

TYPES OF ROCK

Rocks are all around us. They come in many shapes, sizes and colours. Each one has been on its own journey over thousands or millions of years. Some rocks are as old as the planet itself. Despite all of this, rocks can be grouped into three main types. Let's have a look at each one and discover how they are formed.

SEDIMENTARY ROCKS

It is perhaps easiest to think of sedimentary rocks as being recycled. They are made up of lots of pieces of smaller rocks and organic remains. Organic remains are bits left over from living creatures. These might be shells from sea animals or bones.

Erosion is a natural process. The weather, heat and animals wear away rocks and break off smaller pieces. When erosion happens, the smaller pieces are often carried away by water. They normally end up in lakes and oceans. This whole process can take hundreds or thousands of years. These smaller pieces of rock combine together. The heat and pressure inside the Earth compress these layers into a new rock. If a sedimentary rock is made up of other rocks, it is called a "clastic" rock. Rocks which are made up of organic pieces like plants, shells and bones are called "organic" rocks (of course!). Did you know that coal is a type of organic rock?

Some sedimentary rocks are formed when chemicals in the ground are evaporated by the sun. They leave behind crystals which combine together to form larger rocks. These are called "chemical" rocks.

Types of sedimentary rocks include: flint (chemical), chalk (organic) and sandstone (clastic).

IGNEOUS ROCKS

Igneous rocks are often the newest rocks on Earth. They are formed when molten magma cools down. If the magma cools quickly because it is from an erupting volcano or it hits water, then it will form different rocks to if it cools slowly. Slowly cooled rocks have bigger crystals than rapidly cooled rocks. Igneous rocks are very hard and difficult to break down.



METAMORPHIC ROCKS

Metamorphosis means to change something, and metamorphic rocks are no different. They are formed when other rocks are changed by high pressure and temperatures. They are often formed far below the Earth's surface where the temperatures are unimaginably hot. Like sedimentary rocks, metamorphic rocks are formed from other rocks that have sunk below the crust. Some rocks are made up of crystals that are lined up. If these are heated, the crystals form new lines and create layers. Slate and marble are examples of metamorphic rocks.

If the rocks are heated too much, they will melt and become magma. When this happens, they will stay underneath the Earth's crust until they are pushed to the surface and cool down into igneous rocks.

RETRIEVAL FOCUS

1. Find and copy an example of a clastic sedimentary rock.
2. How many main types of rock are there?
3. What are "organic remains"?
4. Which type of rocks are formed by erupting volcanoes?
5. Slate is a type of _____ rock.

VIPERS QUESTIONS

S

How are different types of igneous rock formed?

V

Which word in the text tells you that it is hard to imagine how hot it is under the Earth's surface?

S

What is needed to form metamorphic rocks?

V

Find and copy a word which describes how rocks are broken down.

E

Which part of the text did you find most interesting? What made it interesting to you?