

By the end of the unit, pupils will be able to answer...

- What different tests can we use to learn more about rocks?
- Why are different types of rocks used for different purposes?
- How are fossils useful in telling us about the past?

Vocabulary	Definition
geologist	someone who studies rocks
igneous	a type of rock that is formed by the cooling and hardening of lava or magma
lava	liquid rock that flows outside a volcano
magma	liquid rock inside a volcano
metamorphic	a type of rock that is formed through extreme heat or pressure
palaeontologist	someone who studies fossils
preservation	the process of something being kept the same
pressure	the force produced when something is pressed upon with great mass
sediment	tiny pieces of rocks and bones
sedimentary	a type of rock that is formed when sediment is pressed together over millions of years

Types of Rocks

Igneous Rocks

Formation
Through solidification of magma or lava

Characteristics
No layers; Hardest of all

Types

Intrusive
(Slow cooling of magma)

Granite Diorite

Gabbro

Extrusive
(Rapid cooling of lava)

Pumice Obsidian

Basalt

Sedimentary Rocks

Formation
Through compaction of sediments

Characteristics
Distinctly layered; Easy to crumble

Types

Clastic
(Compaction of broken rocks)

Sandstone Conglomerate

Chemical
(Compaction of dissolved minerals)

Iron ore Rock salt

Organic
(Compaction of organic materials)

Coal Limestone

Metamorphic Rocks

Formation
Through transformation of older rocks

Characteristics
May or may not have layers; relatively harder

Types

Foliated
(Distinguished by layers)

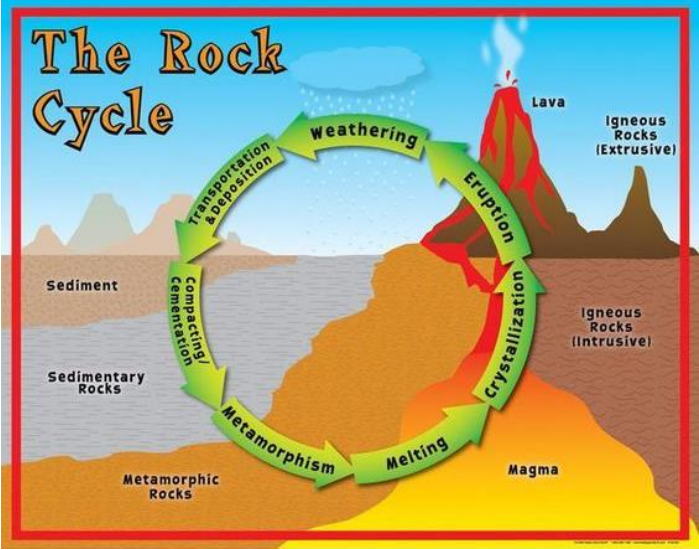
Slate Gneiss

Phyllite

Non-foliated
(No distinguishable layers)

Marble Quartzite

Hornfels



	A living animal. Now extinct - belemnite lived in the sea during the Jurassic period 150 - 200 million years ago).
	The animal dies and its body sinks to the sea floor. Other animals and bacteria feast upon its body.
	Only the bones of the animal are left behind.
	Mud and other minerals wash over the skeleton (e.g. during a storm or waves) and build up a layer over the bones.
	Over hundreds, thousands and millions of years more and more layers of sediment build up burying the skeleton deeper. The layers eventually form sedimentary rocks.
	The resistant minerals from the skeleton, such as calcite, are left behind in the rocks showing a 'print' of the living thing.

Investigate!

- Devise own tests for investigating the different types of rocks
 - Use secondary sources to discover how different rocks are formed
 - Rank different rocks for a range of purposes
- Come up with clear and concise explanations of how fossils are made
 - Research what geologists and palaeontologists are discovering and studying in modern times