



P.3 LITERACY ONE

REVISED LESSON

NOTES

TERM 1 2023

THEME ONE: OUR ENVIRONMENT IN OUR SUB COUNTY

TOPIC ONE: SOIL

WEEK ONE: LESSON THREE

Vocabulary:

- component
- environment
- humus
- organism
- weathering
- decomposition

SOIL

Soil is the top layer that covers the earth's surface.

How soil is formed

- By weathering
- By decomposition

Note: weathering is the breakdown of rocks to small particles

Components of soil

- humus
- air
- rock particles
- water
- living organisms
- dissolved mineral salts

EXERCISE

1. The top layer of the earth's surface is called
2. What is weathering?
3. Name three components of soil.
4. Name two processes by which soil is formed.

Activity

Observing components of soil

LESSON FOUR

Vocabulary:

- lump
- metallic
- droplets
- vapour
- escape

Experiment to show that soil contains water

Materials to use

- Source of heat
- Soil sample
- Saucepan with metallic lid

Steps to follow

1. Put soil in a saucepan
2. Cover it with a lid and put on fire

Diagram of the experiment

Observation: Water droplets are seen on the inner surface of the lid

What does the experiment show about soil?

Soil contains water.

EXERCISE

1. What does the experiment above show?
2. How is heat useful in above experiment?

Activity

Recording results

LESSON FIVE

Vocabulary

- bubbles
- gently
- breathe
- germinate

Experiment to show that soil contains air

Materials needed

- Transparent glass jar
- Water
- Lump of soil

Steps to follow

1. Half fill a glass jar with water
2. Lower a lump of soil into the water

Diagram of the experiment

Observation: Air bubbles are seen coming out of the soil.

What does the experiment show about soil?

Soil contains air

Uses of air in soil

- Air is used by living things for respiration.
- Air is used for seed germination.

WEEK TWO: LESSON ONE

Vocabulary

- | | | |
|----------|-------------|-----------|
| • stir | • substance | • humus |
| • settle | • gravel | • fertile |

Experiment to show that soil contains humus

Materials needed

- | | | |
|-------------|---------------|---------|
| • Glass jar | • Soil sample | • Water |
|-------------|---------------|---------|

Steps to follow

1 Put soil in a glass and add water to it.

2 Stir and leave it to settle.

Diagram of the experiment

Observation: Black substances float on top of water.

What does the experiment show about soil?

Soil contains humus.

How is humus formed?

By decomposition

How is humus useful in soil?

Humus makes the soil fertile.

Activity

Recording observations

LESSON TWO

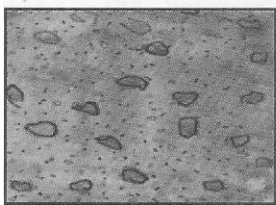
Types of soil

- Loam soil
- Sand soil
- Clay soil

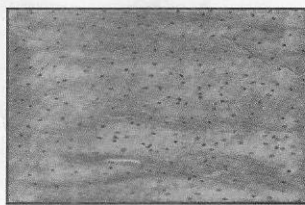
Soil texture

Soil texture is the smoothness or roughness of soil particles.

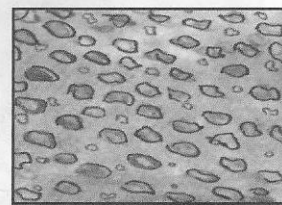
Texture of different types of soil



Loam soil



Clay soil



Sand soil

Characteristics of loam soil

- Loam soil is a mixture of humus, sand and clay.
- It has medium – sized particles.
- It contains a lot of humus.

EXERCISE

1. Name the three types of soil.

2. What is soil texture?
3. Name three components of loam soil.
4. Why is loam soil the best for crop growing?

LESSON THREE

Vocabulary

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> • Thumb • Glass | <ul style="list-style-type: none"> • Sample • Finest | <ul style="list-style-type: none"> • Drainage • Medium |
|--|--|--|

EXERCISE

Characteristics of sand soil

- It has big soil particles.
- It is loose, light and easy to dig.
- It allows water to pass through easily.
- It has less humus, so it's not fertile.
- It dries quickly in hot weather.
- It feels rough when rubbed between the thumb and fingers.

