


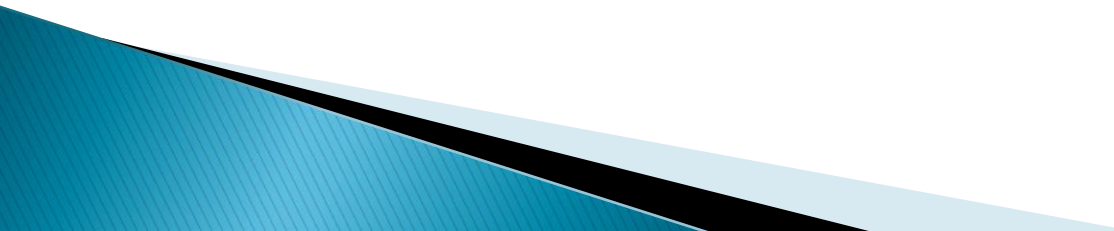
Grade 7 Science
Unit 4: The Earth's Crust
Classification of Rocks




Questions to Ponder...

1. How do the crystals or minerals form in a rock?
 2. Why do some rocks have layers?
 3. Why do some rocks have rounded particles while others have angular particles?
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Rocks

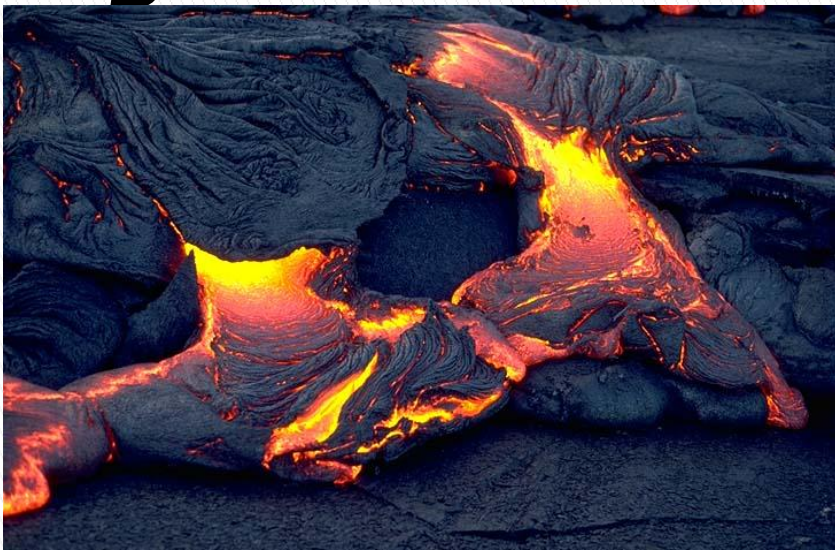
- ▶ Are combinations of two or more minerals.
 - ▶ They can be grouped into **three** families depending on how they are formed.
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1. Igneous Rocks

- ▶ Result from the cooling of molten (melted) rock material.
 - ▶ The cooling creates crystals in the rocks.
 - ▶ Basalt and granite are the most common.
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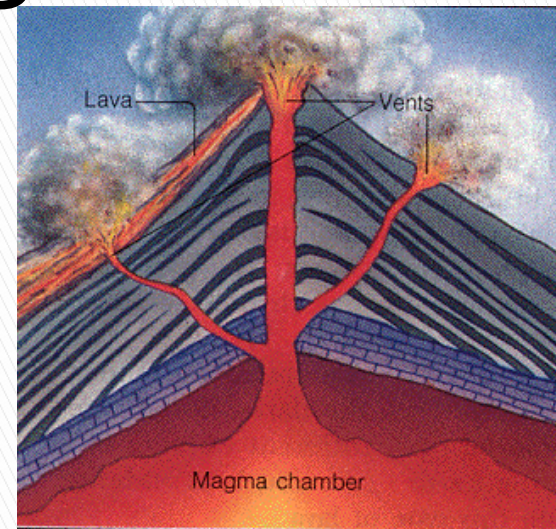
Molten Rock can form...

