



Topic Title: Rocks and Soil

Year Group: 3

Academic Year: 2022-2023

Science Intent: Children will discover the different types of rocks and how they are formed. Children will compare and group rocks based on appearance and simple properties. They will learn how fossils are formed and learn about palaeontology. Children will understand how soil is formed and then investigate the permeability of different types of soil.

<p>Prior Scientific Learning/Linked Topics:</p> <ul style="list-style-type: none"> • Explore materials with different properties. • Explore natural materials, indoors and outside. 	<p>Literacy Links (including texts/media used):</p> <p>The pebble in my pocket Egyptian Cinderella</p>	<p>Maths Links:</p> <p>Measurement and Statistics Graphs</p>
<p>Scientific Knowledge</p>	<p>Working Scientifically</p> <p>Children will:</p> <ul style="list-style-type: none"> • Ask relevant questions and use different types of scientific enquiries to answer them, using scientific equipment with increasing accuracy. • Gather, record, classify and present data in various ways to help in answering scientific questions. • Record data using scientific diagrams and labels, classification keys, tables and bar charts. • Use straightforward scientific evidence and vocabulary to answer questions and support findings. • Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. 	
<ul style="list-style-type: none"> • Compare and group together different kinds of rocks (including those in the locality) on the basis of 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. 		



- Identify patterns, including similarities and differences related to simple scientific ideas and enquiries.

Content:

- **To be able to identify naturally occurring rocks and explore their uses.**
Children to go on a rock hunt around the school grounds looking for different types of rock. Children will then compare different images of natural and human-made rocks and sort them accordingly.
- **To be able to group rocks according to their characteristics.**
Children to categorise rocks based on their appearance and physical properties into different categories (hard/soft, light/dark).
- **To be able to explain the three different types of rocks and how they are formed.**
To learn about sedimentary, metamorphic and igneous rocks. Children to be able to discuss and explain the differences of these, giving examples for each.
- **To be able to plan, carry out and evaluate experiments to compare rocks.**
Children to investigate which rocks are permeable, durable and dense.
- **To explore soil and how it is formed.**
Children given a sample of soil from the school grounds to explore by mixing the sample with water and then observe the soil as it settles into different layers. Children then asked to classify a range of soil samples from crumbliest to least crumbly.
- **To explore what fossils are and how they are formed when things that have lived are trapped within rock.**



Children to replicate the fossilisation process by flattening plasticine in a small plastic pot to make the sea bed. Then place a dog biscuit (sea creature) which has 'died' and fallen onto the sea bed. Then add the sea (salty, diluted food colouring) and shredded up kitchen roll to represent the sediment.

Key Vocabulary:

rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorbs water, fossil, bone, flesh, minerals, marble, chalk, granite, sandstone, slate, types of soil (e.g. peaty, sandy, chalky, clay)

Stunning Start/Marvellous Middle/Fabulous Finish:

N/A

OAA/Trips/Visits/Visitors:

All to be revealed