

# Rocks



# What is a Rock?

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- A rock is a naturally formed solid mixture containing mineral fragments, glass, and organic matter.



# Igneous Rocks

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- Form from the cooling and hardening of lava or magma.
  - Lava: molten material on Earth's surface.
  - Magma: molten material below Earth's surface.



# Cool Facts about Igneous Rocks

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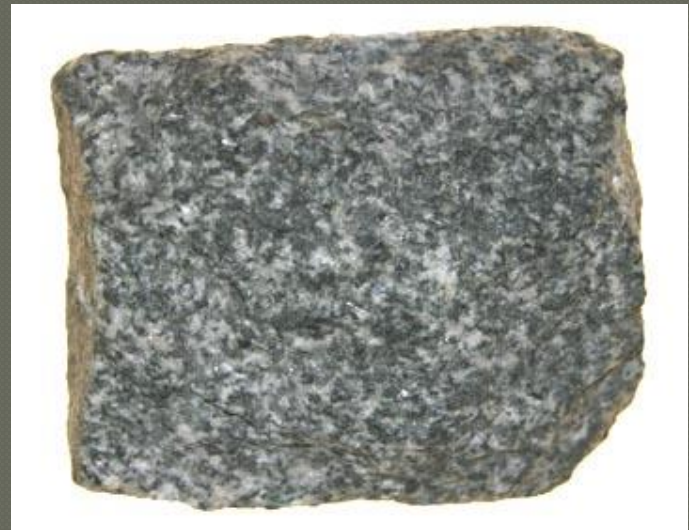
- ① The word igneous comes from the Greek word for fire.
- ① Igneous rocks are the oldest rocks on the Earth.



# Intrusive Igneous Rocks

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- Form within the Earth's surface from cooling & hardening magma.
  - Have larger grain sizes because the rock cooled slowly allowing the grains to form.



# Examples of Intrusive Igneous Rocks

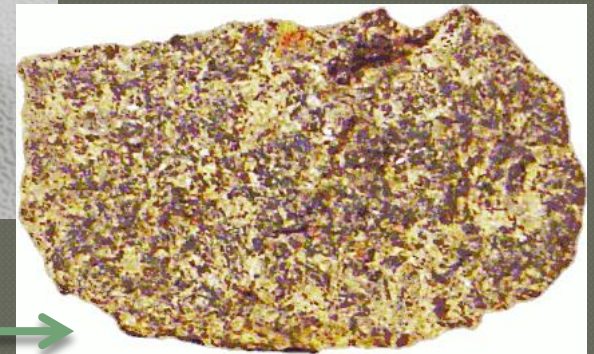
● Granite



● Monzonite



● Gabbro



# Extrusive Igneous Rocks

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- Form from the cooling and hardening of lava on the Earth's surface.
  - Cool quickly, therefore they have very small or no grains.

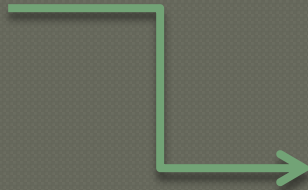


# Examples of Extrusive Igneous Rocks

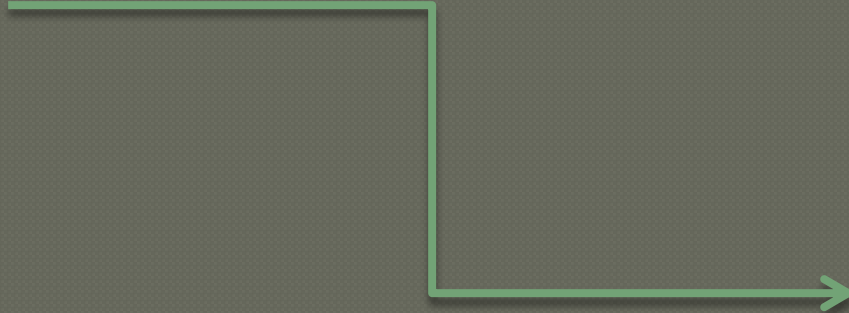
● Obsidian



● Andesite



● Basalt





# Sedimentary Rocks

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- Form through the compaction or cementation of sediments.



# Sediments

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- ◉ Fragments of rocks & minerals
- ◉ Formed from rocks broken down by weathering.



