The Knowledge

Supporting the National Curriculum

Knowing More **Remembering More** **Learning More**

Rocks

ARDLEIGH GREEN
JUNIOR SCHOOL

Year 3
Science

Key facts

Types of Rock:

There are **three** main types of rock in the Earth's crust. These are **sedimentary**, **igneous** and **metamorphic**.

Sedimentary rocks are made from **layers of mud and sand**, called sediment, that have settled in water and have been squashed over a long time to form rock.

Igneous rocks are made from **cooled magma or lava**.

Metamorphic rocks are formed when existing rocks **are changed by heat and pressure.**

Sedimentary rocks	Igneous rocks	Metamorphic rocks
 sandstone	 granite	 marble
 limestone	 obsidian	 slate

Uses of rocks:

The **appearance** and **properties** of rocks affect how they are used.

Chalk: a **sedimentary** rock, is **soft** and can be **easily eroded**. This makes chalk suitable for writing and drawing on blackboards.

Granite: an **igneous** rock, is very **hard** and **impermeable**. Granite is used for making kitchen work surfaces.

Marble: is a **metamorphic** rock. It is easy to carve and is **not easily eroded**, making it suitable for sculptures.

Key People

Mary Anning (1799–1847) was an **English fossil collector**. She lived in Lyme Regis in Dorset, in an area now known as the Jurassic Coast. Mary had little formal education but was **taught fossil hunting by her father**. She made many important fossil discoveries during her lifetime, including an Ichthyosaur fossil in 1811 and a fossilised Plesiosaur in 1823.

fossilised Plesiosaur skeleton

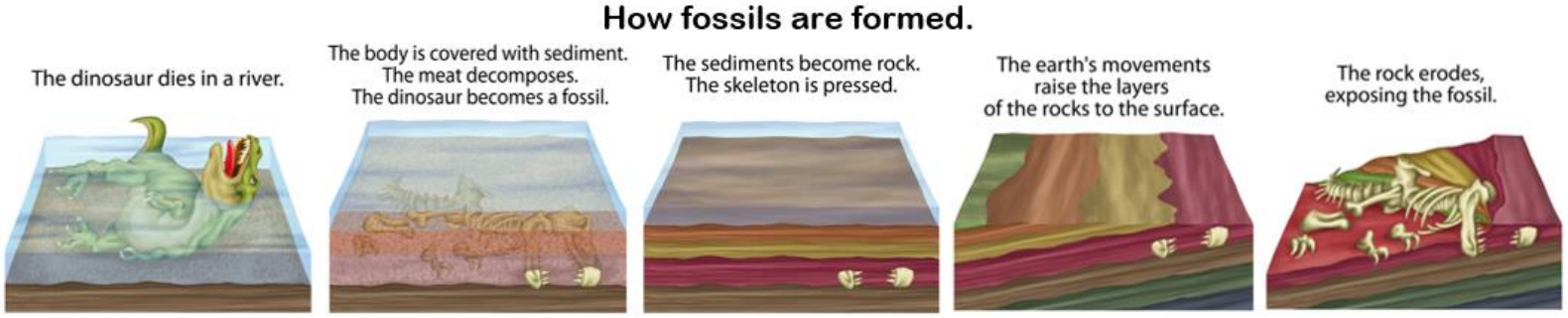
•A **geologist** is a scientist who specializes in **the study of the earth**. Geologists analyse the **materials** that make up the earth, the **structure** of the earth, and the **processes** going on under and above the **surface** of the earth. Geology is also concerned with the **history** of the earth, how the materials, structures, processes and the organisms have **changed over time.**

Key Vocabulary

Rock: mineral matter
Soils: the material that covers the Earth's crust (made up of air, organic matter, water and minerals)
Organic matter: dead and decaying plants and animals
Hard: solid and firm
Soft: can be changed
Texture: the visual and tactile quality of a surface
Absorb: to soak up
Fossils: the remains, or traces, of once-living things preserved as rock
Impermeable: not allowing water is pass through. Also described as waterproof

Fossils:

Fossils are the **remains**, or traces, of once-living things **preserved** as rock. Fossils are only found in **sedimentary** rock and the conditions must be just right for them to develop.



Soils:

Soil is the material that covers the **Earth's crust**. It is made from:

AIR – Oxygen, carbon dioxide, nitrogen
ORGANIC MATTER – Living and dead plants and animals.
WATER – Air and water fill the gaps between particles of soil.
MINERALS – Broken down rock.
There are three main types of soil. These are **sandy, silty** and **clay**.

Test Yourself

What are the three different types of rock?

What are rocks used for?

How could you describe the different properties of rock?

How are fossils made?

What is soil?

What is soil used for?

What might happen to rocks over time?

What is the name of someone who studies the earth?