1. Why is sand soil not fertile?
2. Which type of soil allows water to pass through easily?
3. Give two uses of sand soil to people.
4. Why is sand soil not good for crop growing?
5. Why does sand soil allow water to pass through easily?

Characteristics of clay soil

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> • It has the finest particles. | <ul style="list-style-type: none"> • It does not allow water to pass through easily. | <ul style="list-style-type: none"> • It is sticky. • It is poorly aerated. |
|--|---|--|

Uses of clay soil

- Clay soil is used for making pots
- Clay soil is used for making bricks
- Clay soil is used for making tiles

Uses of sand soil

- Sand is used for building houses
- Sand is used for making blocks
- Sand soil is used for making glasses.

Uses of loam soil

Loam soil is used for growing crops

LESSON FOUR

Vocabulary

- arrangement
- vertical
- profile
- gravel

Soil profile

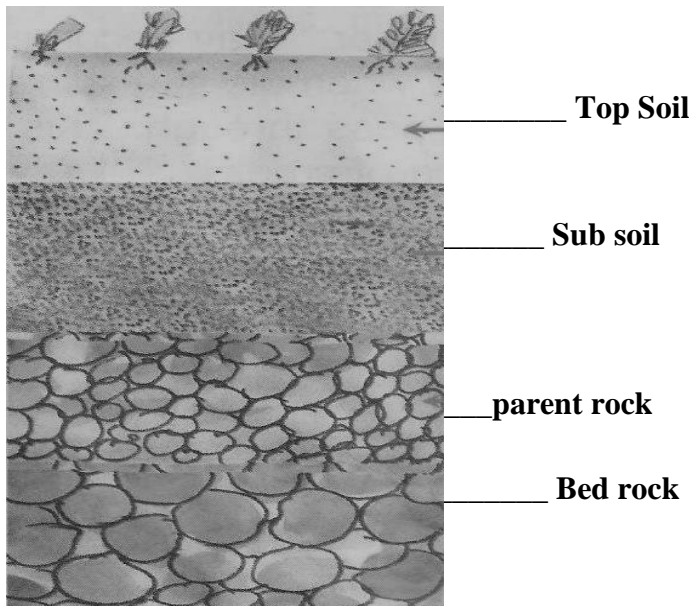
Soil profile is the vertical arrangement of soil layers.

Soil profile is the arrangement of soil layers from top to bottom.

Layers of soil

- Top soil
- Sub-soil
- Parent rock
- Bedrock

Diagram of soil profile



Areas where we can observe different soil layers

Newly dug pits

Trenches along the road

EXERCISE

1. What is soil profile?
2. Which layer of the soil profile contains most humus?
3. Identify one place where we can observe soil layers in the environment.
4. Why does the top layer of soil support plant growth?
5. Why do most soil organisms live on the top layer?

LESSON FIVE

Vocabulary

- living
- organism
- humus
- colour
- thick

Top soil

- It is the best layer for plant growth.
- It has a lot of humus.
- It is dark in colour.

Sub soil

- It contains less humus.

Parent rock

- It is a rock from which soil is formed.

Animals that live in the soil

- moles
- earthworm
- millipedes
- termites
- squirrels
- centipedes
- rats

Activity

Observing and naming some animals that live in soil.

EXERCISE

1. What name is given to the second layer of the soil profile?
2. List down any three animals that live in soil apart from rats.
3. Why is top soil the best layer for plant growth?
4. Why aren't there many organisms in the sub soil?

WEEK THREE: LESSON ONE

Vocabulary

- compost
- manure
- depth
- mixture
- garbage

Compost pit:

This is a pit where compost manure is produced.

Compost manure is a mixture of rotten organic matter that is used in gardens to support plant growth.

Importance of a compost pit

It is where compost manure is produced.

Materials used to make compost manure

- banana peel
- cassava peels
- sweet potato peels
- cow dung
- chicken droppings

Advantages of compost manure

- Improves soil texture and aeration.
- Improves soil fertility

Disadvantages of compost manure

- It is heavy to carry manure
- It requires a lot of time to make.

LESSON TWO

Vocabulary

- earthquake
- lightning
- thunder
- hailstones
- drought
- mudslide
- migration

TOPIC 2: CHANGES IN OUR ENVIRONMENT

Natural changes

Natural changes are changes brought about by nature.

