

Rocks Powerpoint Notes

What is a Rock?

Rocks are made of mixture of _____ and other _____.

Some rocks contain one _____, some contain _____
_____ minerals

About _____ minerals make up most of the _____; these minerals are known as _____ minerals

How do we identify the type of rock?

_____ identify rocks by looking at their _____, _____, and _____ to classify a rock

Color- a rock's color can tell _____, but color alone doesn't provide enough _____ to _____ the rock

_____ - geologists study the shape and _____ of _____ in a rock to help identify minerals that are in the rock; we can use the same tests on _____ that we use on _____ (example: chemical reaction test)

Texture- geologists use texture, how the rock _____, to help identify the rock; some rocks are _____ others are _____.

We identify rocks by their MINERALS. For example, Granite is made of three types of minerals. They are _____, _____, & _____.

We identify rocks by their TEXTURE. Three ways we can identify a rock by it's texture are:

1. Grain Pattern: _____ vs. _____
2. _____: Fine Grain vs. Large Grain
3. Grain Shape: _____ vs. _____

What are the 3 rock types?

Geologists classify (organize) rocks into 3 groups based on how they were formed:

1. _____
2. _____
3. _____

IGNEOUS ROCKS

"Ignis" = Latin for "_____"

Formed from the cooling of either _____ or _____.

(Magma is found _____ the earth, while lava is found _____ the earth)

The most _____ type of rock (most amount)

2 Types of Igneous Rocks: _____ or _____.

Intrusive means _____.

Extrusive means _____.

Intrusive Igneous Rocks:

Below ground = from _____ (intrusive igneous rock)

Usually have _____ crystal grains (they cooled _____)

Extrusive Igneous Rocks:

Above ground = from _____ (extrusive igneous rock)

Usually have _____ or _____ crystals (they cooled _____)

SEDIMENTARY ROCKS

Formed from _____ (rock fragments, mineral _____, animal & plant remains) that are pressed or _____ together.

Sedimentary Rocks are formed through a series of processes: _____, _____, _____, _____, & _____. (WEDCC)

WEDCC:

Weathering

The breaking down of rock by _____ & _____

Erosion

Running _____, _____, & _____ carry away fragments of rock

Deposition

The "dropping" off of _____

Compaction

Process where sediments are _____

Cementation

Process which minerals _____ sediments together

How can sedimentary layers help us understand the age of fossils?

As sedimentary rocks are deposited, they form _____.

Scientists know that the layers on _____ (and the fossils in the top layer) are _____ than the fossils in _____ layers.

METAMORPHIC ROCKS

Rocks that have changed due to _____ and _____.

“Meta” means “_____” and morphosis means “_____” in Greek.

Igneous, sedimentary and other metamorphic rocks can change to become _____ rocks.

What occurs in the Earth to change these rocks?

Pressure from _____ rock layers.

_____, but not enough to _____ the rock

Rocks may be _____ or _____ or atoms may be exchanged to form new minerals.

How are metamorphic rocks classified?

_____—mineral grains are flattened and line up in parallel _____.

Example: _____ formed from rearrangement of minerals in _____ into bands

How are metamorphic rocks classified?

Non-Foliated—_____ are formed

Example: _____ formed from _____.

Where do metamorphic rocks usually form?

Where magma _____ relatively cool rock

Near _____ (near mountain ranges)

Places that are covered miles _____ with other rock causing _____.

When hot water _____ rock

Where a _____ strikes Earth (rare)

Where _____ strike rocks (rare)

What is the process through which rocks change?

The _____ is a series of processes on Earth's surface and in the crust and mantle that slowly change rocks from one kind to another

Once a rock is formed, does it stay the same rock forever? _____

Rocks are continually changed by many _____, such as weathering, _____, compaction, _____, melting, and cooling

Rocks can _____ to and from the three types

How are rocks redistributed?

The core, mantle, & crust are one giant rock _____
_____.