

PENANG SANGAM HIGH SCHOOL
P.O.BOX 44, RAKIRAKI
LESSON NOTES




School: Penang Sangam High School
Subject: Agricultural Science
Year/Level: 9

Week 18

Strand	AS 9.3 AGRONOMY
Sub Strand	AS 9.3.1 SOILS
Content Learning Outcome	AS 9.3.1.2 Relate the soil profile to the agricultural use of an area.

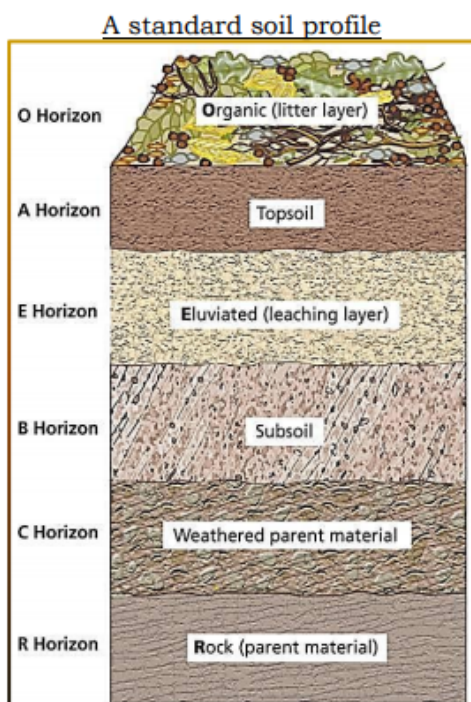
LESSON ONE: COMPONENTS OF A SOIL PROFILE

Lesson outcome: At the end of this lesson the student will identify the components of a soil profile.

-  Soil Horizon - a layer of the soil profile
-  Soil profile - a vertical section of soil from the ground surface to the parent rock
-  Subsoil - the horizon immediately below the topsoil

Notes

When a vertical section of a soil is cut, the soil profile is exposed, showing various horizons.



Description

All soils have four major horizons:

A Horizon – which is the topsoil, is the oldest soil in the profile so contains the most weathered material. It is usually darker than lower horizons because it contains decomposed organic material.

B Horizon – which is the subsoil, contains most of the soil minerals which soil organisms need. These minerals have been leached from the Topsoil and were also released from the parent material during weathering.

C Horizon – which is the substratum, contains weathered parent material.

R Horizon – which is unweathered rock, is also called bedrock or soil parent material

LESSON TWO: IMPORTANCE OF THE SOIL PROFILE

Lesson Outcome: At the end of this lesson the student will discuss why farmers study the soil profile.

Notes

The soil profile can assist farmers when they are making decisions on the farm. Farmers prepare a soil profile and study the position and depth of each horizon.

Lessons which a farmer can learn from a soil profile:

- a) Depth of O Horizon – informs the farmer of the previous use of the soil.
- b) Depth of A and B Horizons- Examining the depth of the A and B horizons helps the farmer determine the type of plant to grow.
- c) The position of the C Horizon- The farmers will usually try to avoid digging into the C horizon because stones and gravel break tools and implements and also affect root growth.

The soil profile is studied because it can determine:

- Previous use of the soil in an area
- The type of crop to grow
- Whether to use machines or tools for cultivation
- Whether an area will need drainage or irrigation

Student Activity

1. What is soil profile?

2. Define the term Soil Horizon.

3. Differentiate between 'C and R horizons' of a soil profile.

4. State 2 reasons why farmers study soil profile.

a) _____

b) _____

5. Make a model of a soil profile and label the parts.



THE END