

Enquiry Question: How are rocks made?

Why this/why now?

Linked with work in history. Rocks were a very important part of the lives of Paleolithic humans. They provided them with their homes and for all Stone Age humans, their tools.

How does this link to the National Curriculum?

Year 3 Programme of Study – Rocks and working scientifically exploring rocks in experiments.

We will be scientists by:

- comparing and grouping together different kinds of rocks on the basis of their appearance and simple physical properties.
- describing in simple terms how fossils are formed when things that have lived are trapped within rock
- recognising that soils are made from rocks and organic matter

Are there any trips and/or links to Leicester?

We will be visiting Poole's Cavern and looking at some of the geological features that we will be talking about in our lessons. Leicester New Walk Museum have fantastic geology and fossil galleries

How will this unit of work be assessed?

Through investigations and observations during practical work and Plicker assessments.

How will the learning journey be evidenced?

In floor books, through writing, diagrams, tables and photographs of practical investigations.

### Autumn Term 1



### Character Muscles



Problem-solving  
Questioning  
Self-control

### Things my family can ask me:

What is sedimentary rock?  
Can you explain how fossils are formed?  
Can you give an example of a trace fossil?  
What is soil made up of?  
What type of rock does not let liquid pass through it?

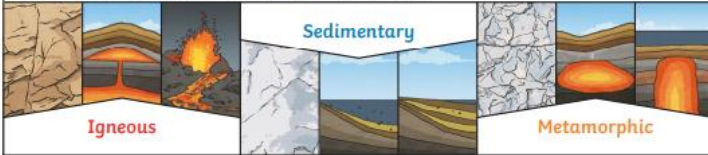
### Links to other subjects

History – Stone Age

# The Knowledge (these are the key bits of information!)

## Key Knowledge

There are three types of naturally occurring rock.



### Natural Rocks

Igneous	Sedimentary	Metamorphic
Obsidian	Chalk	Marble
Granite	Sandstone	Quartzite
Basalt	Limestone	Slate

**Soil**

Soil is the uppermost layer of the Earth. It is a mixture of different things:

- minerals (the minerals in soil come from finely broken-down rock);
- air;
- water;
- organic matter (including living and dead plants and animals).

Caves are formed when water **permeates** through the bedrock and **erodes** some of the rock away. Over thousands of years these caves can become very large.



## Key Vocabulary

<b>investigate</b>	to study by close examination or questioning
igneous rock	Rock that has formed from magma or lava
sedimentary rock	Rock that has been formed from layers of sediment that has been pressed together with a lot of force.
metamorphic rock	Rock that was igneous or sedimentary that has changed because it was exposed to extreme heat or pressure.
magma	Melted (molten) rock that is underground.
lava	Melted (molten) rock that has come out of the ground.
sediment	A natural solid that is moved around by wind or water,
permeable	allows liquid to pass through it
impermeable	Does not allow liquid to pass through it
fossilisation	how fossils are made
paleontology	the study of fossils
erosion	When wind, water or ice wears away land.

### Fossilisation

An animal dies. It gets covered with <b>sediments</b> which eventually become rock.	More layers of rock cover it. Only hard parts of the creature remain, e.g. bones, shells and teeth.	Over thousands of years, <b>sediment</b> might enter the mould to make a <b>cast fossil</b> . Bones may change to mineral but will stay the same shape.	Changes in sea level take place over a long period.	As <b>erosion</b> and weathering take place, eventually the fossil becomes exposed.

Further Research: BBC Bitesize  
<https://www.bbc.co.uk/bitesize/topics/z9bbkqt>