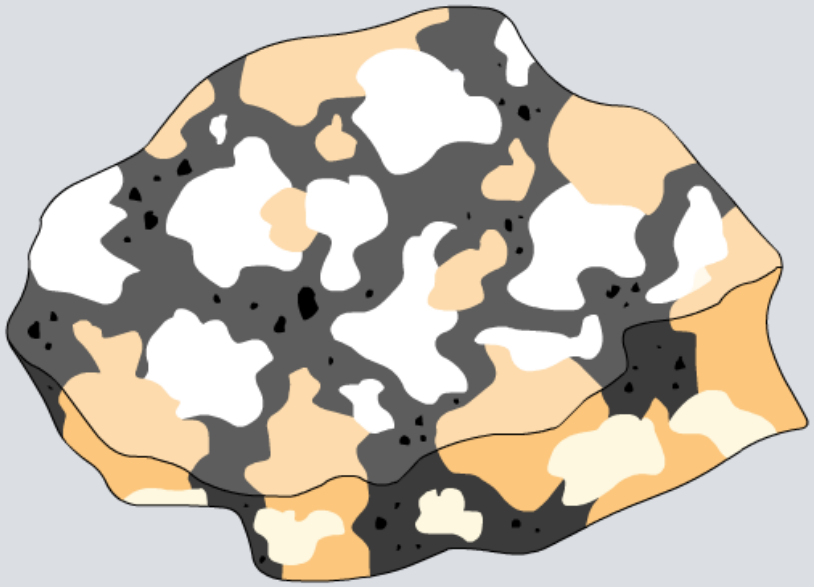
The Rock Cycle



Different types of rock

There are many different types of rocks in the world.











Identifying rocks

Which tests can be done to identify these rocks?

How can a magnifying glass, a nail and a beaker of water be used to identify which type of rock each sample is?

Click on a rock to find out.

sandstone

granite

marble

limestone

basalt

slate

Identifying rocks: summary

type	examples	description
sedimentary	sandstone and limestone	the softest rock type, containing layers and sometimes fossils
metamorphic	marble and slate	usually harder than sedimentary rocks, containing thin layers and twisted fossils
igneous	basalt and granite	usually the hardest rock type, containing shiny crystals

Different rocks = different uses

Match the rock to its description and use

limestone	rough surface	nail files
chalk	very soft	floors
granite	very hard and shiny	roof tiles
slate	soft and easily shaped	stone columns
marble	strong and shiny	statues
pumice	makes thin sheets	for writing

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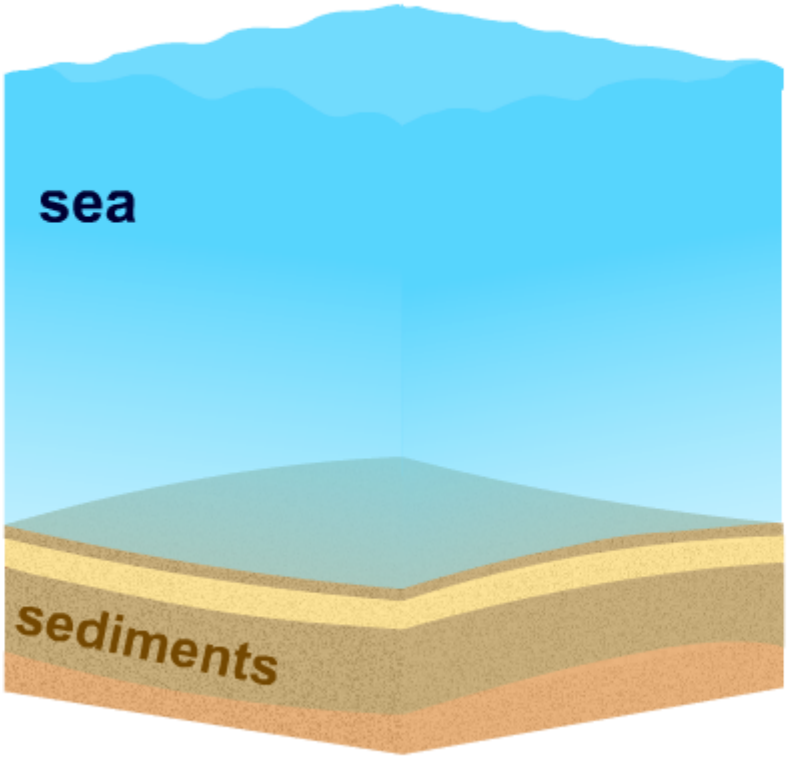
Formation of sedimentary rocks

How are sedimentary rocks formed?

