

Unit - 1

Rocks and Soils



Learning Objectives

- ▶ To understand the nature of rocks, their types and uses.
- ▶ To identify the different types of rocks.
- ▶ To study about the nature of soil and its composition
- ▶ To understand the importance of soil conservation



Introduction

Have you ever noticed any mountains or rocks nearby your location or during your travel? Have you ever been to any hill station during your vacation? Do you know how they originated on the earth surface? Do you know what kinds of material are used in the construction of temples, buildings, roads, flyovers etc. In this lesson, we will learn about rocks and soils.

In lower classes, we have studied about four realms of the earth, namely lithosphere, hydrosphere, atmosphere and biosphere. Lithosphere is the upper most and significant layer of the earth. It is composed of solid rocks and unconsolidated materials. The literal meaning of lithosphere is “**The sphere of rock**”.



Petrology is a branch of geology which deals with the study of rocks. ‘**Petrology**’ is derived from the Greek word “**Petrus**” refers to rock and “**Logos**” refers to study

Find out

What is the base of the house made up of ?

Rocks

The rocks are the solid mineral materials forming a part of the surface of the earth and other similar planets. The earth’s crust (Lithosphere) is composed of rocks. A rock is an aggregate of one or more minerals. Rock is an important natural resource and is found in solid state. It may be hard or soft in nature. An estimation reveals that there are 2,000 different types of minerals found on the earth surface out of which only 8 basic minerals commonly found all over the earth. Minerals are chemical substances which exist in nature. They may occur either in the form of elements or compounds.

Classification of Rocks

According to the mode of formation the rocks are classified into three types as follows.

1. **Igneous Rocks**
2. **Sedimentary Rocks and**
3. **Metamorphic Rocks**