# Compaction

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- Occurs when sediments get buried and pressed together by the weight of the material above them.
- Sedimentary rocks have layers or stripes



# Cementation

- Occurs when water carrying minerals that act like glue evaporates causing the sediments left behind to stick together.



# 3 Types of Sedimentary Rocks

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# 1. Clastic Sedimentary Rocks

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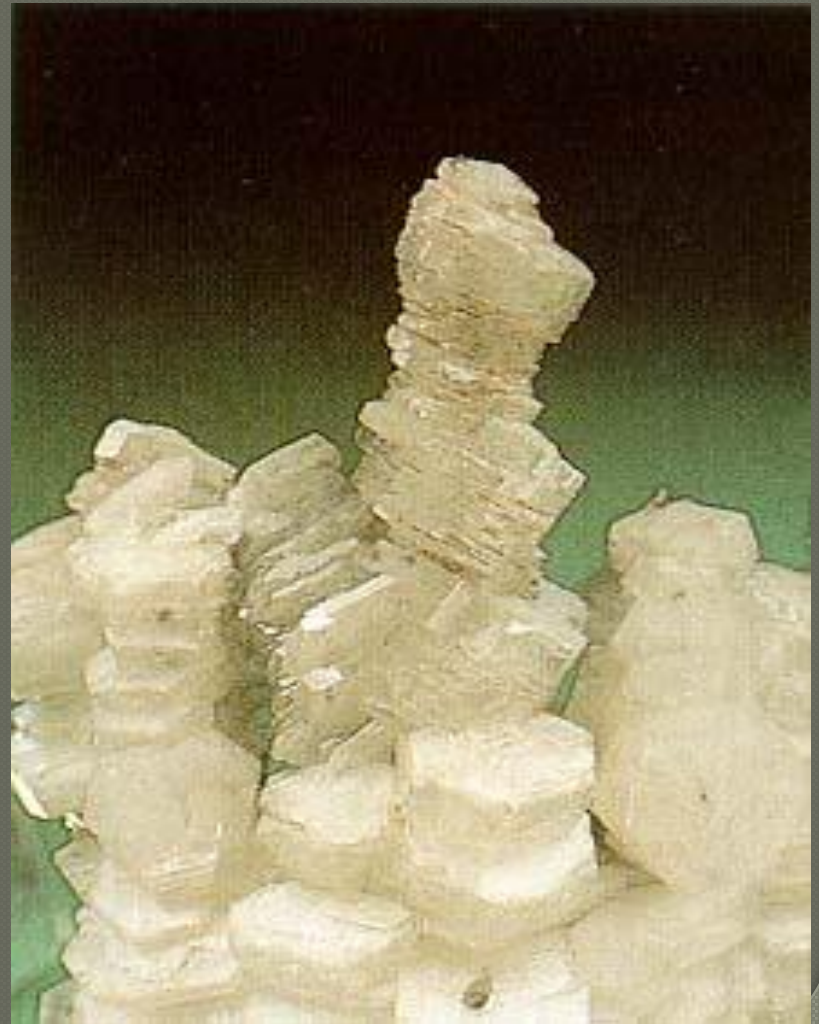
- Made mostly of sediments.
  - The sediments can come in 4 different sizes:
    - Coarse
    - Medium
    - Fine
    - Very Fine



## 2. Chemical Sedimentary Rocks

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- Sedimentary rocks formed from water evaporating away leaving behind a cemented together rock.



# 3. Organic Sedimentary Rocks

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- Formed from the remains of living organisms being pressed together.



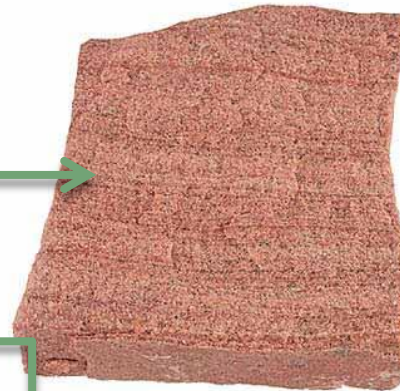


# Examples of Sedimentary Rocks

● Conglomerate



● Sandstone



● Shale



# Metamorphic Rocks

- Formed deep underground where other types of rocks encounter high heat and pressure to chemically change into new rocks.



# Types of Metamorphic Rocks

- Foliated – has a banded appearance.
- Non-foliated – does not have a banded appearance.

