

# Our Lady's Catholic Primary School - Knowledge Organiser

## Rocks and soil

### Prior Knowledge



Soil's contribution to 'what do plants need to grow'.

### Key vocabulary

<b>magma</b>	Molten rock that remains underground.
<b>lava</b>	Molten rock that comes out of the ground
<b>sediment</b>	Natural solid material that is moved and dropped off in a new place by water or wind, e.g. sand.
<b>permeable</b>	Allows liquids to pass through it.
<b>impermeable</b>	Does not allow liquids to pass through it.
<b>fossilisation</b>	The process by which fossils are made.
<b>palaeontology</b>	The study of fossils.
<b>erosion</b>	When water, wind or ice wears away land.

### Words you might use to describe the properties of rocks

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).

### Fossil formation

Fossils were formed millions of years ago

1. Plants and animals died and sank to the seabed.
2. The soft parts decayed away leaving the hard parts.
3. The hard parts were covered and squashed by many layers of sand and other materials.
4. The animal/plant matter dissolves and is replaced by minerals, leaving a replica of the original bone called a fossil.

#### Animal fossil



#### Plant fossil



### Significant scientist

#### Mary Anning (1799-1847)



Mary Anning was an English palaeontologist and fossil collector. She became known around the world for important finds she made in the Jurassic fossil beds in Dorset.

## Science: Autumn 1

## Year Group 3

### Types of rocks

**Sedimentary rocks** Rock that has been formed by layers of sediment being pressed down hard and sticking together. You can see the layers of sediment in the rock.

#### Sandstone



#### Limestone



#### Chalk



Chalk is used for drawing because it is crumbly and soft.

**Metamorphic rocks** Rock that started out as igneous or sedimentary rock but changed due to being exposed to extreme heat or pressure.

#### Quartzite



#### Slate



#### Marble



Marble is good for gravestones because it does not rub away.

**Igneous rocks** Rock that has been formed from magma or lava.

#### Basalt



#### Pumice



#### Granite



Granite is good because it is hard and it does not absorb water.

### Types of soils

The property of soils is affected by the:

- ? type of rock
- ? size of rock pieces
- ? amount of organic matter in it.

#### Peat



Water-logged  
Contains decomposed plant material  
Soft and easily compressed

#### Sandy soil



light and dry  
- lots of air gaps so water drains through quickly

#### Chalky soil



stony and water drains through quickly  
- found in areas with lots of chalk

#### Clay soil



very sticky when wet  
- a heavy soil  
- water does not drain through it quickly

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