Above the
ground



Lava

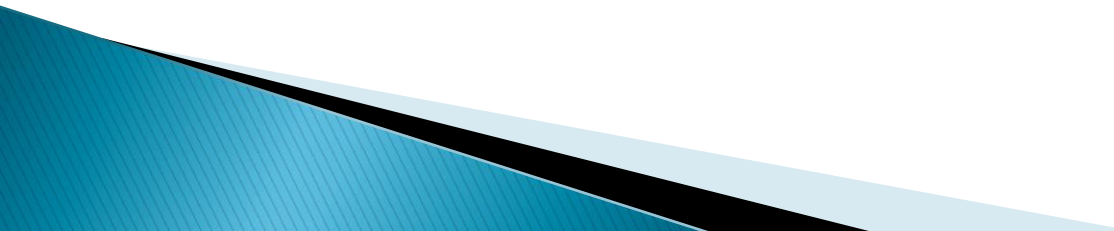
Below the
ground



Magma

2 types of Igneous Rock

Intrusive

- ▶ formed below the surface of the Earth.
 - ▶ Rocks cool very slowly.
 - ▶ They have large crystals.
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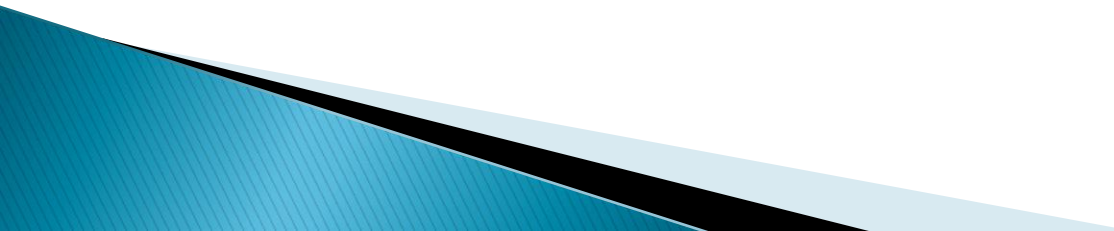


Gabbro

Granite



Extrusive

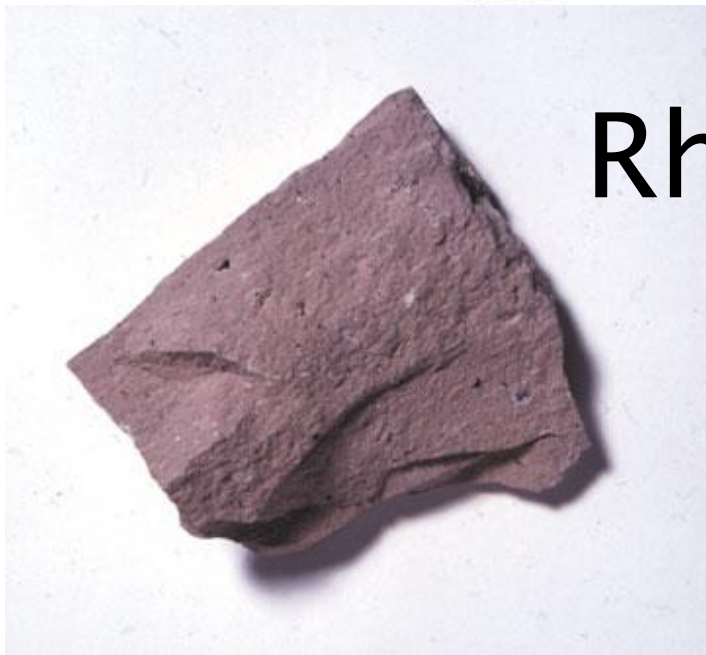
- ▶ Formed above the Earth's surface.
 - ▶ Rocks cools quickly.
 - ▶ They have small crystals.
- 



Basalt



Obsidian



Rhyolite



2. Sedimentary Rocks

- ▶ Form from the compaction and cementation (**lithification**) of sediments into visible layers called **beds**.

Sedimentary rocks are classified by grain size...

- ▶ **Small** particles (silt or mud)

Shale



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- ▶ **Medium** Particles (sand – can roll between your fingers)

Sandstone



▶ **Large** Particles (gravel)



