



Science – Rocks (Year 3)

Outcome: Create a famous palaeontologist factfile.

Chemistry



Prior Knowledge and Skills

- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials)
- Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials)
- Distinguish between an object and the material from which it is made. (Y1 - Everyday materials)

Ideas and inspiration:



Mary Annying (Palaeontologist)

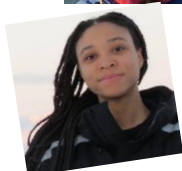


James Hutton (Scientist who studied rocks and the effects of natural processes on them, such as rain, running water, tides, and volcanoes, on the development of the Earth)



Anjana Khatwa (Geologist who collects rocks and fossils from the beach and studies them to learn about the creatures that lived in the sea and on Earth over 150 million years ago)

https://pstt.org.uk/application/files/6916/2851/6246/Earth_scientist_-_Anjana_Khatwa.pdf



Brianna Green (Biogeochemist who collects soil to see what kind of living things are in it to study the effects of climate change)

https://pstt.org.uk/application/files/8516/2851/6177/Biogeochemist_-_Brianna_Green.pdf

Vocabulary:

Types of rock:

sedimentary rock, igneous rock, metamorphic rock.

Properties of rocks:

permeable, semi-permeable, impermeable, durable.

Names of rocks: e.g. marble, chalk, granite, sandstone, slate.

Formation of rocks and fossils:

natural, human-made, magma, lava, molten rock, sediment, erosion, fossilisation, layers, bone, fossil.

Soil:

sandy, chalky, clay, peaty, loamy, topsoil, subsoil, bedrock, mineral, organic matter, compost.

Other:

palaeontology.

Previously introduced vocabulary: soil, water, air.

Developing Knowledge and Skills

Scientific Knowledge:		Working Towards	Within	Expected	Above
	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.				
Working Scientifically (Skills): Do:		Working Towards	Within	Expected	Above
	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.				
Working Scientifically (Skills): Record:		Working Towards	Within	Expected	Above
	Gather, record, classify and present data in a variety of ways to help in answering questions.				
Working Scientifically (Skills): Review:		Working Towards	Within	Expected	Above
	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.				

	 Identify differences, similarities or changes related to simple scientific ideas and processes.				
Working Scientifically (Enquiries): Identifying, grouping, and classifying:		Working Towards	Within	Expected	Above
	 Classify rocks or soils based on own criteria.				
Working Scientifically (Enquiries): Observation over time:		Working Towards	Within	Expected	Above
	 Observe how soil separates into different layers in water.				
Working Scientifically (Enquiries): Comparative/ fair testing:		Working Towards	Within	Expected	Above
	 Carry out tests, such as testing: ○ the hardness of different rocks ○ what happens when rocks are put in water ○ how quickly water runs through different types of soil				
Working Scientifically (Enquiries): Researching		Working Towards	Within	Expected	Above
	 Research how fossils are formed.				
Highlights: _____ _____ _____					