

Subject: Science

Duration: 3 x 40 mins

Unit Title: Systems

Focus Questions: 1. What does each system do for the plants?

2. How do the parts of each system work together?

Objectives:

Pupils will:-

1. Identify the types of root systems.
2. Explain the functions of the root system and the shoot system.
3. Identify and state the functions of a flower.
4. Conduct experiment on the germination process of seeds and record findings.
5. Label a seed and give functions of each part.
6. Make a list of ground provisions and classify them according to their root type.

Materials/Resources: Integrated Science G.S.AT Workbook

Nelson's Assessment

Seed – red pea, jar, newspaper

Key Concepts/Vocabulary:

Storage stem – Irish potato, onion, ginger, sugar cane

Storage root – sweet potato, carrot, beetroot, cassava

Procedures/Activities:

Pupils will:-

1. Draw a picture of a plant and label the parts. Discuss the function of each part.
  - Identify the three different growth forms in plants. Give examples of each.  
Tall trees – mango, coconut, ackee  
Short, bushy, shrubs – hibiscus, rose  
Herbaceous plants (herbs) – grass, mint, periwinkle/callaloo
2. Identify the systems of a plant on the diagram. Label as shoot system and root system.
3. Examine different types of root and give examples of them.

Each group will search on school compound for a sample of a fibrous and top root and give examples of each root.

4. Collect a sample of a hibiscus flower or any other, place it in their notebooks and label it. Discuss the function of each part. (Fertilization, germination and pollination.)
5. The groups will complete the following activities and record observations then make inferences and conclusions.
  - i. Soak seeds for 24 hours, then place in a container with soaked newspaper. Record findings.
  - ii. Get two containers of equal amount of water; place a plant in one container so that only the roots are in the water. Cover the containers with newspaper and observe.
6. Split a red pea and explain its structure. Label the diagram of the pea and identify the young root and shoot system.
  - Explain the germination process.

Assessment:

1. Answer questions based on the concept from:
  - ✓ Carlong Assessment – Science
  - ✓ Nelson's Assessment – Science
2. Produce list of ground provision under correct classification.

Evaluation: