

Key Vocabulary	
igneous rock	Rock that has been formed from magma or lava .
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.
metamorphic rock	Rock that started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.
magma	Molten rock that remains underground.
lava	Molten rock that comes out of the ground is called lava .
sediment	Natural solid material that is moved and dropped off in a new place by water or wind, e.g. sand.
permeable	Allows liquids to pass through it.
impermeable	Does not allow liquids to pass through it.

Disciplinary Skills
Classification: To know how to categorise in science.
Observing Patterns: To know how to make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment.
Control of Variables: To contribute to class discussions about what makes the test fair/not fair
Researching (Using secondary Resources): To begin to know when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.

Key Knowledge

There are three types of naturally occurring rock.

The diagram illustrates the formation of three types of rocks. On the left, under the heading 'Igneous', it shows magma cooling to form a rock. In the middle, under 'Sedimentary', it shows layers of sediment being deposited and compacted. On the right, under 'Metamorphic', it shows an existing rock being transformed by heat and pressure.


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

Some words you might use to discuss the properties of a rock:

hard, soft, **permeable**, **impermeable**, durable (meaning resistant to weathering), high density, low density. Density measures how 'bulky' the rock is (how tightly packed the molecules are).

Key Vocabulary	
fossilisation	The process by which fossils are made.
palaeontology	The study of fossils.
erosion	When water, wind or ice wears away land.

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.

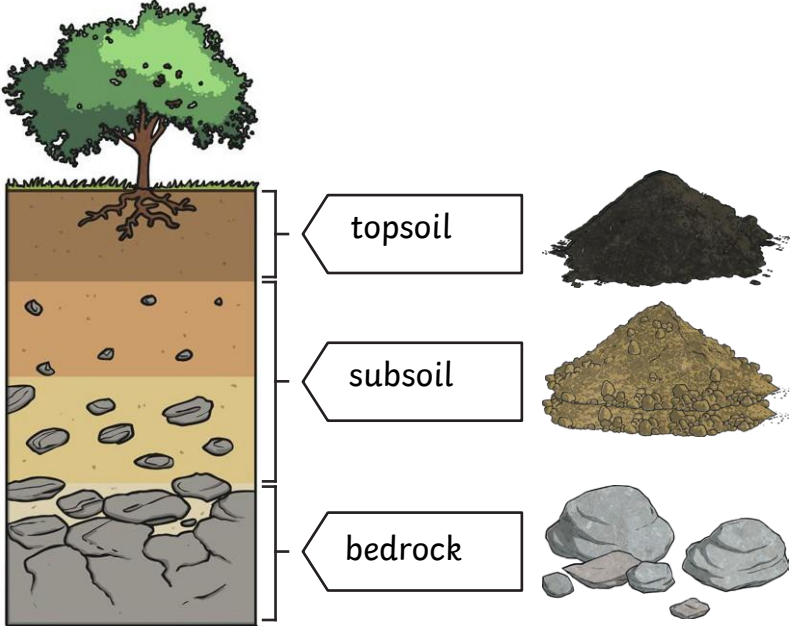


Key Knowledge

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).



The diagram shows a cross-section of the ground. At the top is a tree with roots extending into the soil. The soil is divided into three layers: topsoil (dark brown), subsoil (lighter brown), and bedrock (grey rocks). To the right of the diagram are three piles of material corresponding to these layers: a pile of dark soil, a pile of lighter soil with small rocks, and a pile of large grey rocks.

Fossilisation

An animal dies. It gets covered with sediments 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, sediment might enter the mould to make a cast fossil . Bones may change to mineral but will stay the same shape.	Changes in sea level take place over a long period.	As erosion and weathering take place, eventually the fossil becomes exposed.
