

Year 3 Spring 1- Rocks and Soils – Can a statue last for 1000 years?

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.
Metamorphic rock 	Rock that has started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.
Permeable 	Allows liquid to pass through it.
Impermeable 	Does not allow liquids to pass through it.
Durability 	The quality of being able to last a long time without becoming damaged
Density 	How much mass there is in a particular space.
Porous 	Something that is porous has many small holes in it, which water and air can pass through.
Fossil 	The remains or traces of plants and animals that lived long ago
Erosion 	When water, wind or ice wears away land.

Prior knowledge

In Year 2 we:

- Identified and compared the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, and cardboard for particular uses.

Properties of Materials

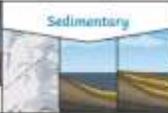
 wood: hard, stiff, strong, opaque, can be carved into any shape.	 glass: waterproof, transparent, hard, smooth.
 plastic: waterproof, strong, can be made to be flexible or stiff, smooth or rough.	 metal: strong, hard, easy to wash.
 paper: lightweight, flexible.	 cardboard: strong, light, stiff.
 fabric: soft, flexible, hard-wearing, can be stretchy, warm, absorbent.	 rubber: hard-wearing, elastic, flexible, strong.

Knowledge and Assessment

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

Sticky Knowledge

There are three types of naturally occurring rock.

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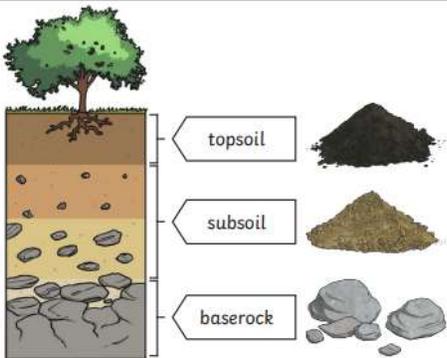
Natural Rocks				Human-Made Rocks	
Igneous Obsidian	Sedimentary Chalk	Metamorphic Marble	Granite	Brick	
Sandstone	Quartzite	Concrete			
Basalt	Limestone	Slate	Coarse Stone		

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).

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).



Fossilisation

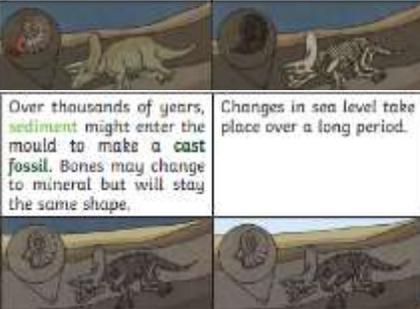
An animal dies. It gets covered with sediments which eventually become rock.

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.



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



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