Examples of natural changes in the environment

- Rising and setting of the sun
- Wind blows in different directions.
- Clouds appear in the sky.
- Floods are brought in by heavy rains.

Causes of natural changes in our environment

- earthquakes
- hailstones
- floods
- storms
- drought
- lightning
- mudslide
- thunder

Effects of natural changes in our environment

Hunger

- Soil erosion
- Migration i.e. the movement of people from one place to another.
- Diseases/ epidemics
- Destruction of homes and property
- Death of people and animals.

Activity

Observing the mentioned causes of changes and their effects on video clips

EXERCISE

1. What are natural changes?
2. Mention two natural causes of changes in the environment.
3. State any one effect of natural changes in the environment.

LESSON THREE

Vocabulary

- artificial
- deforestation
- bridges
- charcoal
- habitats

People-made changes [Artificial changes]

These are changes brought about by people's activities.

Examples of people-made changes

- Building homes
- Building houses
- Planting trees
- Making bridges
- Deforestation
- Draining swamps
- Disposing wastes
- Making and burning bricks
- Making medicine from plants
- Burning charcoal

Effects of people-made changes

Good effects

- Easy transport
- Building houses provides accommodation
- Planting trees conserves the environment

Bad effects

- | | | |
|----------------|----------------------|----------------------------------|
| • Soil erosion | • Soil exhaustion | • Desertification |
| • Accidents | • Death of animals | • Destruction of animal habitats |
| • Drought | • Spread of diseases | |

ACTIVITY

Discussing human activities that lead to changes

EXERCISE

1. What are people-made changes?
2. Apart from deforestation, name any four people-made changes in the environment.
3. What is deforestation?

LESSON FOUR

Ways of managing changes:

(a) How to manage floods

- Digging trenches
- Building flood banks

(b) How to manage drought

- Plant trees.
- Dig valley dams.
- Use irrigation method.

ACTIVITY

Observing ways of managing changes in our environment

EXERCISE

1. Give one way of managing floods in our environment.
2. Give two ways of managing drought.
3. Identify any one change which can be controlled by irrigation.

LESSON FIVE

Vocabulary

- agents
- erosion
- deforestation
- drought
- cultivation
- grazing

Soil erosion:

Soil erosion is the carrying away of top soil by its agents.

OR

Soil erosion is the removal of top soil by its agents.

Agents of soil erosion

- Running water
- Strong wind
- Animals

Causes of soil erosion

- Over grazing
- Deforestation
- Bush burning.
- Over stocking
- Over cultivation

ACTIVITY

Discussing the causes of soil erosion

EXERCISE

1. What is soil erosion?
2. Name the agents of soil erosion.) Give two causes of soil erosion.
3. State any one human activity that can lead to soil erosion.

WEEK FOUR LESSON ONE

Vocabulary

- famine
- deforestation
- manure
- siltation
- exhaustion

Effects of soil erosion:

- It causes desertification.
- It leads to famine.
- It leads to soil exhaustion.
- It leads to silting.

Soil exhaustion

Soil exhaustion is the loss of soil fertility.

Causes of soil exhaustion

- Over cultivation
- Over grazing
- Leaching
- Bush burning
- Mono cropping

How to control soil exhaustion

- By mulching
- Use of crop rotation
- Addition of manure
- Use of fertilizers

ACTIVITY

Discussing the causes of soil exhaustion and how to control

EXERCISE

1. Give two effects of soil erosion.
2. Give two ways a farmer can control soil exhaustion.
3. State any one method of controlling soil erosion on the school compound.

LESSON TWO**Vocabulary:**

- mulching
- contour
- ploughing
- terracing
- rotation
- afforestation

How to control soil erosion

- By mulching
- Contour ploughing
- Planting trees.
- Planting grass on bare land.
- Crop rotation.
- By terracing

Diagram showing terraces

ACTIVITY

Observing methods used to control soil erosion in the school environment

EXERCISE

1. Write three ways of controlling soil erosion.
2. How farmers in hilly areas control soil erosion?
3. State one way soil erosion is controlled in the school compound

LESSON THREE

Vocabulary:

- storms
- husks
- erosion
- mulch
- materials
- weeds

Mulching

Mulching- is the covering of top soil with dry plant materials.

