



Unit Title: Rocks and soil

Year Group: 3

Academic Year: 2024/25

Science Intent:

Prior Scientific Learning:	Literacy Links (including texts/media used):	Maths Links:
- Distinguish between an object and the material from which it is made. (Y1 - Everyday materials) - Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials) - Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials) - Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials) - Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials)	VIPERS	Graphs and tables
Scientific Knowledge	Scientific Enquiry Approaches :	Working Scientifically:
- 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	- Pattern seeking - Identifying, grouping and classifying (Comparative/Fair Testing) (Research for some children statement)	The children sometimes decide how to record and present evidence. They record their observation e.g. using photographs, videos, pictures, labelled diagrams or writing. They record their measurements e.g. using tables, tally charts and bar charts (given templates, if



trapped within rock. Recognise that soils are made from rocks and organic matter.		required, to which they can add headings). They record classifications e.g. using tables, Venn diagrams, Carroll diagrams. - Children are supported to present the same data in different ways in order to help with answering the question. - Children answer their own and others' questions based on observations they have made, measurements they have taken or information they have gained from secondary sources. The answers are consistent with the evidence. - The children make systematic and careful observations
Week 1: To observe how rocks change over time		Key Vocabulary:
KWL – prior knowledge and what would the children like to learn. Start within the school grounds, become rock detectives and go on a walk to begin to recognise the different types of rocks, their physical properties and their uses. Describe the rocks seen and document them e.g wall was made out of brick, path was granite. Continue detective walk around the local environment, including visiting a local church and grounds – consider the age of rocks based on observations e.g. how worn the rocks are. All: able to determine what objects are made of rock Most: able to describe the characteristics of rock Some: able to notice different rock types		Pock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, marble, chalk, granite, sandstone, slate,
Week 2: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.		Key Vocabulary:



In pairs, the children were given a range of rocks and asked to observe them closely using a magnifying glass. They spent time talking about the visual characteristics of each of the rocks. They were asked to sort them in different ways. They then completed a compare and contrast grid to demonstrate what they had observed about two rocks in particular. All: able to describe the physical features of rocks Most: able to compare different rocks Some: able to use scientific language to compare different rocks	Pock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, marble, chalk, granite, sandstone, slate,
Week 3: Devise a test to investigate the hardness of a range of rocks Devise a test to investigate how much water different rocks absorb	Key Vocabulary:
The children tested common types of rock for three properties: porosity, density and durability. They conducted simple observational investigations for each property and recorded the results in a table. Porous, density, durability All: able to notice changes from observations Most: able to predict what might happen Some: able to use scientific language to describe the processes	Pock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, marble, chalk, granite, sandstone, slate, absorb water, porous, density, durability
Week 4: Recognise that soils are made from rocks and organic matter.	Key Vocabulary:
The children were given a sample of soil from their school grounds to explore. They mixed the samples with water and then observed them as they settled into different layers. All: able to describe different types of soil Most: able to compare different types of soil Some: observe how soil can be separated through sedimentation	soil, peat, sandy/chalk/clay soil, absorb water, sedimentation, separated
Week 5: Describe in simple terms how fossils are formed when things that have lived are trapped within rock.	Key Vocabulary:



The children flattened plasticene in a small plastic pot to make the sea bed. They then imagined that a sea creature, represented by the dog biscuit (bone shaped), had died and fallen onto the sea bed. They next added the sea (salty, diluted food colouring) and shredded up kitchen roll to represent the sediment. Imagining they were an archaeologist, some thousands of years later, the pupils unearthed their fossils using a pick (tooth pick). They could identify imprints of fossils and they found the fossilised bones of the dead sea creature itself. All: can list the different factors that break down rocks Most: can use a model to demonstrate fossil formation Some: can sequence the steps of fossil formation	fossil, fossilised, encased, worn down,
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Stunning Start/Marvellous Middle/Fabulous Finish: Stunning start: Trip exploring local area Fabulous finish: Become archaeologists – create fossils and unearth them.	OAA/Trips/Visits/Visitors: Trip to the church
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