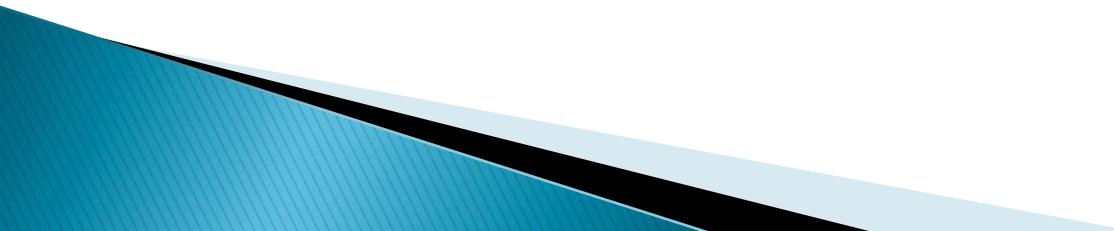
Conglomerate

▶ Plant and animal particles



Limestone

3. Metamorphic Rocks

- ▶ Result when pre-existing rocks (**parent rocks**) undergo changes due to **heat, pressure** and **water**.
 - ▶ This is a long and slow process.
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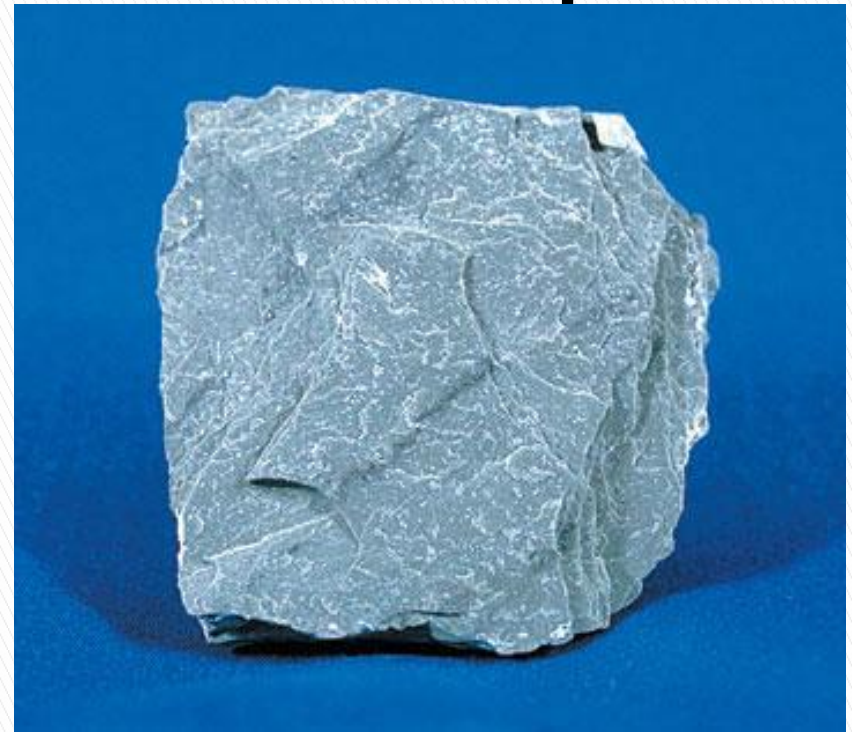
Parent Rocks...

▶ Sedimentary



PARENT: Shale

▶ Metamorphic



Slate

▶ Sedimentary



PARENT: Limestone

▶ Metamorphic



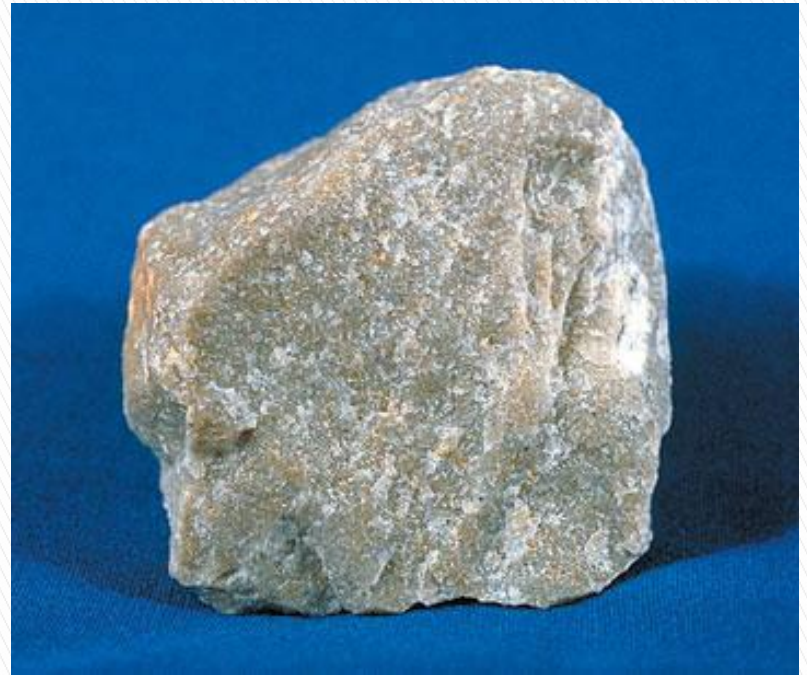
Marble

▶ Sedimentary



PARENT: Sandstone

▶ Metamorphic



Quartzite

▶ Igneous



PARENT: Granite

▶ Metamorphic



Gneiss