

Rocks- Year 3- Kapow unit- Rocks and soils

Previous learning

Key Vocabulary for Year 3	
Fossils	Metamorphic
Soils	Sedimentary
Sandstone	
Granite	
Marble	
Pumice	
Crystals	
Absorbent	
Igneous	

Previous vocabulary

Useful links

<https://www.stem.org.uk/resources/community/collecion/12367/year-3-rocks>

<https://www.hamilton-trust.org.uk/science/year-3-science/rocks-rocks-and-fossils/>

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=3c

Natural Rocks			Human-Made Rocks
Igneous	Sedimentary	Metamorphic	
Obsidian 	Chalk 	Marble 	Brick
Granite 	Sandstone 	Quartzite 	Concrete
Basalt 	Limestone 	Slate 	Coade Stone

Some words you might use to discuss the properties of a rock:
 hard, soft, **permeable**, **impermeable**, durable (meaning resistant to weathering), high density, low density. Density measures how 'bulky' the rock is (how tightly packed the molecules are).

Key scientists you could look at...

Mary Anning

Scientific skills

Working scientifically	Questioning and enquiry	Observing and measuring	Investigating	Recording	Grouping and classifying
To use practical scientific methods, processes, and skills	Ask some relevant questions and use different types of scientific enquiries to answer them	Begin to make systematic and careful observations. Take accurate measurements using standard and non-standard measurements. Begin to use a range of equipment. Begin to look for naturally occurring patterns and relationships. Help to make decisions on how to carry out an investigation.	Set up simple practical experiments focusing on comparative and fair tests and begin to know when a fair test is necessary and decide how to set it up. Begin to think of more than one variable factor.	Gather, record, and begin to classify and present data in a variety of ways to help answer a question. Begin to record findings using scientific vocabulary, drawings, labelled diagrams, keys, bar charts, and tables. Begin to report on findings including oral and written explanations, displays and presentations. Begin to use notes, simple tables, and standard units to record and analyse data.	Begin to identify similarities and differences related to scientific ideas and processes. Talk about criteria for grouping, sorting, and classifying using simple keys. Begin to compare and group according to behaviour or properties, based in testing.

Experiment and activity ideas

Create own rocks	Rock hunt	Create own fossils	Investigate the properties of different rocks	Rock sort
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Knowledge- objectives

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.

Resources in school

Variety of different rocks, fossils

Soil

Soil is the uppermost layer of the Earth. It is a mixture of different things:

- minerals (the minerals in soil come from finely broken-down rock);
- air;
- water;
- organic matter (including living and dead plants and animals).

Caves are formed when water **permeates** through the bedrock and **erodes** some of the rock away. Over thousands of years these caves can become very large.

Fossilisation

An animal dies. It gets covered with sediments which eventually become rock.	More layers of rock cover it. Only hard parts of the creature remain, e.g. bones, shells and teeth.	Over thousands of years, sediment might enter the mould to make a cast fossil . Bones may change to mineral but will stay the same shape.	Changes in sea level take place over a long period.

Key Knowledge

There are three types of naturally occurring rock.

Igneous	Sedimentary	Metamorphic