

## FIRST TERM E-LEARNING NOTE

**SUBJECT: AGRICULTURAL SCIENCE**

**CLASS: SS 2**

### SCHEME OF WORK

<b>WEEK</b>	<b>TOPIC</b>
1-2	Soil: Meaning, Types, Composition and Properties of Soil.
3	Farm Machinery and Implements: Types, Description, Uses and Maintenance.
4-5	Surveying and Planning of Farmstead; Meaning and Importance, Common Survey Equipment.
6	Irrigation and Drainage; Meaning, Importance, Types, Advantages and Disadvantages.
7	Environmental Factors Affecting Agricultural Production (Crops and Animals), Climatic Factors – Biotic factors – Edaphic factors.
8 - 9	Plant Nutrient and Nutrient Cycle. Macro and Micro Nutrients. Nitrogen, Carbon and Water cycles.
10	Factors Influencing Nutrient Availability in the Soil. Methods of Replenishing Soil Nutrients Farming Practices

### REFERENCE BOOK

- Essential Agricultural Science for Senior Secondary Schools, by O.A. Iwena
- Prescribed Agricultural Science for Senior Secondary Schools by S.A. Omofuyi Ota
- WAEC Pack

### WEEK ONE

#### TOPIC: SOIL

#### CONTENT

- Meaning of Soil
- Types of Soil
- Composition of Soil
- Properties of Soil

### MEANING OF SOIL

Soil can be defined as the unconsolidated weathered materials found in the upper most layer of the earth surface on which plants grow. It provides support and nutrients for the plants.

### TYPES OF SOIL

The three types of soil are; Sandy Soil, Clay Soil and Loamy Soil.

## **SANDY SOIL**

A soil is said to be sandy if the proportion of sand particles in a sample of the soil is high. The particles are mainly quartz ( $\text{SiO}_2$ ).

### **PROPERTIES OF SANDY SOIL**

1. Sandy soil is coarse, grained and gritty.
2. It is loose with large pore spaces.
3. It absorbs and loses water easily.
4. It is not sticky when wet and cannot form a cast or ribbon.
5. It is well aerated with low water holding capacity.
6. Percolation in sandy soil is high but capillarity is low.
7. Sandy soil heats up easily during the day and cools down quickly in the night.
8. It supports leaching, hence it is low in plant nutrients.
9. It does not support water logging and erosion.
10. Sandy Soil has grey or brownish colour.

### **METHODS OF IMPROVING SANDY SOIL**

1. Planting of cover crops
2. Application of compost manure
3. Application of farm yard manure
4. Mulching the soil
5. Avoidance of bush burning

### **ECONOMIC IMPORTANCE OF SANDY SOIL**

1. It is good for cultivation of cassava, cotton, groundnut etc.
2. It is good for building construction when mixed with cement.

### **EVALUATION**

1. What is soil?
2. List the three types of Soil and state three characteristics of sandy soil.

## **CLAY SOIL**

A soil is said to be clayed if the proportion of clay in a sample of the soil is very high.

### **PROPERTIES OF CLAYED SOIL**

1. The particles are fine, powdery and smooth when dry.
2. The parties are sticky and...