

Preston Primary School Knowledge Organiser

Topic: Science- How are rocks formed?

Term: Summer 2

Year: Unit 3

Duration: 7 Weeks

The Powerful Knowledge we will take away from this Learning Enquiry (what children will be learning):

I know that there are three types of rock: sedimentary, igneous, and metamorphic. These look very different from each other and have different qualities. I know how rocks are formed.



I know that some types of rock are permeable and some are impermeable.

I know that fossils are formed when living things are trapped within rocks and then die.



I know that soil is made from matter such as dead animals and plants, rock, air and water. Dead animals and plants are known as organic material. There are 6 different types of soil, but we are learning about three: clay soil, peat and chalky soil. These each have different properties and different plants grow best in different kinds of soil.

We will be examining and investigating the rocks and soils found in our locality. We will be comparing the similarities and differences between different types of rocks and soils.

Our Key Vocabulary:

Word	Meaning
Sedimentary	These rocks form when igneous rocks are worn down and travel into bodies of water to form sediment.
Igneous	These rocks are formed when molten rock has cooled down.
Metamorphic	These rocks have changed in structure due to intense heat, e.g., under heat and pressure, limestone turns to marble.
Organic material	Material derived from living things when they have passed away.
Permeable	Rocks that allow water to pass through, e.g., sandstone and chalk.
Impermeable	Rocks that do not allow water to pass through, e.g., slate that can be used to make the roof of a building.
Similarities	Properties that are similar between two materials.
Differences	Properties that are dissimilar between two materials.
Properties	A quality of a material e.g., strength, that helps them serve a purpose.
Fossil	The remains of a living thing (plant or animal) encased in rock.

Steps in learning	
	<p>Children will learn that there are three types of rock: sedimentary, igneous, and metamorphic.</p> <p>Children will learn that rocks are formed under heat and pressure and can eroded over time through natural processes.</p>
 	<p>Children will classify rocks based on their properties including appearance, whether they are waterproof and what they are used for.</p> <p>Children will conduct a research survey into the different types of rocks in our school and record what type of rock they, whether they are man made or natural, what they are used for and how they got here.</p>
	<p>Children will learn about how fossils are formed. They will be able to discuss what fossils can tell us about the past. Children will study these fossils and rocks to discover more about animals and dinosaurs from the past.</p>
	<p>Children will learn how soil is made. Children will use samples of soil from around the school site to find out what type of soil it is, consider how it was formed and will classify it based on their results.</p>

What I already know:

Children have studied different materials during their time in Year 2 and 3. In Year 2, the children learnt about different everyday materials and what they are used for. They also considered the similarities and differences between them.

In Unit 4, children will compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.



This shows what the 6 different types of soil look like.



This shows some examples of how different sedimentary, metamorphic, and igneous rocks can look.

Website links:

[How to become a palaeontologist | Natural History Museum \(nhm.ac.uk\)](https://www.nhm.ac.uk)

Use this website to discover more about being a palaeontologist.

[What is soil made from? - BBC Bitesize](https://www.bbc.com/1/learn/primary/soil)

Learn more about the soil that is all around us on this link.

[What is a rock? - BBC Bitesize](https://www.bbc.com/1/learn/primary/rocks)

Use this link to learn more about rocks.