

# Science Knowledge Organiser



**Topic: Rocks and Soils**

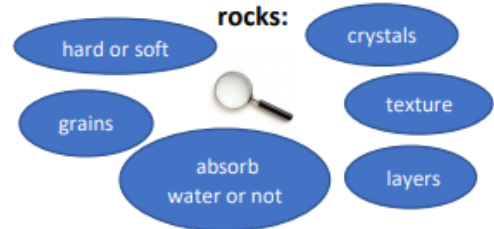
**Year 3: Autumn Term**

**Strand: Chemistry**

**What should I already know?**

- Rocks are a natural material
- Some materials are used for certain purposes based on their properties
- Rocks are found on the surface of the earth and lava comes from inside the earth.
- Soil has nutrients which help plants to grow.

**Words to describe the appearance of**



## Types of Rock

### Sedimentary

<b>sandstone</b> 	<b>limestone</b> 
<b>chalk</b> 	Chalk is used for drawing because it is crumbly and soft.

### Metamorphic

<b>quartzite</b> 	<b>slate</b> 
<b>marble</b> 	Marble is good for gravestones because it does not rub away.

### Igneous

<b>basalt</b> 	<b>pumice</b> 
<b>granite</b> 	Granite is good for worktops because it is hard and does not absorb water.

## 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**



## 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 partially 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

## Key vocabulary

<b>rock</b>	A naturally occurring material made of minerals. They can be different sizes: <ul style="list-style-type: none"> <li>• stones</li> <li>• pebbles</li> <li>• boulders</li> </ul>
<b>fossil</b>	The bones or other remains of living things are sometimes preserved in rocks as fossils.
<b>soil</b>	Ground up rock mixed with plant and animal remains.