



TAVUA COLLEGE

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WEEKLY HOME STUDY PACKAGE - WEEK 1 (05/07/21 – 09/07/21)

Subject	AGRICULTURAL SCIENCE	Year/Level	11
Strand	AS 11.3 Agronomy		
Sub-strand	AS 11.3.1 Soils		
Content Learning Outcome	Demonstrate the assessment methods used in determining the physical properties of the soil.		

CLASSES OF SOIL TEXTURE

Lesson Outcome: identify the classes of soil texture.

Agricultural soils are divided into textural classes according to their physical texture.

- i) A coarse textured soil is one comprised primarily of medium to large size sand particles and includes sands and loamy sands.
- ii) A medium textured soil is one comprised of equal amounts of sand, silt and clay and includes loams, clay loams, sandy loams and silt loams.
- iii) A fine textured soil is one dominated by tiny clay particles and includes clays, sandy clays and silty clays.

DETERMINE SOIL TEXTURE

Lesson outcome: practice three methods of determining soil texture
5 methods to determine the texture of the soil.

Method 1. Feel Method – this is suitable for fields. This can be done by placing the soil on hard surface and add water.

- Pick up some soil and rub between thumbs.
- If it feels gritty then its sandy soil. If it is sticky then the soil is clay.

Method 2: Ball Throwing Method:

The texture of the soil can be inferred by the way a ball of soil acts when it is thrown at a hard surface such as a wall or a tree.

Method 3 and 4: The Pipette Method and the Hydrometer Method

- are used to determine soil texture in the laboratory.
- Both methods determine the proportions of sand, silt and clay in the soil.
- The proportions are then plotted on the Soil Texture Triangle and an accurate determination of the texture of the soil is made.

Method 5: Ball and Ribbon Method

This test is suitable for the field. It will give a rough idea of the texture of the soil.

Activity

1. List the three classes of soil texture.

i. _____

ii. _____

iii. _____

(3 marks)

2. Differentiate among the particle sizes of sand, silt and clay.

(3marks)

3. Identify two methods of determining soil texture.

i. _____

ii. _____

(2 marks)

4. While carrying out a soil texture test, a student described the three soil sample as **gritty, smooth and sticky**. What would the student conclude from the three soils being tested?

(3 marks)