P.3 LITERACY I LESSON NOTES TERM II– 2018s

ENVIRONMENT

Environment is things around us. Surroundings is another word to mean environment

Component of the environment

Environment is made up of two components namely:

- Living components
- Non – living components

Living components	**Non-living components**
Plants Animals	Air Water Soil

- Living things

What are living things?

THEME: LIVING THINGS IN OUR SUBCOUNTY

Reading descriptions of words

Breathe	Giraffes	Nile perch
Wastes	Wetland	Silver fish
Respond	Water logged	Proteins
Reproduce	Crocodiles	Belts
Feed	Tortoises	Salting
Stimuli	Earthworms	Refrigerator
Thorax	Hides	Scratching
Spiracles	Aquatic animals	Warmth
Antennae	A pond	Flightless
Tasting	Protection	Web feet
Laying	Monitor	Penguins
Feathers	Shelter	Geese
Beaks	Slugs	Swans
Swimming	Friendship	Poultry
Gills	Wriggling	Pigeons
Cold blooded	Gliding	Sucking
Hooves	Maggot	Regarded
Buttons	Nostril	Scorpions
Manure	Ventral fin	Harmful
Prestige	Caudal fin	Spoil
Dowry	Pectoral fin	Weevils
Buffalos	Dorsal fin	Wax
Tourists	Corners	Swarm
Taboos	Senses	Proboscis

Nectar Dragonflies

THEME: LIVINGTHINGS IN OUR SUBCOUNTY

LESSON ONE

What are living things?

Livingthings are things which have life.

Examples: cows , goats , oranges , mangoes , beans , birds , insects etc

Groups of living things.

- Plants
- Animals

Characteristics of living things

- They breathe
- They feed
- They move
- They reproduce
- They pass out wastes
- They respond to stimuli
- They grow and change

Non-living things:

These are things which do not have life.

e.g stones, soil, water , timber , etc.

Characteristics of non-living things

- They do not breathe
- They do not feed.
- They do not move
- They do not reproduce
- They do not pass out wastes
- They do not respond stimuli
- They do not grow and change.

EXERCISE

1. Define the term environment.
2. Mention any two components of the environment.
3. What are living things?
4. Mention the two groups of living things.
5. State two characteristics of living things.
6. What are non-living things?
7. Give one example of non-living things.

LESSON TWO

Animals

Types of animals in our division

There are two types of animals in our sub county and these are;

(i) Domestic animals

(ii) Wild animals

Domestic animals:

Are animals which are kept in homes.

Examples;

- Cows
- Dogs
- Goats
- Sheep
- Rabbits
- Donkeys

Reasons why people keep domestic animals.

- To get meat
- To get milk
- To sell and get money
- For transport
- For protection
- For labour

Animals kept for transport

- Donkey
- Camels
- Horse
- Oxen

EXERCISE

1. Name the type of animals kept at home.
2. Why are such animal s kept at home?
3. Name one animal kept for protection.
4. Give the reason why donkeys are kept.

LESSON THREE

Animal	Products	Things we make
Goats Cow	Skins and hides	Belt , drum , shoes , watchstraps , handbags
	Milk	Yoghurt, butter , cheese , ghee
	Hooves and horns	Glue , buttons, bungles , necklaces
	Bones	Animal feeds
Sheep	Wool	Woolen blankets , sweaters , stockings , jackets , scurvies
	Mutton	
Pigs	Pork	Bacon and ham, lard
Rabbits	Fur	Blankets
	meat	

Ways of caring for domestic animals

- By giving them food and water
- By cleaning their houses (shelter)
- By treating them when sick
- By building them shelter.

EXECISE

1. Mention any two products got from domestic animals.
2. In which way are hooves useful to people.
3. What do we call the meat got from:
   (i) pigs
   (ii) sheep
4. Give any one product got from milk.
5. Suggest one way of caring for domestic animals.

LESSON FOUR

Wild animals

- Are animals which live in the bush.

Examples:

- Antelopes
- Giraffes
- Elephants
- Buffalos
- Zebras
- Leopards

Uses of wild animals

- They attract tourists
- Some wild animals give us skins eg snakes , leopards , lions .
- Some wild animals gives horns eg antelopes , rhinos , buffalos.
- Elephants give us ivory.

Dangers of wild animals

- Some wild animals can eat people e.g lions , leopards, etc.
- Some wild animals can also eat domestic animals.
- Some wild animals destroy our crops

EXERCISE

1. What are wild animals?
2. Mention atleast two examples of wild animals.
3. Give two uses of wild animals.
4. How can wild animals be dangerous?
5. Suggest any two willd animals.
6. Write down any one useful and dangerous wild animal

LESSON FIVE

Habitats

A habitat is a home of a living things.

Types of habitats

- Animal habitats
- Plant habitat

Animal habitats

An animal habitat is a place where an animal lives.

Examples of animal habitats

- Compound eg. goats , rabbits , geckoes
- Plants eg caterpillars , slugs , butterflies , chameleon
- Forest / bush eg monkey , buffalo, elephants
- Swamps eg mud fish
- Water eg whales, dolphin
- Garden eg rats , squirrels etc.

Animals in swamps and in water:

- A swamp is a water logged area with some plants in it or
- A swamp is a wetland with vegetation in it.
- A swamp can be called a wetland.

EXERCISE

1. Define the term habitat.
2. Mention any two animal habitats.

3. What is the habitat for fish?
4. Give any one use of swamps to animals.
5. Name two animals that live in the garden.

LESSON SIX

Water animals (Aquatic animals)

Animals that live in water are called aquatic animals.

Examples

- Fish
- Crocodiles
- Hippopotamus
- Frogs
- Slugs
- Crab

A POND

A pond is a small pool of water.

Some ponds are natural and others are manmade.

A pond can be found in homes , schools and hotels.

Examples of animals in a pond

- Fish
- Frogs
- Slugs
- Snails
-

AN AQUARIUM

An aquarium is a glass tank where fish and other water animals are kept in our homes.

