

## Chapter- 2 Inside Our Earth

### **(i) What is a rock?**

Answer: Any natural mass of mineral matter that makes up the earth's crust is called a rock. The earth's crust is made up of various types of rocks of different textures, sizes and colours.

### **(ii) Name three types of rocks.**

Answer: The three types of rocks are:

Igneous Rocks

Sedimentary Rocks

Metamorphic Rocks

### **(iii) How are extrusive and intrusive rocks formed?**

Answer: The molten lava comes out of volcanoes, reaches the earth's surface and cools down rapidly to become a solid piece of rock. This is how extrusive rocks are formed. For example, basalt.

When the molten lava solidifies deep inside the earth's crust, the rocks so formed are called intrusive rocks. For example, granite.

### **(iv) What do you mean by a rock cycle?**

Answer: Igneous rocks change into sedimentary rocks, igneous and sedimentary rocks under heat and pressure change into metamorphic rocks, metamorphic rocks into igneous rocks or sedimentary rocks due to melting or wearing down. This process is called the rock cycle.

### **(v) What are the uses of rocks?**

Answer: Rocks are useful for various purposes, such as

They help in making roads.

They are used in the construction of houses and buildings.

Small stones are used by children in different types of games.

They are used in fertilizers.

### **(vi) What are metamorphic rocks?**

Answer: The type of rocks formed when igneous and sedimentary rocks experience heat and pressure are called metamorphic rocks. For example, clay changes into slate and limestone into marble.

### **(vii) What do you know about the interior of the earth? Or What are the three layers of the earth? Explain.**

Answer:

Our earth is made up of several concentric layers with one inside another. These layers are three in number—crust, mantle and core.

**Crust:** It is the uppermost layer over the earth's surface. It is the thinnest of all the layers. It is about 35 km on the continental masses and only 5 km on the ocean floors.

The continental masses are made up of silica and alumina. It is thus called sial (si-silica and al-alumina). The oceanic crust mainly consists of silica and magnesium. It is thus called sima (si-silica and ma-magnesium).

**Mantle:** It is just beneath the crust. It extends up to a depth of 2900 km below the crust. It is made up of nickel and iron.

**Core:** It is the innermost layer. Its radius is about 3500 km. It is mainly made up of nickel and iron and is known as nife (ni-nickel and fe-ferrous, Le., iron). The central core has a very high temperature and pressure.

**Give reasons:**

- 1. We cannot go to the centre of the earth.**
- 2. Sedimentary rocks are formed from sediments.**
- 3. Limestone is changed into marble.**

Answer:

- 1. We cannot go to the centre of the earth because of the following reasons:**

The thickness (from crust to the core) is 6371 km. (Radius of the earth).

Temperature increases with depth @ 1°C per 32 metre.

There is extreme heat and pressure of overlying rocks, everything is in a molten state.

There is no oxygen to survive.

- 2. Sedimentary rocks are formed from sediments because of the following reasons:**

Igneous rocks and metamorphic rocks, decompose, disintegrate and wear down due to weathering.

This material is carried away by running water (rivers), wind, glacier.

The material is then deposited in low lying areas and is called sediments.

When sediments are solidified into layers due to pressure from overlying sediments they are called sedimentary rocks.

- 3. Limestone is changed into marble due to the following reasons:**

The overlying layers of rocks put pressure on the underlying rocks.

From the surface to the interior of the earth, temperature and heat go on increasing.

Due to pressure and heat, the original limestone changes into marble.

