




Key Knowledge

Type	How are they formed?	Features
Sedimentary 	Sedimentary rocks are formed from particles of sand, shells, pebbles, and other fragments of material. Together, all these particles are called sediment. Gradually, the sediment accumulates into layers and over a long period of time hardens into rock.	Usually crumbly and allow water through them Made of layers and stuck together with mineral crystals They can contain fossils within their layers
Metamorphic 	Metamorphic rocks are formed under the surface of the earth from the metamorphosis (change) that occurs due to intense heat and pressure (squeezing).	Usually hard May contain tiny crystals or fossils
Igneous 	Igneous rock is formed when magma cools and solidifies, it may do this above or below the Earth's surface.	Very hard Contain crystals

Key Vocabulary and Phrases

Erosion	The gradual wearing away of something
Magma	Hot fluid below or within the earth's crust from which lava and other igneous rock is formed on cooling.
Tectonic plates	A layer under the ground made up of large, moving pieces called plates. All of Earth's land and water sit on these plates.
Solidify	To become solid or hard.
Dissolve	To become part of a liquid

How are fossils formed?

An animal dies, its skeleton settles on the sea floor and is buried by sediment. The sediment surrounding the skeleton thickens and begins to turn to stone. The skeleton dissolves and a mould is formed. Minerals crystallise inside the mould and a cast is formed. The fossil is exposed on the Earth's surface.

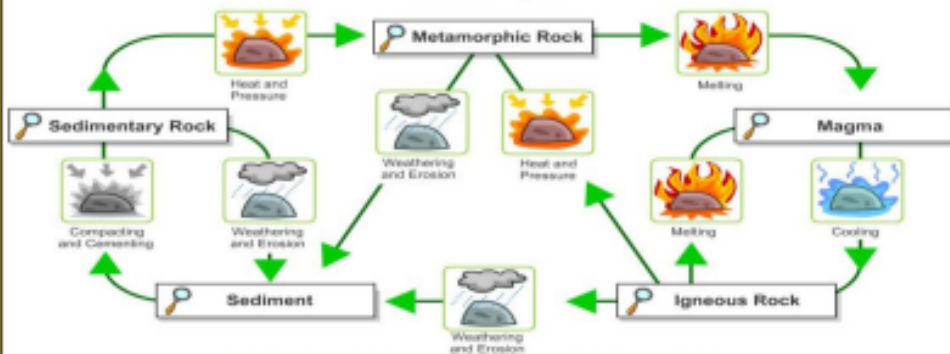
What is soil made from?

Minerals (small stone fragments: clay, silt or sand)
 Organic Matter (decaying plants and animals)
 Water (which the nutrients in the minerals and the organic matter dissolve into)
 Air (which fills the gaps between the mineral and organic matter parts).

Types of soil

Sandy soil is pale in colour with lots of small air gaps. Water drains through sandy soil easily so it usually feels quite dry
Clay soil is an orange or blue-ish sticky soil with very few air gaps. Water does not drain through it easily. When it rains, puddles stay on top of clay soil for a long time.
Chalky soil is a light brown soil. Water drains through it quickly
Peat is different from other soils because it does not contain any rock particles. It is made from very old decayed plants and is dark, crumbly and rich in nutrients (chemicals plants need to grow).

The Rock Cycle



Key Vocabulary and Phrases

ask questions	Use the question words What, where, when why, how
compare and contrast	Look at two or more objects and describe similarities (what is the same) and differences (what is different)
classify, sort and group	Organise rocks by their features – igneous, sedimentary and metamorphic (e.g colour, size, shape).
diagram	A labelled picture
record data	Drawings, scientific diagrams, photos, classification keys, tables, bar graphs and line graph, writing and numbers are ways to show what I have found out.
reporting and presenting findings	Giving reasons, explaining causes and relationships, explaining results and trusting its accuracy

How I could record my findings

Pictures
For EXPLORING



Use this if you want to tell the story of what you did or what you observed, e.g. bread going mouldy

Table
For FAIR TESTING/PATTERN SEEKING

What I Change	What I measure

Use this to record your information. You can transfer it into some of the other forms as well. It could be all numerical or words

Carroll Diagram
For CLASSIFYING/GROUPING

	Red	Blue
Square		
Triangle		

Use this when you want to put objects into categories for having a property or not, e.g. prime/not prime numbers against even/not even (odd) numbers

What I could investigate

Create a comparative model of igneous, sedimentary and igneous rocks



How permeable are different types of soil?



Classify rocks according to whether they have grains or crystals.



Equipment I could use

A beaker to hold the soil.



A funnel to tip the water in.



Coffee filter paper for the soil.



A measuring cylinder to measure the amount of water.



A camera, pencil and paper to record what I find out.