Places where an aquarium can be found:

- Hotels
- School compounds,
- homes, etc.

Diagram of an aquarium

Exercise

1. what are aquatic animals?
2. Mention any two aquatic animals.
3. How is a pond different from an aquarium?
4. Give two places where an aquarium is found.
5. Mention any two animals that are kept in the aquarium.

LESSON SEVEN

Animals without legs

- fish
- Snakes
- Slugs
- Earth worm

Animals which lay egg

- Lizards
- Tortoise
- Chameleon

Animals and their young ones

Animal	**Young**	**Home**
Cow	Calf	Byre
Goat	Kid	Shed
Rabbit	Kitten	Hutch
Sheep	Lamb	Pen
Pig	Piglet	Sty
Horse	Foal	Stable
Chicken	Chicks	Coop
Lion	Cub	Den
Fish	Fry	Water / aquarium

Exercise

1. Name two limbless animals.
2. How does a fish reproduce?
3. Match the following to their young one.

(i) Cow fry
(ii) Horse calf
(iii) Rabbit cub
(iv) Fish foal
(v) Lion kitten

(i) Cow ……
(ii) Horse ……
(iii) Rabbit …….
(iv) Fish ……
(v) Lion ……..

4. Write the homes of the following animals.

(i) Chicken
(ii) Pig
(iii) Sheep
(iv) cow

LESSON EIGHT

Animal movements

Way f movement	Animals
Crawling	Lizards Chameleon

	Tortoise
Hopping	Frogs Grasshoppers Locusts Toads
Flying	Butterflies Houseflies Bees
Walking	Cows Dogs Hens Man
Gliding	Snail Slug Snake
Wriggling	Caterpillar Earthworms Maggot
Swimming	Fish Ducks Swans Geese

Why animals move from one place to another

- To get food
- To get water
- To get protection
- To get shelter
- To look for their young ones
- To look for friendship
- To look for new homes

EXERCISE

1. State any two reasons why animal move from one place to another.
2. How do the following animals move?

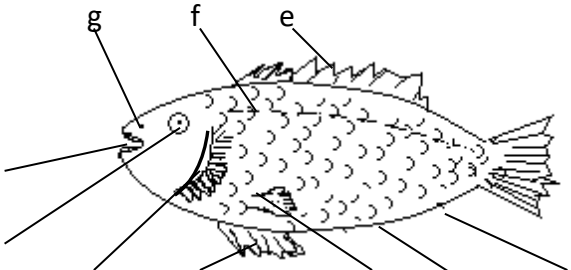
(i) Caterpillar

(ii) Snake

3. State the similarity between fish and swans in terms of their movement.
4. How is a frog different from cows in terms of their movement?
5. Mention any two animals that move by flying.

LESSON NINE

External parts of a fish



H

i

k a b l c

a. Pelvic fin
b. Pectoral fin
c. Ventral/anal fin
d. Tail/caudal fin
e. Dorsal fin
f. Lateral line
g. Nostril
h. Mouth
i. Eye
j. Scale
k. Gill cover/operculum
l. Anus

USES OF PARTS OF A FISH

1. The dorsal fin protects the fish from enemies.
2. The eyes are used for seeing.
3. The gill cover protects the gills.
4. The tail fin helps the fish to turn to different directions.
5. The scales protect the body of a fish.
6. The nostrils are for smelling.
7. The mouth is for feeding /getting food.
8. The lateral line detects sound waves.
9. Pectoral and pelvic fins are used for breaking speed and going up or down wards in water.
10. Gills are used for breathing.

NB : Fins help a fish to swim in water

Exercise

1. Name any three eternal parts of a fish.
2. In the space below draw a fish and label the following parts.

(i) Caudal fin
(ii) Lateral line
(iii) Nostril

3. Give the function of the gill cover to the fish.
4. What does a fish use for breathing?
5. How useful are fins to a fish?

LESSON TEN

Examples of fish common in Uganda.

- Tilapia (engage)
- Nile perch (empuuta)
- Cat fish
- Silver fish (mukene)
- Lung fish
- Mud fish

Use of fish

- Source of proteins
- Scales are used to make bags and belts.
- Fish helps to control mosquito larvae

- Helps in manufacture of animal feeds
- Some people get jobs e.g fish mongers
- For selling

Exercise

1. Name any two types of fish caught in Uganda.
2. Which main food value is got by eating fish?
3. How do fish control malaria?
4. Identify the biggest fish in Uganda.
5. State two uses of fish to the people of Uganda.

LESSON ELEVEN

Methods of catching fish

- fish hooks
- Fishing nets
- Fishing baskets

FISH PRESERVATIONS

Preservation

Preservation is the way of keeping food for a long time without going bad.

Morden methods of preserving fish

- Canning / tinning
- Refrigeration

Local methods

- By smoking
- By salting
- By sun drying

Qn: Why do we preserve fish?

- For future use
- To prevent wastage

Exercise

1. Name any two common methods of catching fish.
2. Give any two modern methods of preserving fish.
3. State the reason why we preserve fish.
4. Why do most people use local methods to preserve fish.

LESSON TWELVE

SUB THEME BIRDS

The external parts of a bird.

l

d

c

g

e

a. Comb/crown
b. Eye
c. Wing
d. Tail feathers
e. Spur
f. Claws/nails
g. Leg
h. Wattle
i. Beak
j. Nostril

Functions of parts of a bird.