Materials used for mulching

- Dry grass
- Banana leaves
- Coffee husks

Advantages of mulching:

- It keeps water in soil.
- It controls growth of weeds.
- It keeps soil fertile
- Mulching controls soil erosion.

Disadvantages of mulching

- It hides crop pests.
- Mulch can catch fire and burn crops.
- Some mulch can turn into weeds.

ACTIVITY

Demonstrating how to mulch the garden

EXERCISE

1. What is mulching?
2. Name three examples of mulch.
3. Give two reasons why farmers mulch their gardens.
4. Mention one disadvantage of mulching.

LESSON FOUR

Vocabulary:

- season
- diseases
- erosion
- fertility
- legumes

Crop rotation

Crop rotation is the growing of different types of crops on the same piece of land seasonally.

Advantages of crop rotation

- Controls soil erosion.
- Improves on soil fertility.
- Controls crop pests and diseases.

Diagram showing crop rotation

Activity

Demonstrating crop rotation on the school garden

EXERCISE

1. What is crop rotation?
2. State any two advantages of practicing crop rotation.
3. Why are legumes included while practicing crop rotation?

LESSON FIVE

TREE PLANTING PROJECT

Vocabulary

- lemon
- mvule
- jackfruit
- formation
- fuel

Names of common trees

Trees that provide fruits

- mango tree
- orange tree
- lemon tree
- jackfruit

Trees that provide timber

- musizi
- mvule tree
- eucalyptus tree
- pine tree

Importance of trees in the environment

- Trees act as wind breaks
- Trees influence rain formation
- Trees provide shade
- Trees are habitats for some animals
- Trees provide wood fuel
- Trees provide timber
- Fruit trees are source of food.

Activity

Observing and writing names of trees on the school compound

Exercise

1. Name any two examples of trees which are sources of food in the environment.
2. Apart from providing food, how else are trees useful to people?
3. Give any one example of trees planted for timber

WEEK 6: LESSON ONE

THEME TWO: ENVIRONMENT AND WEATHER IN OUR SUBCOUNTY/DIVISION

TOPIC ONE: AIR

Vocabulary

Air, oxygen, nitrogen, carbon dioxide

Air is a mixture of gases

Wind is moving air or air in motion.

Components of air

- nitrogen
- oxygen
- rare gases
- carbon dioxide

Percentage composition of air in the atmosphere

- Nitrogen 78%
- Oxygen 21%
- Rare gases 0.97%
- Carbon dioxide 0.03%

Summary diagram

ACTIVITY

Naming components of air

EXERCISE

1. What do we call the mixture of gases?
2. Give two components of air.
3. Which component of air occupies the biggest percentage in the atmosphere?

LESSON TWO

Vocabulary:

- exerts
- expands
- compressed
- weight
- occupies
- balloon
- inflated
- deflate

Properties of air

- Air has weight.
- Air occupies space.
- Air exerts pressure.
- Air can be compressed.

An experiment to show that air has weight

Materials needed

- two balloons
- two strings
- beam balance

Steps to follow

- i. Put a beam balance on a leveled table top
- ii. Inflate one of the balloons
- iii. Tie the inflated balloon on one end of the beam balance
- iv. Tie the deflated balloon to the opposite end of the beam balance

Diagram of the experiment

What happens? The inflated balloon goes lower than the deflated one.

What does this show about air?

Air has weight.

ACTIVITY

Recording observations

EXERCISE

1. Write any three properties of air.
2. Why does the inflated balloon appear on the lower side?

LESSON THREE

Vocabulary:

- trough
- bubbles
- occupies
- inverted
- slightly

An experiment to show that air occupies space

Materials needed

- Glass
- Basin (trough)
- Water

Steps to follow

1. Fill the trough $\frac{3}{4}$ with water
2. Lower an inverted glass directly into the water
3. Bend the glass slightly and observe

Diagram of the experiment

Observation: Air bubbles are seen escaping from the glass

What does this show about air?

Air occupies space

Activity

Recording observations

LESSON FOUR

Vocabulary:

- pressure
- atmosphere
- cardboard
- exert

Experiment to show that air exerts pressure

Materials to use

- card board (hard paper)
- glass
- water

Steps to follow

1. Half fill a glass with water.
2. Cover it with a card board.
3. Turn it upside down while holding the cardboard
4. Leave the cardboard and observe.

