**Lesson two: Types of rocks**

**1. Introduction to Rocks**

Rocks are natural solid materials made of one or more minerals. They are found everywhere on Earth and are constantly changing due to natural processes. Rocks are classified into three main types based on how they are formed.

**2. Types of rocks**

**A. Igneous Rocks**

Formed when **magma or lava cools and hardens**.

**Examples**: Granite (inside Earth), Basalt (lava on surface)

**B. Sedimentary Rocks**

Formed from **layers of sediments** (sand, shells, mud).

**Process**: Sediments are **compacted and cemented**.

**Examples**: Sandstone, Limestone

May contain **fossils**.

**C. Metamorphic Rocks**

Formed when existing rocks are **changed by heat and pressure**.

**Examples**: Marble (from limestone), Slate (from shale)

| **Type** | **Formed By** | **Examples** |
| --- | --- | --- |
| Igneous | Cooling of magma or lava | Granite, Basalt |
| Sedimentary | Compaction of layers of sediment | Sandstone, Limestone |
| Metamorphic | Heat and pressure | Marble, Slate |

**3. The Rock Cycle :**

**Example path**:

Igneous rock → weathering → sediments → sedimentary rock → heat/pressure → metamorphic rock → melting → magma → igneous rock again.

 **Weathering & Erosion** → Sediments

 **Compaction & Cementation** → Sedimentary Rock

 **Heat & Pressure** → Metamorphic Rock

 **Melting & Cooling** → Igneous Rock

 **Conclusion**

Rocks are always changing through natural Earth processes. By understanding how **igneous**, **sedimentary**, and **metamorphic** rocks form and how they connect in the **rock cycle**, we can better understand the structure and history of our planet.