Beak	-	It picks food from the ground (feeding)
	-	It is used for protection
Wings	-	used f or flying
Legs	-	for walking
Claws	-	for protection
Spur	-	for fighting/ protection
	-	seeing
	-	for flying
	-	giving birds shape
	-	cover body of a bird.
	-	Give birds colour
	-	Feathers give birds warmth

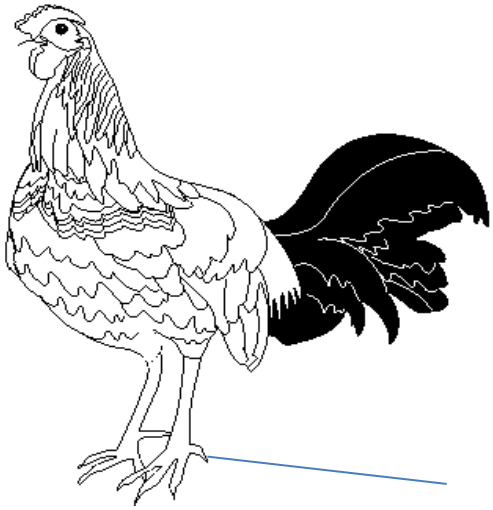
Characteristics of birds.

- Birds breathe by means of lungs
- Birds are covered with feathers.
- Have beaks
- Have claws
- Reproduce by laying eggs

Note: Swimming birds have webbed feet which help them to swim on water.

EXERCISE

1. Mention any two external features of a bird
2. How is a spur useful to a bird?
3. What do the birds use for flying?
4. In which way do birds reproduce?
5. Below is a bird name parts X andY



X

LESSON THIRTEEN

Examples of swimming birds

- Ducks
- Geese
- Swans

Types of birds

- Domestic birds
- Wild birds

Domestic birds

- Are birds kept in our homes .
- They are also called poultry.

Examples

- Ducks
- Pigeons
- Peacocks
- Guinea fowls
- Chicken
- Parrots
- Turkeys

Wild birds.

- Are birds found in the bush.

Examples

- Weaverbirds
- Kites
- Crested cranes
- Eagles/crows

EXERCICE

1. What are domestic birds?
2. Give two examples of domestic birds.
3. What term is used to mean domestic birds?
4. Suggest any two characteristics of birds.
5. Name any two wild birds.

6. Why is a duck called a swimming bird?

LESSON FOURTEEN

Habitats of birds

- A habitat is a home of a living thing.
- Birds live on trees, nests, burrows.

Uses of birds to people;

- Birds provide meat e.g chicken, turkey
- Provide manure
- Provide feathers
- Provide bones used to make animal feeds
- Used f or cultural purposes e.g paying dowry
- Used for tourist attraction

Caring for birds

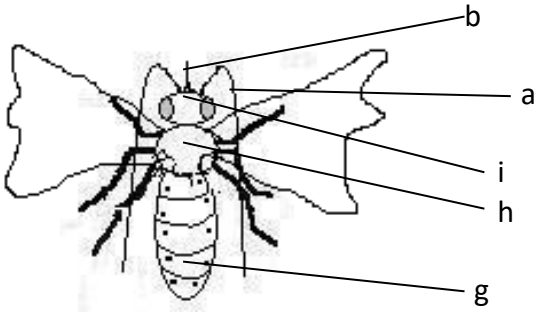
Providing food , water , shelter to birds

EXERCISE

1. What is a habitat?
2. Mention any two habitats of birds.
3. Apart from being a habitat, give any other one way plants are useful to birds.
4. Suggest two uses of bird to people.
5. Give one way of caring for birds.

LESSON FIFTEEN

Parts of an insect



a. Feelers/antennae
b. Proboscis
c. Eye
d. Wing
e. Leg
f. Spiracles
g. Abdomen
h. Thorax
i. Head

The three main body parts of an insect

1. Head - It is where the eyes, feelers and proboscis are found.
2. Thorax - It s where the legs and wings are attached.
3. Abdomen It is where we find the spiracles.

Functions of parts of an insect

1. Feelers - for feeling
2. Proboscis - used for sucking food and water

3. Wing - for flying
4. Spiracles - for breathing

Characteristics of insects

- Insects have three main body parts
- Have three pairs of legs
- Have jointed legs
- Have feelers for feeling and smelling
- Have segmented bodies

Note: spiders, ticks and mites have two main body parts and eight legs. They are not insects.

EXERCISE

1. State any two characteristics of insects.
2. Why is a tick not an insect?
3. On which part of an insect are wings and legs attached?
4. Give the use of the proboscis to an insect.
5. Name the three main parts of an insect.

LESSON SIXTEEN

Harmful and useful insects

- Some insects are harmful or dangerous to man

Examples:

- Of harmful insects
- Wasps
- Crickets
- Locust
- Mosquitoes
- Termites
- Bees
- Houseflies
- Red ants
- Cockroaches

Useful insects to man

- Bees
- Grasshoppers
- White ants
- Locusts

Exercise

1. Give any two useful insects in our environment.
2. Stete on use of insects.
3. Write down one example of harmful insect.
4. In which one way are insects are harmful?

LESSON SEVENTEEN

INSECT HABITATS (HOMES)

Insects that live in the soil

- Termites
- White ants
- Red ants

Insects that live on plants

- Butterflies
- Caterpillars

Social and solitary insects

Social insects are the insects that live , move and work together.

Examples

- Bees
- Red ants
- Termites
- Wasps
- Black ants
- White ants

Anti – social insects (solitary insects)

- Are insects which do not live, move and work together.

Examples

- Houseflies
- Locusts
- Mosquitoes
- Cockroaches
- Dragon flies
- Butterflies
- Moth
- Grass hoppers

NOTE: Moth pollinates flowers at night

Other insects habitats.

- Bees - bee hive
- Spider - web

EXERCISE

1. What is the habitat of a bee.
2. Where do termites live?
3. State the difference between social and solitary insects.
4. Give any two examples social and solitary insects.
5. State the importance of moths to plants.

LESSON EIGHTEEN

CARE FOR INSECTS, BIRDS AND ANIMALS

Care for bees

- By providing a hive
- By planting flowers for nectar
- By providing water.

Types of bees.

- Worker bees
- Drone bees
- The queen bees

Note: A group of bees is called a swarm.

