of time, the rock containing the fossil is exposed. 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.

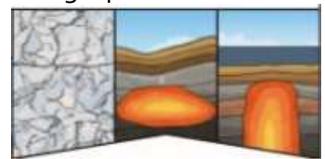


# Rocks and Soils Year 3

## Key Vocabulary

<b>Fossil</b>	The remains of organisms that lived millions of years ago.
<b>Layers</b>	A thin piece of something that is stacked on other thin pieces.
<b>Rock</b>	A naturally occurring solid material.
<b>Pebble</b>	A small, smooth, rounded rock.
<b>Boulder</b>	A large, often smooth, rock.
<b>Permeable</b>	Something that lets water or liquid pass through it.
<b>Impermeable</b>	Something that does not allow water or liquid to pass through it.
<b>Texture</b>	How something feels when you touch it. E.g. smooth, rough, hard, soft.

## Three types of naturally occurring rock

<p>Igneous rock – formed from magma below the earth's crust.</p> 	<p>Sedimentary rock – formed when small, weathered fragments of rock settle and stick together in layers.</p> 	<p>Metamorphic rock – formed when rock gets changed through heat or being squashed.</p> 
 <p>Granite and basalt.</p>	 <p>Limestone and sandstone.</p>	 <p>Marble and slate</p>

## Types of soil.

<p>Sandy soil – pale with large particles. Water drains easily so feels dry.</p> 	<p>Clay soil – sticky with small particles. Water does not drain easily.</p> 	<p>Loam soil – some water and some air in it and better for growing plants.</p> 
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