

Rock Observation



Name: _____ Date: _____

Find a rock and draw it in the box below.

- | | |
|-------------|-------------|
| smooth | sharp |
| soft | sedimentary |
| spotted | transparent |
| grainy | glassy |
| heavy | translucent |
| speckled | dull |
| shimmery | square |
| crumbly | shiny |
| jagged | igneous |
| metamorphic | streaked |
| light | red |
| striped | brown |
| oblong | black |
| rough | blue |
| rounded | yellow |
| flat | white |
| hard | grey |
| triangular | |

Describe your rock by using your own words and words from the word list.

Jupiter



Rocks



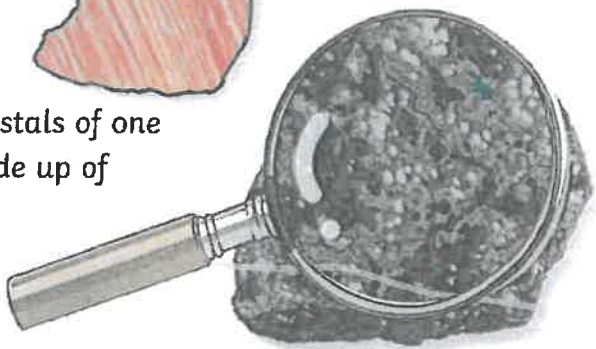
What Are Rocks?

Rocks are solid materials formed from crystals of one or more minerals. The Earth's crust is made up of many different types of rock.



What Are Different Types of Rock?

There are three main types of rock. Scientists classify (group) rocks according to how they are formed.



Igneous

Igneous rocks are volcanic. They are formed when magma (molten rock) or lava cools and hardens. This can happen underground or on the Earth's surface when a volcano erupts.



granite
colour ranges from pink to grey, dark mineral grains



basalt
black or dark grey, fine grained

Sedimentary

Sedimentary rocks are formed when other rocks are eroded by wind and water. Erosion breaks these rocks down into tiny fragments called sediment. Sediment is carried by water and settles at the bottom of rivers or oceans. Over millions of years, this sediment is buried and squashed. Over time, this pressure causes the sediment to turn back into rock. Some sedimentary rocks are formed from the remains of dead animals or plants.



shale

colours can include red, grey, green, brown and black, thin layers

chalk

white, crumbly, very fine grains

Metamorphic

Metamorphic rocks are formed from igneous and sedimentary rocks. Intense heat and pressure inside the Earth's crust squeeze and fold buried rocks, causing them to change.



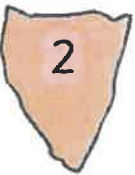
marble

usually white with different coloured veins through it, can be polished to look smooth





1 Name the three different types of rock.



2 Which type of rock can be formed when a volcano erupts?



3 Which rock is described as white and crumbly?

- a) granite
- b) slate
- c) chalk



4 Which of these is a type of metamorphic rock?

- a) marble
- b) pumice
- c) limestone





Rocks



What Are the Properties of Rocks?

Properties are one way of describing rocks. Scientists examine the properties of rocks to find out more about them.



Hard or soft:

Some rocks are hard and can only be split using special tools. Others are soft and are easier to break apart.



Permeable or impermeable:

If a rock is permeable, water can pass through it. If it is impermeable, water cannot pass through it.



Durable or not durable:

Durable rocks are more resistant to being damaged by the weather. Rocks which are not durable are more easily damaged.



Dense or not dense:

Density measures how bulky a rock is. High density rocks sink in water. Low density rocks float.



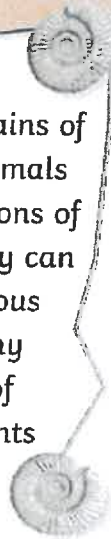
What Is Soil?



Soil is made from small fragments of rock, dead plants and animals, water and air. There are different types of soil including sandy, clay and chalky.

What Are Fossils?

Fossils are the preserved remains of plants and animals that died millions of years ago. They can include enormous skeletons or tiny shells. Fossils of animal footprints have also been discovered.



How Are Fossils Formed?

Fossils are formed through a process called fossilisation. When a living thing dies, its skeleton or shell gets covered over. Over time, layers of sediment settle on top of these remains, burying them. These layers eventually turn into rock, trapping the remains of the dead animal or plant. These harden and turn into rock, forming a fossil.

5

What does it mean if a rock is permeable?

6

What does it mean if a rock is described as dense?

7

Name two things soil is made from.

8

How are fossils formed?



Types of Rock

Earth

To compare and identify types of rock.

Use the word bank to fill in the blanks and explain how each type of rock is formed.

Igneous Rock

Far below the surface of the Earth, temperatures are extremely high. It is so hot that rock is in _____ form called _____.

Occasionally, this magma pushes up to the surface of the Earth during volcanic eruptions. When it reaches the surface, it becomes known as _____.

When magma or lava cools and _____, it forms a type of rock called _____ rock.

Intrusive igneous rock is rock that has formed _____ the surface of the Earth. _____ igneous rock is rock that has formed above the surface of the Earth.



Word Bank

extrusive, liquid, lava, under, magma, hardens, igneous

Sedimentary Rock



Sedimentary rocks form when layers of _____ are pressed together. This process can take _____ of years.

Sediment is made up of _____, plants, shells and tiny pieces of _____. Sediment is carried by wind and water to new places. Often, it settles _____ water.

Over time, layers of sediment _____. The weight of each layer pushes down on the ones below, making them _____.

Water is eventually _____ out of the lower layers and the minerals within the sediment start to _____ the other materials together until they form a _____ layer.

Word Bank

under, minerals, stick, compact, millions, build up, solid, pushed, sediment, rock