Uses of bees to man

- Bees provide honey
- Bees provide bee wax
- Young bees are eaten

Importance of honey

- Honey is used as medicine e.g syrup
- Honey is used to make some foods sweet
- People sell honey and get money
- It is a source of carbohydrates

Products from the wax

- Candles
- Shoe polish
- Some cosmetics
- After shave
- Crayons

EXERCISE

1. What is a swarm?
2. Mention any two types of bees.
3. Which bees produce othe bees in a hive?
4. Give any one use of bees.
5. Suggest any one product got from wax.

LESSON NINETEEN

Ways of caring f or birds.

- Treating birds
- Keeping bird's records
- Providing food to birds
- Building birds' houses
- Vaccinating birds
- Protecting eggs

Signs of a sick bird

- It is sleepy
- Has dull feathers
- It dos not want to eat food.

Note: Poaching is the hunting of wild animals without permission

- Treating sick animals in the wild life center
- Providing food to animals.

Exercice

1. Suggest any two causes of sickness among birds.

2. Discuss two ways of controlling diseases among birds
3. Give any one way of caring for birds.
4. What is poaching?
5. Write one sign of sick birds.

TOPICAL TEST

LESSON TWENTY
SUB THEME: PLANTS
Reading description of words.

- Seed
- Develop
- Germination
- Seedling
- Condition
- Necessary
- Moisture
- Temperature
- Warmth
- Epigeal
- Hypogeal
- Cotyledon
- Dicots
- Monocots
- Thatching
- Chlorophyll
- Upright/erect
- Clasping
- Underground
- Flower
- Habitat
- Nursery bed
- Harsh
- Weeding
- Spraying
- Chemicals
- Thinning
- Transplanting
- Mulching
- Fencing
- Rotation
- Photosynthesis
- Legumes
- Cereals
- Firmly
- Reproductive
- Suffocate
- Harbor
- Excess
- Pests
- Pesticides
- Premature
- Pruning
- Transplant
- Manure

Plant
Plants are living things that make their own food.
Examples of plants

- Maize plants
- Bean plant
- Cow pea plant

Reasons why they are called plants

- They make their own food
- They have chlorophyll

GROUPS OF PLANTS

a. Flowering plants
   Are plants which bear flowers e.g maize, beans, grass, tomatoes, peas, etc.
b. Non-flowering plants
   Are plants which do not bear flowers e.g ferns, conifers, mosses, liver worts

Characteristics of plants
They grow, reproduce, feed, breathe, and excrete.
EXERCISE

1. What are plants?

2. Give two examples of plants.
3. What are flowering plants?
4. Give a reason why a fern is called a non-flowering plant.
5. State two characteristics of plants.

LESSON TWENTY ONE

Plants habitats

Plant habitat is a place here plants grow or are found

N.B a habitat is a home of a living thing.

Plants in school compounds.

- Pawpaw
- Avocadoes
- Mangoes
- Palms
- Trees, flowers, etc.

Plants in swamps

- Papyrus
- Yams
- Rice
- Sugarcanes, etc

Plants in desert/dry areas

- Cactus
- Sisal

Plants which grow in water

- Water hyacinth
- Water lily
- Water cabbage

Plants that grow on rocks

- Liverworts
- Ferns
- Mosses

EXERCISE

1. Name two plan habitats.
2. How is a cactus able to grow in a desert area?
3. Mention any one plant that grows on rocks.
4. Where do sugar cane plants grow?
5. Give any one plant that grows in a school compound.

LESSON TWENTY TWO

SCHOOL GARDEN

Factors to consider when setting up a school garden

- It should be near a water source
- Should be near the school

- It should be in an open space

Importance of a school garden

- Children learn about crop i.e for study purposes
- Children get food from the grown crops
- The surplus is sold and generates income to the school.
- Children learn how to dig.

NURSERY BED

Nursery bed is a small piece of land where seedlings are raised before taking them to the main garden.

Importance of a nursery bed.

- Protects the seedlings from harsh conditions e.g too much sunshine, strong wind and heavy rains.
- It is easy to care for the seedlings.
- The shelter prevents water from evaporating
- It is easy to select good seedlings.

QUALITIES OF A GOOD NURSERY BED

A good nursery bed should have shed to protect seedlings from harsh weather.

A good nursery bed should have fine fertile soil for better growth of seedlings.

A good nursery bed should be on a well raised land to prevent soil erosion.

Examples of crops grown in a nursery bed.-

- Tomatoes
- Cabbage
- Loofah plants
- Passion fruits
- Onion
- Orange
- Egg plants
- Green pepper
- Spinach
- Trees

Caring for crops in a nursery bed.

- Watering/irrigation
- It provides water to plants mainly in dry seasons

  Spraying

  This is the application of chemicals on seedlings to control pests, diseases and weeds.

EXERCICE

1. What is a nursery bed?
2. State two qualities of a good nursery bed.
3. Name two plants grown in a nursery
4. Suggest any two ways of caring for seedlings in a nursery bed.
5. Give one importance of a nursery bed.

LESSON TWENTY THREE

WEEDING

This is the removal of unwanted plants from the garden.

A weed is un –wanted plant in the garden.

Examples of common weeds

- Black jack
- Star grass
- Spear grass
- Sodom apple
- Finger millet
- Goat grass

- Wondering jew
- Nut grass
- Elephant grass

Importance of weeds to man

- Some weeds are eaten as food
- Some weeds are used as herbal medicine
- Some weeds are feeds to domestic animals.

Ways of controlling weeds

- By up rooting
- By mulching
- By slashing
- By spraying
- By digging

Dangers of weeds in the gardens

- Weeds hide dangerous pests.
- Weed lead to low crops yields
- Weeds compete with plants for sunlight, water and nutrients.

Thinning

- Is the removal of excess crops from the garden to create space.

EXERCISE

1. What is weeing?
2. State two methods of weeding.
3. Mention any one example of weeds.
4. Discuss any two advantages of weeding.
5. Define thinning.

LESSON TWENTY FOUR

Hardening off:

This is the making of seedlings get used to harsh conditions.