Sedimentary rock is formed from multiple layers of solid particles and dissolved minerals over thousands of years.

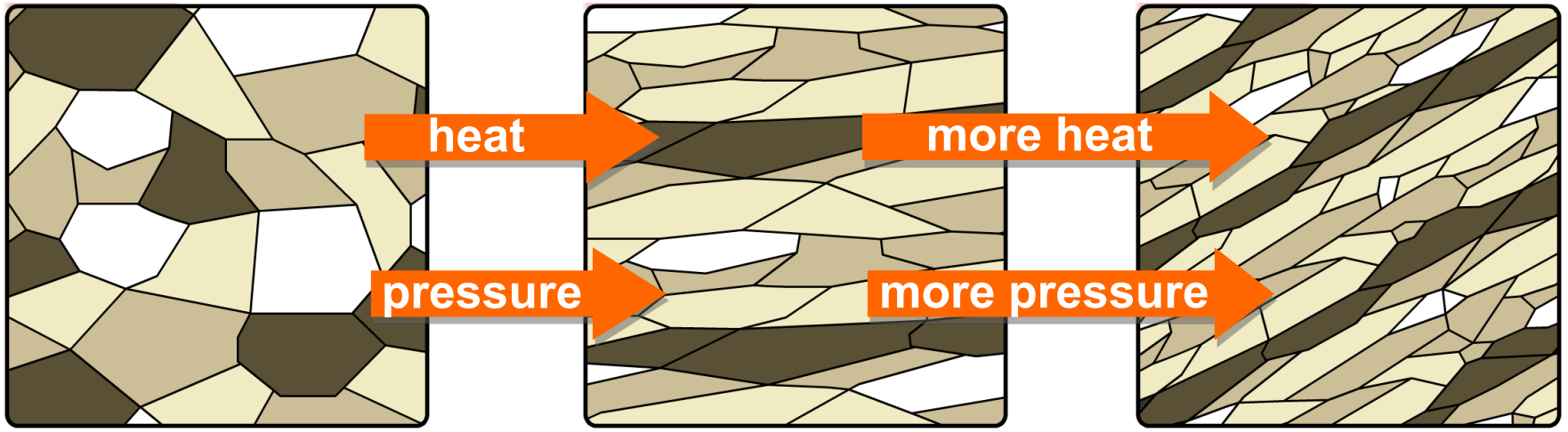
Click "**play**" to find out more.



Formation of metamorphic rocks

Sedimentary rocks are turned into metamorphic rocks by the extreme pressures and temperatures deep within the Earth.

These conditions change the structure of the rocks so that new layers are formed.



Mixture of grains in structure

Heat and pressure compress grains

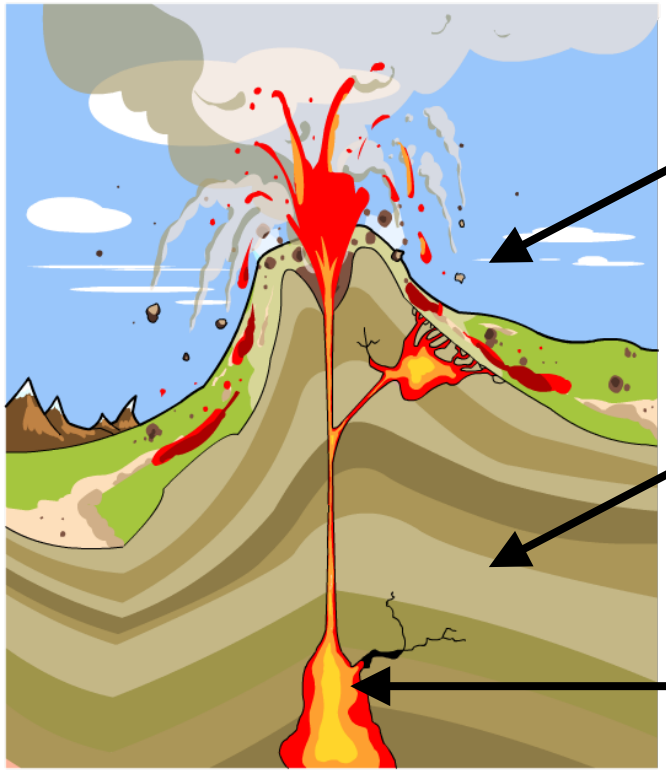
Grains form orderly layers

Formation of igneous rock

Magma is a type of molten rock found deep underground. Occasionally magma rises up through the Earth's surface, causing volcanic eruptions.

Igneous rocks are formed when the magma cools and solidifies.

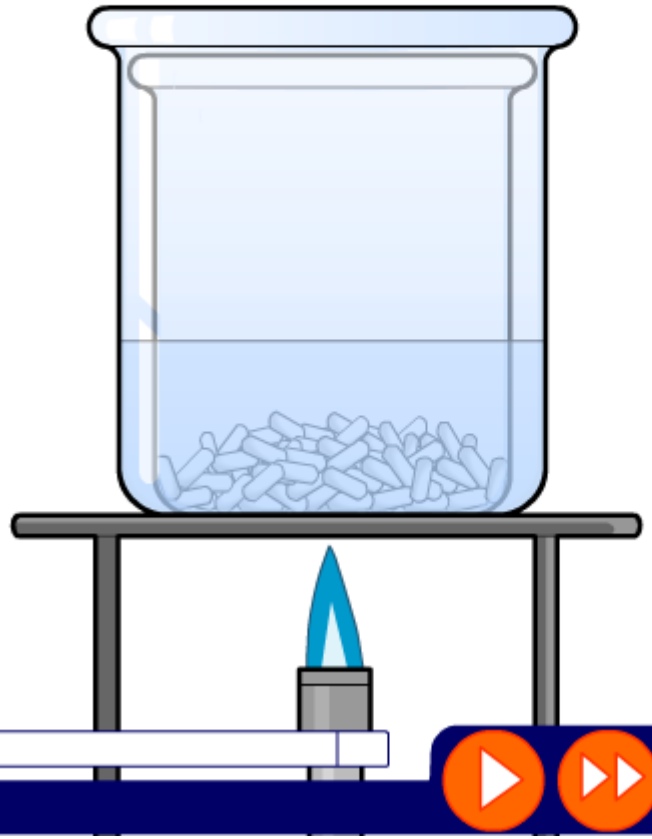
- When magma cools **above the surface**, **extrusive** igneous rocks are formed.
- When magma cools **below the surface**, **intrusive** igneous rocks are formed.



Crystal size in igneous rocks

Are the size of the crystals found in igneous rocks determined by the rate at which the magma cools and solidifies?

Click "**play**" to find out.

