

Year 3 Science Knowledge Organiser: Rocks



Key vocabulary

fossil	a fossil is the remains or the
	impression left by a prehistoric plant
	or animal embedded in rock.
rock	a rock is a solid made up of a bunch of different minerals.
minerals	minerals come from broken down rock.
erosion	water, wind, and other natural forces cause rocks and earth to wear away.
soil	soil is the loose upper layer of the
	Earth's surface where plants grow. Soil
	consists of a mix of organic matter, air, water and minerals.
organic matter	living and dead plants and animals.
hard rocks	hard rocks need to be split by tools e.g. granite.
soft rocks	soft rocks can be moulded e.g. clay.
permeable	permeable rocks allow water to pass through.
impermeable	impermeable rocks do not let water pass through.
durable	rocks which are resistant to erosion so they last longer.
density	if the particles in the rock are tightly packed then it has a high density.
	These rocks would sink in water. Rocks with low density would float.
erosion	water, wind, and other natural forces
	cause rocks and earth to wear away.

Focus scientists

Mary Anning (1799-1847) was a famous British fossil hunter who found the fossils of many prehistoric animals. Although not trained as a scientist her discoveries changed Science.

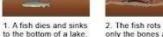


Dr Anjana Khatwa is a geologist who collects rocks and fossils and studies them to learn about the creatures that lived in the sea and on Earth over 150 million years ago



Fossil formation







 The fish rots and only the bones are left.
The fish is covered with mud.



 Millions of years pass and the mud turns to rock. Over time, the bone matter is completely changed into mineral matter. The fish is now a fossil.

Key Knowledge

ROCKS

SEDIMENTARY: Sedimentary rocks are formed by sediment that is deposited overtime, usually as layers at the bottom of lakes and oceans. This sediment can include minerals, small pieces of plants and other organic matter. The sediment is compressed over a long period of time before consolidating into solid layers of rock.

IGNEOUS: Far underground, the temperature is so hot, rock melts into a liquid (molten rock). When the liquid is underground it is called 'magma' and it can cool to form an intrusive rock. When it spills out (volcano), the liquid is called 'lava' and it cools to form extrusive rock.

METAMORPHIC: Metamorphic rocks have been changed over time by extreme pressure and heat. Metamorphic rocks can be formed by pressure deep under the Earth's surface, from the extreme heat caused by magma or by the intense collisions and friction of tectonic plates.



KEY PROPERTIES OF ROCKS: Hard/Soft;

Permeable/Impermeable; Durability; Density.

Fossils- are the remains or the impression left by a prehistoric plant or animal embedded in rock.

- 1.) An animal, creature or plant dies and ends up at the bottom of the sea.
- 2.) Over time, layers of rock form on top and the only thing which remains are the bones or the space where the bones used to be (mould fossils).
- 3.) Sometimes sediment enters the space where the bones used to be and takes the shape of the creature (cast fossil).

What soil made from

Air - Oxygen, Carbon dioxide, nitrogen etc...

Organic Matter - Living and dead plants and animals.

Water - Air and water fill the gaps between particles of soil.

Minerals - Formed from broken down rock.