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India—Types of Soil

Lesson Plan

Contents

- ▶ What is soil? Why is it important?
- ▶ What determines the types of soil
- ▶ Types of soil
- ▶ Protection of soil

Objectives

- ▶ Learning about the importance of soil – its uses
- ▶ What are the important features to differentiate soil?
- ▶ What are the different types of soil?
- ▶ Learning about the uses of each types of soil
- ▶ Protection of soil

Teacher's Aids

- ▶ Maps of India – Political and Physical
- ▶ Maps showing soil and farming
- ▶ Atlases
- ▶ Blank maps of India for the students
- ▶ Blackboard, internet, pictures, magazines, etc.

Tips for Teacher

- ▶ Ask students to take a teaspoon of soil from different places near their homes in a little bottle. See the differences.
- ▶ Show them some actual soil differences in the school premises if possible.
- ▶ Make a chart of soils with students helping:
 1. Type
 2. Location
 3. How formed
 4. Uses
 5. Sample [made with painted/coloured soil or powdered chalk/crayons]

/// Gear Up, Background and Reading

- ▶ The earthworm lives under the soil.
- ▶ Many animals and birds help the soil by (a) making it richer with manure and (b) pollinating. Explain how.
- ▶ the lesson aloud, including points to remember, and explain.
- ▶ What is soil – a mixture of clay, sand & humus. Also air and moisture.
- ▶ It is important because of its fertility & capacity to grow crops.
- ▶ Tell students the importance of soil – how it takes centuries to form soil – by natural breaking of rocks and man’s efforts. Removing topsoil by quarrying can have very bad effect on farming and ecological balance.

/// Types of Soil

- ▶ Soils differs in composition – reflected in colour, and fertility.
- ▶ (i) Alluvial soil (ii) Black soil (iii) Red soil (iv) Laterite soil (v) Desert soil (vi) Mountain soil
- ▶ (i) **Alluvial:** Northern Plains & deltas; Alluvium brought from mountains & deposited in river valleys & flood plains; fertile – rice, wheat, maize, sugarcane, oilseeds, pulses, cotton, jute, etc.
- ▶ (ii) **Black:** Mainly Deccan Trap – formed from lava rocks - fine clay particles, holds moisture for long; locally called regur soil – cotton, sugarcane, wheat, millets, oilseeds, tobacco.
- ▶ (iii) **Red:** In hot, dry parts of India, Tamil Nadu, Karnataka, parts of Maharashtra, Madhya Pradesh & Telangana – formed from igneous rocks – less fertile – add fertilisers and irrigation – cotton, wheat, pulses, millets, oilseeds & tobacco.
- ▶ (iv) **Laterite:** In hilly areas of Maharashtra, Odisha, Bengal, Karnataka, Andhra Pradesh, Telangana, Kerala, Assam and Meghalaya – develops due to leaching in areas with high temperatures and heavy rainfall – add manure – plantation crops like tea, coffee, coconut, rubber, etc.
- ▶ (v) **Desert:** Rajasthan, Haryana, Gujarat – very little rainfall – loose sand with small amount of clay – add irrigation – wheat, millets, maize, barley, cotton, pulses, etc.
- ▶ (vi) **Mountain:** Slopes of Himalayas & Southern Plateaus – rich in humus – wheat, maize, barley, rice & fruits; also in south – tea, coffee & spices.

/// Protection of Soil

- ▶ Fertility varies – place to place and soil to soil – affected by activity of nature and humans.
- ▶ How to protect soil: (i) Plant more trees (ii) Fields should be covered with plants (iii) Reduce overgrazing (iv) Use organic manure