







Rocks and Soils - Knowledge


There are 3 types of Rock...

 <p>Igneous rock</p> <p>Formed by molten magma or lava cooling down and solidifying.</p> <p>Contain crystals.</p>	 <p>Sedimentary rock</p> <p>Buried under the sea and compressed and compacted.</p> <p>Softer than igneous or metamorphic rocks.</p> <p>Have grains.</p> <p>Contain fossils.</p>	 <p>Metamorphic rock</p> <p>Igneous or Sedimentary rocks changed by heat or pressure.</p> <p>Can have crystals.</p> <p>Very hard.</p> <p>Have layers.</p>
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A fossil is the preserved remains or traces of a dead organism. The process by which a fossil is formed is called fossilisation.



Focus Scientist

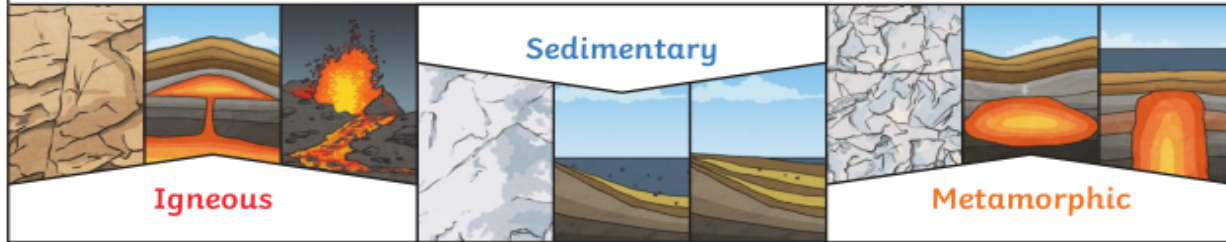


Graham Carter is an Engineering Geologist who tests soils for land contamination and for building regulations. He assesses the risks of building in certain areas.


Graham Carter

Key Knowledge

There are three types of naturally occurring rock.



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.



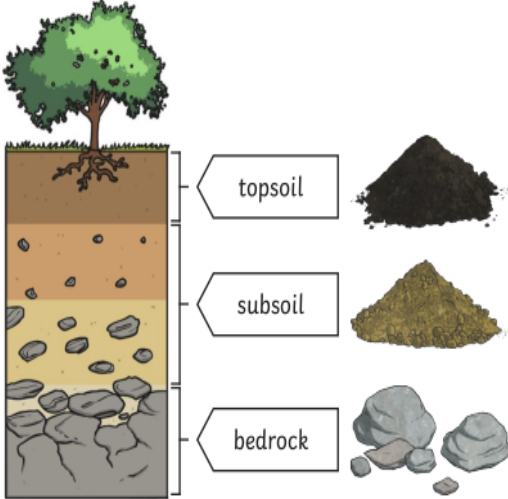
Natural Rocks			Human-Made Rocks
Igneous	Sedimentary	Metamorphic	
Obsidian	Chalk	Marble	Brick
			
Granite	Sandstone	Quartzite	Concrete
			
Basalt	Limestone	Slate	Coade Stone
			

Key Knowledge

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).



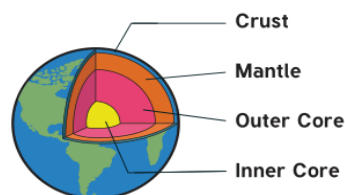


Rocks and Soils – Working Scientifically and Key Vocabulary

National Curriculum

- carrying out simple practical investigations which include scientific skills of observation, measurement and prediction.
- using straightforward scientific evidence to answer questions or to support their findings.
- recording findings using simple scientific language, labelled diagrams and tables
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.

Labelled Diagram



Results Table

Type of rock	Permeable	Hard or Soft
Limestone		
Sandstone		
Granite		
Marble		

Key Vocabulary

decay	To rot or decompose.
erosion	When water, wind or ice wears away land.
fossil	The preserved remains of a dead organism.
fossilisation.	The process by which fossils are made
igneous rock	Rock that has been formed from magma or lava.
impermeable	Does not allow liquids to pass through it.
lava	Molten rock that comes out of the ground is called lava.
magma	Molten rock that remains underground.
metamorphic rock	Rock that started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.
paleontology	The study of fossils.
permeable	Allows liquids to pass through it.
rock	Any naturally occurring solid mineral material.
sedimentary rock	Rock that has been formed by layers of sediment being pressed down hard and sticking together. You can see the layers of sediment in the rock.
soil	Made up of pieces of rock, minerals, decaying plant material, microbes and water.

Scientific Equipment

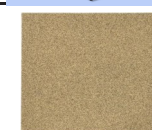
magnifying glass



microscope



sandpaper



pipette

