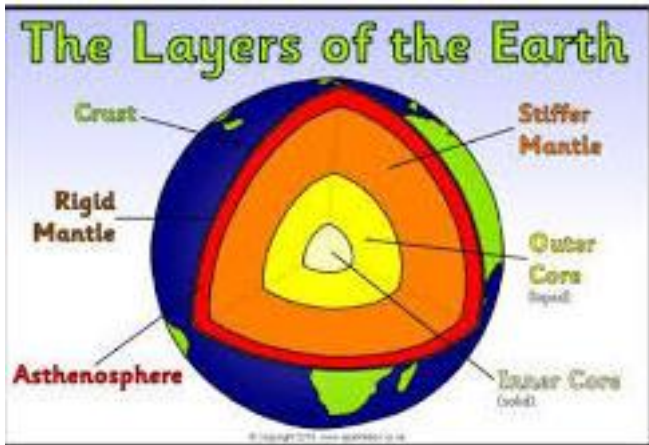


# Rocks Knowledge Planner







## What should I already know?

- The role of Mary Anning in palaeontology and the discovery of fossils.
- Soil contains nutrients and these help plants to grow.
- The meaning of the word absorb.
- That magma is molten rock that is formed in very hot conditions inside the earth.
- Why some materials are used for certain purposes because of their properties

Key Vocabulary	
Mineral	A natural substance that makes up rock.
Rock	Made from one or more minerals.
Permeable	Allows water to pass through.
Impermeable	Does not allow water to pass through.
Igneous rock	Lava or magma that has turned from liquid to solid, forming rock.
Metamorphic rock	An igneous or sedimentary rock that has been changed by extreme heat and pressure.
Magma	Hot fluid or semi-fluid material below or within the Earth's crust
Lava	Hot molten or semi-fluid rock above the Earth's crust
Earth's crust	The outermost solid shell of the Earth.
Sediment	Matter (e.g. dead animals, plants or pieces of rock) that settles to the bottom of a liquid.
Sedimentary rock	Rock that has formed from the build-up of sediment at the bottom of rivers/oceans over many years, which has been squashed under the weight of the liquid and more sediment.
Fossil	The remains or impression of a prehistoric plant or animal embedded in rock and preserved by minerals replacing decomposed matter.
Extinct volcano	Not having erupted in recorded history
Palaeontologist	A scientist who studies fossils



## Rocks

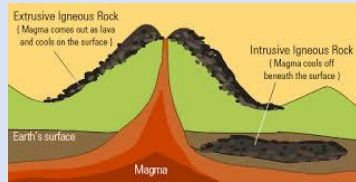
Granite	Marble	Limestone	Chalk	Sandstone	Slate
					
A very hard igneous rock with a grainy and crystalline appearance.	A metamorphic form of limestone, typically white and crystalline.	A hard sedimentary rock, made from calcium carbonate.	A white soft, sedimentary rock	A sedimentary rock consisting of sand cemented together by pressure.	A fine grained grey, green or purple metamorphic rock.

## What are the different types of rocks?

There are three different types of rocks that are formed naturally.

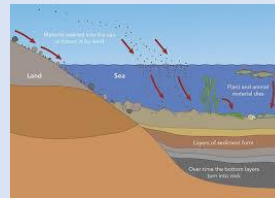
### Igneous:

- When molten magma cools, igneous rocks are formed.
- This either cools and forms rocks under the earth's surface, or flows out of erupting volcanoes as lava and may mix with other minerals.
- Examples include granite and basalt.
- This type of rock is strong, hardwearing and non-porous.



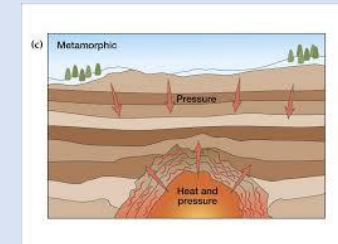
### Sedimentary:

- Sometimes, little pieces of rocks that have been weathered can be found at the bottom of lakes, seas and rivers This is called sediment.
- Over millions of years, layers of this sediment builds up forming sedimentary rocks.
- Examples include limestone and chalk.
- Sedimentary rocks are porous and can easily be worn down .



### Metamorphic:

- When some igneous and sedimentary rocks are heated and squeezed (pressured), they form metamorphic rocks.
- Examples include slate and marble.
- Metamorphic rocks are strong



## What are fossils

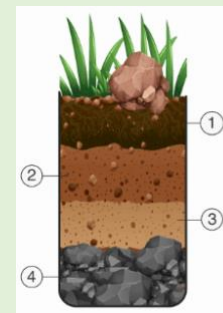
- Fossils are the remains of prehistoric life.
- They are usually formed when a living thing (plant or animal) dies and the body is covered up or buried by sediment over tens of thousands of years.
  - Some fossils are formed when the tough bones and teeth in animals, and the woody part of plants are preserved .
  - Other fossils are made from imprints in surrounding sedimentary rock such as footprints or imprints from shells.
  - Fossils tell us about the Earth and about life that existed hundreds of thousands and millions of years ago.



## What is soil?

- Soil is made from pieces of rock, minerals, decaying plants and water.
- When rock is broken down into small grains, soil is formed.

There are layers of soil:



- above the soil is leaf litter and recently decaying plants.
- as the soil becomes deeper, the rock grains become larger until bedrock is reached.