

Key Learning

Year 3

Compare and group different kinds of rocks based on appearance and simple physical properties.

Recognise that soils are made from rocks and organic matter.

Year 4

Use knowledge and understanding of materials to sort and group materials.

Enquiry types

Compare different types of rock based on their appearance and physical properties.

Gather, record, classify and present data.

Make systematic and careful observations.

ROSES Year 3/4 Science: ROCKS

SPRING 1st half 2026



Morda CE Primary School

Key Knowledge

Natural or human-made?

Rock are solid materials that form naturally, which means they form in nature and are not made by humans.



Humans can make materials that look like **rocks** or have similar properties. These **human-made** materials include bricks, cement and tarmac/asphalt.



Rock properties

Words you might use to discuss the properties of rock include hard, soft, permeable, impermeable, density, texture, porous, grain size, durable (meaning resistant to weathering).

Key Scientific Vocabulary

rock

Rock is a solid material that forms naturally.

human-made

Human-made materials are produced by humans and do not form naturally.

natural

Natural materials form in nature and are not produced by humans.

permeable

A **permeable** material allows liquid to pass through it.

impermeable

An **impermeable** material does not allow liquid to pass through it.

weathering

Weathering is the process whereby **rocks** break down into smaller pieces or wear away over time because of rain, wind, plants or animals.

fossilisation

Fossilisation is the process through which traces or remains of prehistoric living things become preserved.

Make accurate measurements using standard units, using a range of equipment, including thermometers.

Explore how rocks change over time.

Gather, record, classify and present data in a variety of ways to help answer questions.

Describe how fossils are formed when things that have lived are trapped within rock.

Recognise that soils are made from rocks and organic matter.

Make predictions. Set up a comparative fair test. Use results to draw simple conclusions.

Make systematic and careful observations. Take accurate measurements using standard units.

Examples of rocks



slate



marble



chalk



granite



basalt



sandstone

Types of soil



chalky



clay-based



loam



peat



sandy



silt

What is soil made of?

Organic materials Water

Rock fragments Air

soil

Soil is the top layer of the Earth's surface. It provides nutrients and support for plant life and it is made up of minerals (from broken-down **rocks**), air, water and organic matter (living things that are either dead or alive).

Types of Weathering

biological – caused by plants or animals



physical – caused by wind, water or ice



chemical – caused by chemicals in air or water



Fossilisation process

1



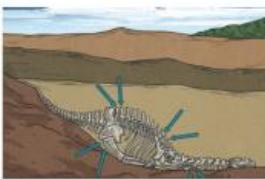
2



3



4



5



Common Misconceptions

Some children may think:

Rocks are all hard in nature.

Rock-like, man-made substances such as concrete or brick are rocks.

Materials which have been polished or shaped for use, such as a granite worktop, are not rocks as they are no longer 'natural.'

Certain found artefacts, like old bits of pottery or coins, are fossils.

A fossil is an actual piece of the extinct animal or plant.

Soil and compost are the same thing.