Transplanting

- Is the transfer of seedlings from the nursery bed to the main garden.

Mulching

- Is the covering of top soil with dry plant materials.

ADVANTAGES OF MULCHING.

Mulching controls soil erosion.
Mulching improves soil fertility.
Mulching keeps the soil moist.

Disadvantages of mulching

Mulching is tiresome
Mulches are fire hazards
Mulches keep some pests.
Mulches may grow into weeds.

EXERCISE

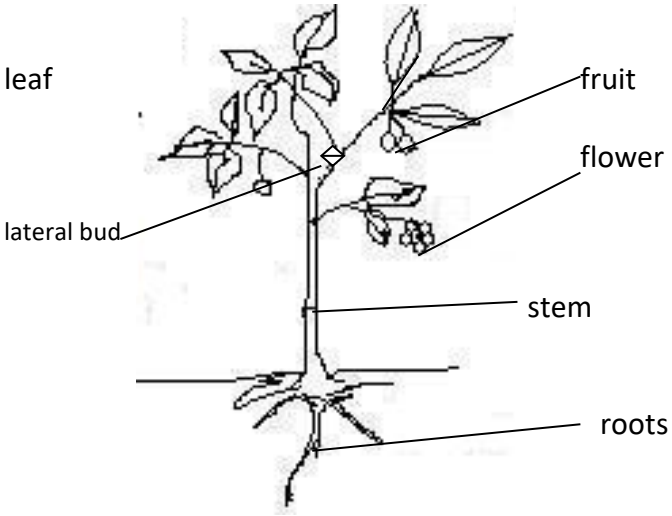
1. Define the following terms
(i) Transplanting
(ii) Hardening off
2. What is mulching?
3. Give any two advantages of mulching.
4. State two disadvantages of mulching.
5. Why is transplanting done in the evening?

LESSON TWENTY FIVE

FLOWERING PLANTS

Flowering plants are plants that bear flowers.

Diagram of a flowering plant



systems of plants

- Shoot system
- Root system

Exercise

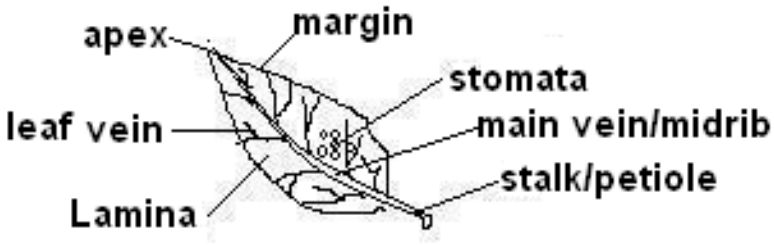
1. What are flowering plants?
2. Write down any one system of a flowering plant.
3. Give the use of a terminal bud to a plant.
4. From which part of seed does the root system grow?
5. Which part of plant makes food for the plant?

LESSON TWENTY SIX

Parts of a flowering plant.

- It has 3 major namely leaves, stem , roots

LEAF



(leaf blade)

Uses of leaves to plants

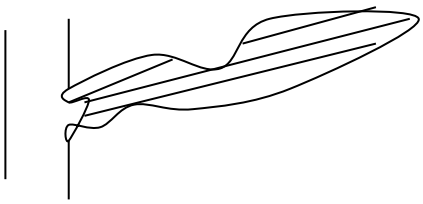
- They make food for the plant.
- Some leaves store food
- They help plants during transpiration

Note : Plants use stomata for breathing

Types of leaves

a) Simple leaves

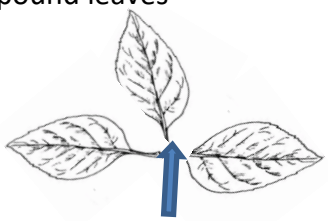
Illustration



Examples of plants with simple leaves

- Mango plant
- Orange
- Jack fruit

b) Compound leaves



examples of plants with compound leaves

- Bean plant
- Cassava plant
- Soya bean

- Acacia plants
- Molinga plant

EXERCISE

1. **Give two uses of leaves to plants and animals.**
2. **Draw leaf and name the midrib**
3. **State the part of the leaf used for breathing.**
4. **Name any two types of leaves.**
5. **Suggest any two examples of plants with each type of leaves.**

LESSON TWENTY SEVEN

PHOTOSYNTHESIS

It is the process by which green plants make food I the presence of sunlight and carbondioxide.
NB: Food made by plants is called starch.

Conditions necessary for photosynthesis

- Chlorophyll (coloring matter that trap sunlight)
- Carbondioxide } These are raw materials of photosynthesis
- Water }
- Sunlight (provide energy to plants)

By – products of photosynthesis

a) Oxygen
b) Starch

Uses of leaves to animals.

- Leaves are eaten as food
- Leaves are used as herbal medicine
- Some plants have leaves susedf or thatching houses
- They are used for d ecoration
- People sell leaves and get money.

EXERCISE

1. What is photosynthesis?
2. In which part of a leaf does photosynthesis take vplace?
3. Give any two raw materials of photosynthesis.
4. Why cant photosynthesis btake place vat night?
5. Suggest the product of photosynthesis.

LESSON TWENTY EIGHT

TRANSPIRATION

Transpiration is the process by which plants loose water through the stomata.

Conditions for transpiration.

Temperature
Number of stomata
Size of the leaf

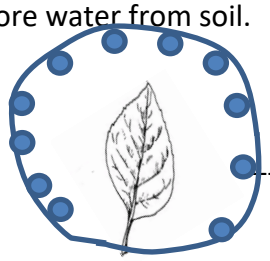
Dangers of transpiration

Transpiration makes plants to dry.

Importance of thranpiration

Transpiration cools a plant

Transpiration helps plants to get more water from soil.