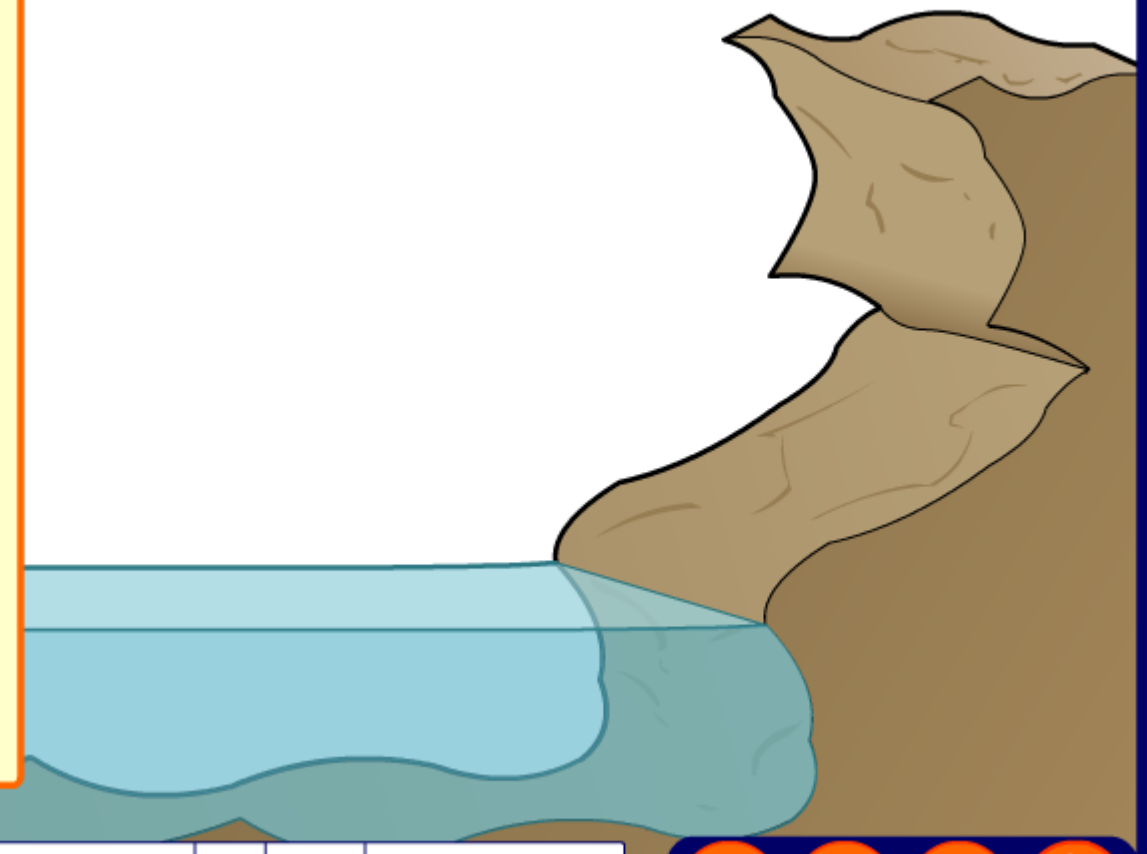


The rock cycle

What happens during the rock cycle?

The **rock cycle** is the series of natural events that cause a rock to change form over time, from **igneous** to **sedimentary** to **metamorphic**.

Click "**play**" to find out more.



The rock cycle: in words

What is the correct label for each structure?

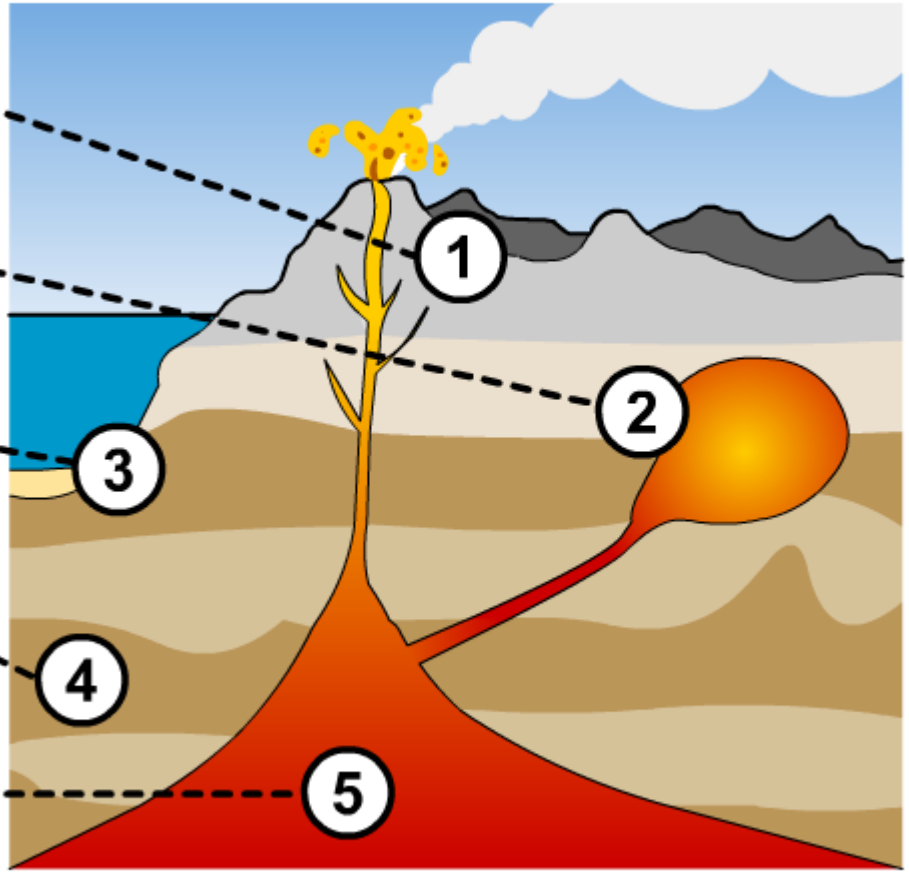
1 ▼

2 ▼

3 ▼

4 ▲

5 ▲



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The rock cycle: summary

Complete these sentences about the rock cycle

1. When molten magma _____ on or close to the surface of the Earth, _____ rocks are formed.

2. Rocks on the Earth's surface are broken down by _____ that involves _____, chemical and biological processes.

3a. The fragments of rock are _____ to the

metamorphic	igneous	magma	physical
solidifies	weathering	transported	sedimentary

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From weathering to sedimentation