



G.D.GOENKA PUBLIC SCHOOL

Subject: Science (7th)

Wednesday, 17th August 2021

Topic: Soil and the soil profile

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LEARNING OBJECTIVE: To understand soil and its profile.

SKILL FOCUS: Classification of soil horizons.

Soil is the thin layer of material covering the earth's surface and is formed from the weathering of rocks. It is made up mainly of mineral particles, organic materials, air, water and living organisms.

Most plants get their nutrients from the soil and they are the main source of food for humans, animals and birds. Therefore, most living things on land depend on soil for their existence.

Soil is a valuable resource that needs to be carefully managed as it is easily damaged, washed or blown away. If we understand soil and manage it properly, we will avoid destroying one of the essential building blocks of our environment and our food security.

The soil profile

As soils develop over time, layers (or horizons) form a soil profile.

Most soil profiles cover the earth as 2 main layers—topsoil and subsoil.

Soil horizons are the layers in the soil as you move down the soil profile. A soil profile may have soil horizons that are easy or difficult to distinguish.

Most soils exhibit 3 main horizons:

- **A horizon**—humus-rich topsoil where nutrient, organic matter and biological activity are highest (i.e. most plant roots, earthworms, insects and

micro-organisms are active). The A horizon is usually darker than other horizons because of the organic materials.

- **B horizon**—clay-rich subsoil. This horizon is often less fertile than the topsoil but holds more moisture. It generally has a lighter colour and less biological activity than the A horizon. Texture may be heavier than the A horizon too.
- **C horizon**—underlying weathered rock (from which the A and B horizons form).