EXERCISE

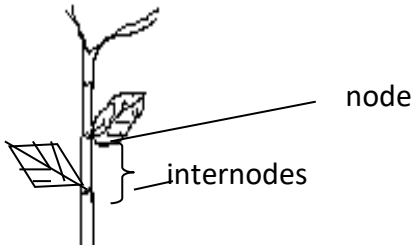
1. What is transpiration?
2. State two factors that affect transpiration
3. Give on advantage of transpiration.
4. Mention one danger of transpiration.

LESSON TWENTY NINE

STEM

Types of stems

1. Upright stems//erect stems



These types of stems are found in woody plants like

- Mahogany
- Eucalyptus
- Ficus tree
- Mango tree
- Muvule

2. Climbing stems

They are also called weak/clasping stems.

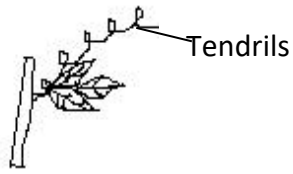
Examples of plants with climbing stems

- Passion fruits
- Vanilla
- Some bean plants
- Loofah plants
- Water melon
- Pumpkin
- Some yams
- Cucumber

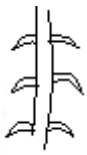
How climbing plants climb others.

- By twinning /clasping
- Using hooks or thorns
- Using tendrils

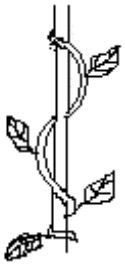
Plants using tendrils



Plants using hooks



by twinning



EXERCISE

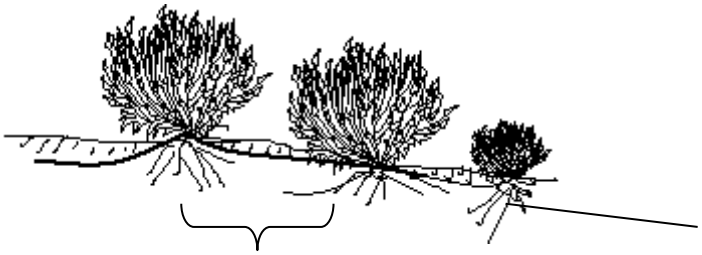
1. What are upright stems?
2. mention any two plants with upright stems
3. What are weak stems?
4. Give two plants with climbing stems
5. State two reasons why plants climb others
6. How do plants climb others?

LESSON THIRTY

3. Underground stems

These are stems found below the ground e.g

- Spear grass
- Couch grass
- Ginger



USES OF STEMS

(a) To plants

- stems store food for the plants
- Transport and food
- Support branches and leaves
- Stems make plants to stand

(b) To animals

- Stems are eaten as food
- Provide animals medicine
- Provides building materials
- We get timber/poles from woody plants

EXERCISE

1. What are underground stems?
2. Why some underground stems are called stem tubers?
3. Mention two examples of stem tubers.
4. Give two uses of stems to animals.
5. Give two uses of stems to plants.

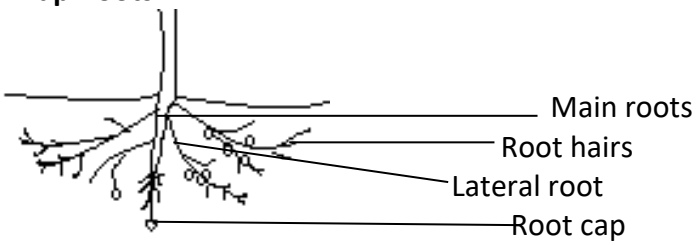
LESSON THIRTY ONE

Roots

It is part of a flowering plant found under the ground.

TYPES OF ROOTS

(a Tap roots



Root systems

There are two types of root systems namely:-

a) Tap root system
b) Fibrous root system

N.B. Root cap

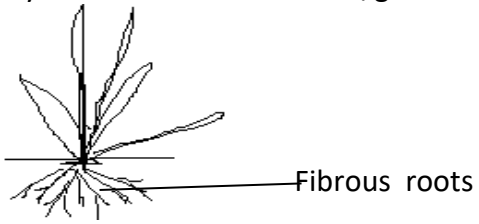
- protects the growing tip of the root.

Examples of plants with tap root system (legumes)

- Beans
- Peas
- Soya
- G.nuts
- Simsim

(b) Fibrous roots

They are common in cereals/grains e.g sorghum

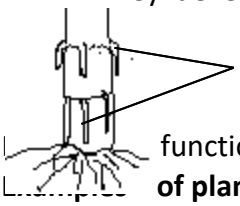


Examples of plants with fibrous roots

- Maize
- Sorghum
- Millet
- Wheat
- Rice
- Barley
- Oats
- Some grass

Prop roots

They develop from the stem of the plant



function of prop root is to give extra support to the plant.

of plants with prop roots

- Sorghum
- Maize
- Millet and some grasses

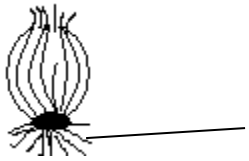
EXERCISE

1. Mention any two root system.
2. Which part of the root protects the root tip?
3. State te function of the root hairs.
4. Give any one plant with prop roots.
5. State the function of prop roots

LESSON THIRTY TWO

(c) Adventitious roots

(d) These also develop from the stem of the plant. They are common in plants like onions, some yams



Uses of roots to plants

- Hold the plant firmly in the soil
- Absorb water and mineral salts from the soil
- Stores food for t he plant

Uses of roots to animals.

- It is a source of food
- It is used as herbal; medicine
- Controls erosion like he buttress roots
- Some people sell roots and get money

EXERCISE

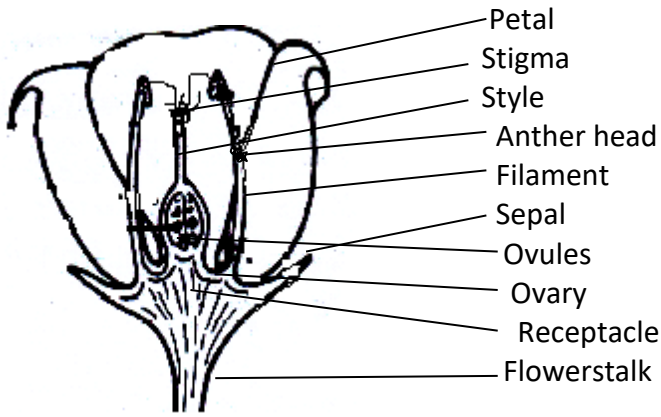
1. Give two uses of roots to eopl.
2. Give any two uses of roots to plants.
3. What type of roots has an onion?
4. Which part of an onion makes food
5. Which part of an onion is eaten as food?

