

**Ambitious Vocabulary**

Magma, Igneous, Metamorphic and sedimentary

**[Ceramics](https://senecalearning.com/en-GB/revision-notes/ks3/science/national-curriculum/2-5-6-the-rock-cycle%22%20%5Cl%20%22the-rock-cycle-making-igneous-rocks)**

Ceramics are materials which are hard and durable. They are made by baking a starting material in a very hot oven called a kiln. The temperature of kilns is adjustable for firing different clays and can reach temperatures of over 1300 °C. The starting materials are soft and malleable, meaning they can be shaped. Clay is an example of a starting material. These soft materials are shaped and then heated to make harder materials which we call ceramics. These new hard ceramic materials have a fixed shape and cannot be bent.

**[Making igneous rocks](https://senecalearning.com/en-GB/revision-notes/ks3/science/national-curriculum/2-5-6-the-rock-cycle%22%20%5Cl%20%22the-rock-cycle-making-igneous-rocks)**

Sedimentary or metamorphic rocks are heated by the Earth’s core until they melt. We call this liquid rock magma and it can be found in the mantle. When this liquid rock cools, it forms igneous rock. This can happen on the Earth’s surface after a volcanic eruption pushes the magma out.

**Making metamorphic rocks**

Sedimentary rocks are layered on top of each other.Under intense heat and pressure these sedimentary rocks form metamorphic rocks.

**Making sedimentary rock**

Rocks that are exposed to the atmosphere are worn away into smaller pieces.Weathered rock is then eroded or moved by rivers, wind or ice.These smaller pieces of rock are then transported and deposited into the ocean. Sedimentary rock is formed on the sea bed.

**The rock cycle**

There are lots of changes to rocks inside the Earth and on its surface.

These changes lead to the three main types of rock.

Sedimentary.

Igneous.

Metamorphic.

**Weathering**

1. Physical (temperature change; freeze-thaw).

2. Chemical (when rain falls on rocks; acids in the rain reacts with substances in the rock).

 3. Biological (plants and animals break up rocks.

**Earth Structure**

The Earth is almost a sphere. These are its main layers, starting with the outermost:

• crust (relatively thin and rocky); made of minerals such as oxygen, silicon, aluminium, iron, calcium and sodium.

• mantle (made of solid rock, but can flow very slowly)

• core (made from nickel and iron). The outer core is liquid and the inner core is solid.

**Key Vocabulary**

**Rock cycle**

Processes that lead a rock changing from one type to another

**Weathering**

The wearing down of a rock by physical, chemical or biological processes

**Erosion**

Weathering of rick and its movement by water, ice and wind

**Sedimentary rocks**

These rocks are formed from layers of sediment. These rocks can contains fossils

**Igneous rocks**

These rocks are formed from cooled magma, with the minerals arranged in crystals

**Metamorphic rocks**

These rocks are made from existing rocks that are heated and withstand high pressure over long periods of time

**Y7 Earth Structure**

**Science**