Rocks Everywhere

A Rock Zine by:
Manya Saxena.
CONTENTS

What are rocks? Types of rocks. 1

Igneous rocks. 2

Sedimentary rocks. 3

Metamorphic rocks. 4

The Rock cycle. 5

Fossils. 6

Word search. 7

Did you know? 8-9
What is a rock?

Rocks are everywhere in nature. They are made up of minerals.

In geology, a rock is defined as:
- a solid mass
- naturally occurring
- made of either mineral or mineraloid matter.

Very big rocks are called boulders. Tiny rocks are pebbles. Rocks can be smooth or rough. Some are light and some are heavy.

Types of Rocks

**IGNEOUS** Rocks
- forms when melted rock (magma) cools and hardens.
- example- basalt, granite, pumice, obsidian

**SEDIMENTARY** Rocks
- made of sediments such as, sand, mud, pebbles, clay, plants and bones.
- Example- sandstone, limestone, shale

**METAMORPHIC** Rocks
- forms with heat and pressure.
- Example- slate, marble, quartzite.
Melted rocks inside Earth is usually called magma, and melted rock on Earth’s surface is called lava. When lava cools down, it solidifies back into rock. What type of rock? Well, that depends on how much gas the lava contained, how much silca it has and how quickly it cools. Any type of rock that comes from lava is called an igneous rock.
Sedimentary Rocks

All about sediments!

**HOW TO MAKE A SEDIMENTARY ROCK:**

0. Sediments

1. Compact

2. Sedimentary rock

Most of the rocks we see on land are Sedimentary rocks. Small pieces of rocks are broken by wind, rain and ice. These pieces are called sediment. Sediments is washed or broken into rivers and oceans. The sediments sinks and forms rocks in layers at bottom. Sediments can come from lot of different places, but erosion is one of the most common sources!
Metamorphic rocks have changed form. When the Earth’s crust moves, rocks get squeezed very hard. Heat from this pressure forms new rocks and they become metamorphic rocks. Marble and slate are metamorphic rocks.

The Rock Cycle

On top of the earth, rock is pressed together. The rock erodes. Then it is pushed down deep into earth. There the rock melts and is pressed together. Then the rock is pushed back to the top of earth again.
The ROCK Cycle

Igneous (extrusive)

Uplift

Weathering

Lava

Sedimentary

Volcano Deposition

Pressure and Heat

Metamorphic

Melting

Cooling & crystallization
Fossils are remains of plants and animals from millions of years ago. They look like rocks with design or picture in them. Fossilization is rare! Scientists estimate that less than one in a million make it into fossil record.

Fossils usually formed when a dead plant or animal lies buried in sand or mud. Over the time the sand, mud, and dead remains harden. The remains turn into rocks.

<table>
<thead>
<tr>
<th>Trace</th>
<th>Molds/Casts</th>
<th>Permineralized (Fossilized)</th>
<th>Actual Specimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of the organism, but NOT the actual plant/animal.</td>
<td>The animal/plant has dissolved away, but the impression remained.</td>
<td>Tissue has been replaced with minerals! Most dinosaur bones and petrified wood fossils have been permineralized.</td>
<td>The rarest type. The actual animal or plant is preserved by being frozen or encased in amber.</td>
</tr>
<tr>
<td>footprints</td>
<td>seashell mold</td>
<td>Bone, T-rex claw, petrified wood</td>
<td>insect in amber</td>
</tr>
</tbody>
</table>
DID YOU KNOW?

What's a mice's favorite rock? Pumice!

Obsidian was used to make knives and tools and can be sharper than a steel razor.

Granite is very popular rock in construction.

Pumice contains little pockets of air that makes it float on water.

More than 90% of all volcanic rock on Earth is Basalt!
Limestone is sometimes used to make buildings and statues. Caves are also formed of limestone.

Sandstone is made from sand. Sometimes they have orange and red beautiful stripes.

Shale is most common sedimentary rock, sometimes it breaks into thin layers and between layers fossils can be found!

Conglomerate are formed in ancient riverbeds. They look like bunch of pebbles together.