LESSON THIRTY THREE

The flower

A flower is the reproductive part of a plant.

Parts of a flower.



NOTE: Pistil is the female part of a flower
Stamen is the male part of a flower.

Uses of flowers to people.

- They are used for decoration
- Bees and birds get nectar from flowers
- They are eaten as food
- They are used for making perfumes
- They are used for making colours
- They are used as herbal medicines

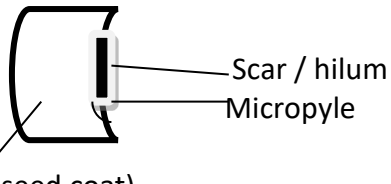
EXERCISE

1. WHAT IS A flower?
2. Give the term used to mean the female part of a flower.
3. In the space below, draw a stamen and name the parts.
4. Suggest two values of flowers to people.

Uses of flowers to plants

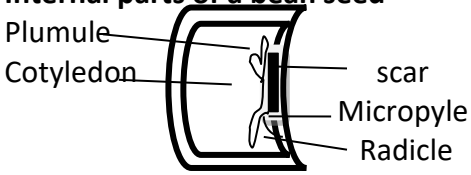
- They help a plant to reproduce.

LESSON THIRTY FOUR
SEEDS
A SEED IS A DEVELOPED OVULE
External parts of a bean seed



Testa (seed coat)

Internal parts of a bean seed



Groups of seeds
Monocotyledous seed
Dicotyledonous seeds

Uses of seeds

- Seeds are eaten as food.
- Seeds are used for planting
- They are sold
- They are used as medicine
- They are used I making crafts
- They are used for making vegetable oil.

EXERCISE

1. What is a seed?
2. Give any one type of seeds.
3. Give one use of seeds.
4. Which part of the seed protects the inside parts of the seed.
5. Draw a seed and name plumule

LESSON THIRTY FIVE

Dangers of plants

Some plants are poisonous e.g Sodom apple to cattle
Some pare thorny and therefore damage the skins of animals.
Some plants harbor/hide dangerous animals and pests
Plants can be weeds hence compete for nutrients with crops.
Some water weeds cause suffocation of fish in the water.

Crop growing

Steps of clearing land

-slashing: shortening of grasses or some bushes using a slasher
- digging /ploughing- breaking up of soil in preparation for planting

Planting : It is putting a planting material in the soil

- Seeds are selected for planting
- Afterwards seedlings are cared for.

Methods of planting

1. Broadcasting method: Is the planting of seeds by scattering them at random on land.
2. Row planting: Is the growing of plant material in lines.

Caring for crops

Weeding: The removal of unwanted plants from the garden.
Staking: giving extra support to plants with weak stems.
Pruning: Removal of excess branches from the plant.
Thinning : Removal of excess plants from the garden to create space.
Mulching: is the covering of different crops on the same piece of land seasonally.
Spraying: Application of chemicals on plants to control pests and diseases.

- Harvesting removal of ready crops from the garden during dry season.
- Drying harvested crops.

EXERCISE

1. Name two methods of planting crops.
2. Define the following

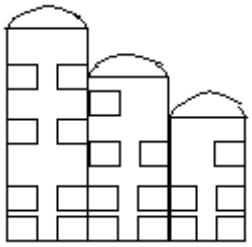
(i) Thinning
(ii) Mulching
(iii) Spraying
(iv) Weeding

3. Give the importance of staking plants.

LESSON THIRTY SIX
Storing harvested crops

Granaries

Silos



Material used to make a granary
a) grass , pole reeds, banana fibres
crops stored in a granary
sorghum , Rice , maize , millet
storage : pests , rats and weevils
Marketing
It is the selling of crops

Places of marketing
- Markets
- Shop
- Vending

EXERCISE
1. WHAT IS HARVESTING?
2. In which season do farmers harvest crops?
3. What is the use of the granary to a crop farmer>
4. State the use of rat guards on a granary.
5. Why is a granary constructed some metres above the ground?

LESSON THIRTY SEV EN
PESTS AND DISEASES
4 pests is an animal which destroys farmers' crops.
Examples
- Monkey
- Rats
- Weevils
- Goat

- Birds
- Cows

Pests control measures

- Weeding
- Crop rotation
- Using scare crows
- Spraying using pesticides
- Row planting
- Early planting

NOTE: Crop rotation , early planting and proper spacing are natural methods of controlling pests

Removing infected parts from the plant
Uprooting the plants which are severely attacked .

- Crop diseases
- Mosaic ,
- potato blight ,
- rust ,
- blast ,
- panama smut and rot

Effects of diseases to plants.

- They cause the crop to rot.
- Crops wither
- Crops dry out before time
- Fruits ripen prematurely
- Leaves fall off or become pale.
- Roots dry

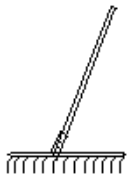
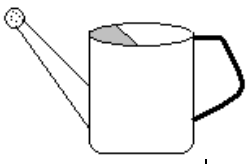
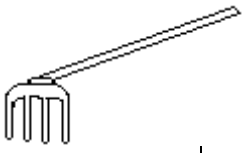
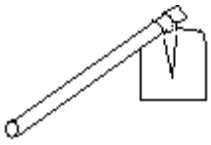
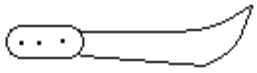
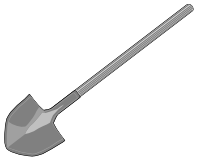
Disease control measures in crops.

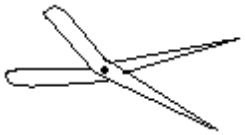
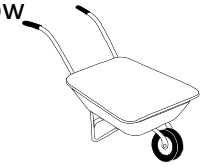
- Practice crop rotation
- Weeding
- Early planting
- Prune/remove the diseased parts
- Uproot the infected crops and burn them.
- Spray crops with medicine to control the diseases.

EXERCISE

1. What is a pest?
2. Suggest any two common pests in the garden.
3. Give two effects of pests to plants
4. Mention two diseases that affects plants in the garden.
5. Give any one way of controlling pests and diseases.

LESSON THIRTY EIGHT

GARDEN TOOLS	IMPORTANCE	WAYS OF CARING FOR GARDEN TOOL
Rake 	- For collecting or gathering rubbish	- Keeping tools in a dry place. - By painting the tools. - By oiling garden tools - By greasing the tools. - By cleaning tools - before storing them.
Watering can 	- Watering crops	
Forked hoe 	- For digging hard soil and stony areas	
Trowel 	- For transplanting	
Hoe 	- For digging - For weeding	
panga 	- For cutting down small trees. - For harvesting ready crops	
Spade 	- For carrying soil	
Slasher 	- For slashing	
sickle 	- For cutting grass	

Prunner 	- For prunning	
Garden fork 	- For turning manure	
Wheel barrow 	- For carrying soil - For carrying and transporting tools and harvested crops.	

EXERCISE

1. WHAT ARE GARDEN TOOLS?
2. Name the garden tool used for collecting rubbish
3. How are garden tools protected from rusting?
4. Give the use of the axe to a farmer.
5. Which garden tool is used for carrying soil?

LESSON THIRTY NINE

Seed germination

Is the process by which a seed develops into a young plant.
A young plant is known as a seedling

Conditions necessary for germination.

- Water , air , warmth

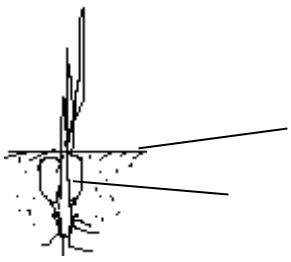
Types of germination

- Epigeal
- Hypogeal

Hypogeal germination is where the cotyledons remains under the ground in the soil. It is common in cereals or monocots e.g maize , millet , sorghum , rice , wheat , barley

Diagram to show hypogeal germination.

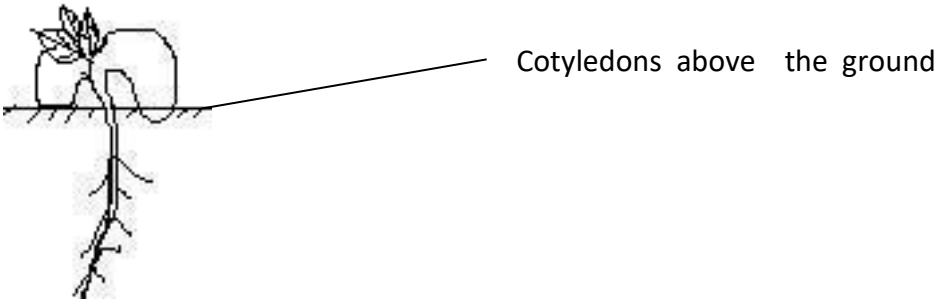
Soil level



Cotyledon in the soil

Epigeal germination is the type of germination where cotyledons come out of the ground (beans , g.nuts, etc)

Diagram to show epigeal



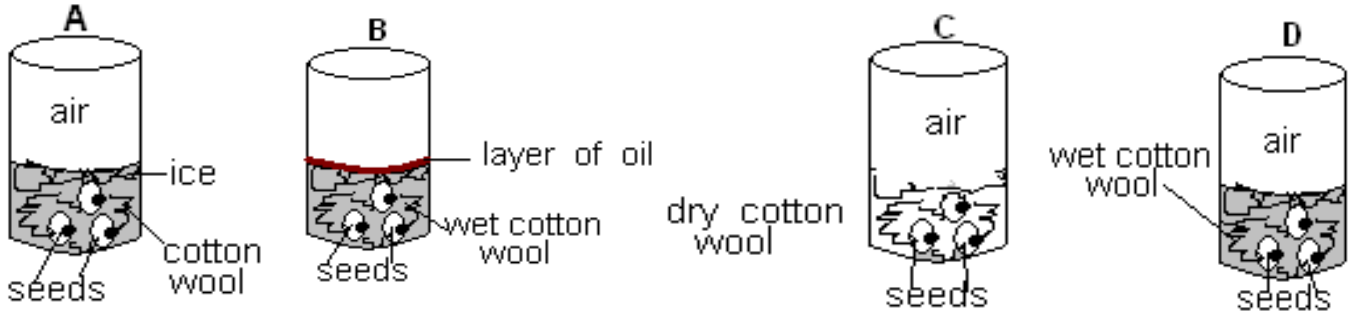
Note: Plant a bean and maize to show the types of germination.

- Germination , burning , rusting and breathing (life) all use a common gas called oxygen.

An experiment to show the condition needed for germination.

Things needed

- 3 tins
- Cotton wool
- Seeds (beans , maize)
- Ice
- Oil



- In tin A the seeds will not germinate because there is no warmth.
- In tin B, the seeds will not germinate because there is no air . The oil prevents air from entering to reach the seeds.
- In tin C, the seeds will not germinate because there is no water (moisture)
- In tin D, the seeds will germinate because there is air, water and warmth. The cotton provides warmth.
-

EXERCISE

1. What is germination?
2. Write down any two conditions needed for germination to take place?
3. How important is oxygen and moisture during germination?
4. Why can't a seed put in oil germinate?
5. Where does a seedling obtain its food?

END OF TERM TWO WORK (REVISION BEGINS)