Diagram

Observation: The card board is held on the mouth of the glass.

What does the experiment show about air?

Air exerts pressure.

ACTIVITY

Observing and recording findings

An experiment to show that air can be compressed

Materials to use

A ball or a balloon

Steps

1. Inflate a balloon
2. Place it on a flat surface
3. Step on it and observe

Diagram of the experiment

Observation: The balloon loses shape

What does this experiment show about air?

Air can be compressed.

.LESSON FIVE

Vocabulary:

- winnowing
- germination
- extinguisher
- pollination
- dispersal

Importance/uses of air in the environment:

- Oxygen supports burning.
- Wind is a source of power to drive wind mills.
- Oxygen is used in germination.
- Carbon dioxide is used to preserve drinks.
- Wind is used in winnowing seeds.
- Wind is an agent of pollination.
- Wind is an agent of seed dispersal
- Wind sails boats/ships/paper kites.
- Carbon dioxide is used in fire extinguishers to put out fire.
- Wind is used for flying kites

Places where we find fire extinguishers

- petrol stations
- hospitals
- hotels
- schools
- banks
- homes

ACTIVITY

Observing activities and objects that use air in the environment

EXERCISE

1. Name the component of air used in preserving foods and drinks.
2. Which type of air supports burning?
3. Give three uses of air.
4. Why is carbon dioxide used in fire extinguishers?
5. Apart from school, name four other places where we find fire extinguishers.

WEEK SEVEN LESSON ONE

Vocabulary:

- capsize
- tuberculosis
- environment
- destroy
- measles

Importance of wind in the environment:

- Wind is an agent of pollination.
- Wind sails boats.
- Wind is an agent of seed dispersal.
- Wind is used to fly kites.

Dangers of strong winds

- Strong wind carries away top soil.
- Wind breaks down crops and house.
- Wind spreads diseases e.g. flu, measles mumps/tuberculosis etc.
- Wind raises dust, spoiling our eyes and environment as well.
- Strong wind blow off people's houses
- Strong winds can capsize boats

ACTIVITY: Identifying and recording dangers caused by wind in the environment.

EXERCISE

1. What do we call moving air?
2. Write any two diseases spread by air.
3. Give three dangers of wind to people.

LESSON TWO

Vocabulary:

- photosynthesis
- photosynthesis
- evaporation
- condensation

TOPIC 2: THE SUN

- The sun rises from the East every morning.
- It sets in the west every evening.
- The sun produces a lot of heat.
- It also produces light

Uses of the sun (importance of the sun)

- The sun provides heat.
- The sun provides light.
- The sun's heat dries clothes.
- It is a source of solar energy.
- Sunlight is used during photosynthesis.
- The sun helps in formation of rainfall.
- The sun helps living things to grow.
- The sun helps our bodies to make vitamin D

Dangers of the sun

- Too much sunshine destroys crops in the garden.
- Too much sunshine dries water bodies.
- Sunny weather makes animals thirsty.

- Strong sunshine can cause skin cancer.
- The sun spoils our eyes if you look at it directly.

ACTIVITY

Identifying items that use energy from the sun

EXERCISE

1. Where does the sun rise from?
2. State any two ways in which the sun is useful.

LESSON THREE

Vocabulary:

- opaque
- block
- shadows
- noon

Shadows and opaque objects

What is a shadow?

A shadow is a dark region formed when light is blocked by an opaque object.

What is an opaque object?

An opaque object is an object that does not allow light to pass through.

- Shadows are longer in the morning and evening.
- Shadows are shorter at mid-day and noon.

Importance of shadows in our environment

- To tell time during the day.
- To show direction during day

How shadows appear at different hours of the day

A shadow in the morning

A shadow at noon (midday)

A shadow in the evening

ACTIVITY: Observing shadows in the school compound
Measuring the length of shadows at different times of the day

EXERCISE

1. What is a shadow?
2. What are opaque objects?
3. How are shadows useful to people?
4. When is the shadow of an object shorter?

TOPIC THREE: WATER

LESSON FOUR

Vocabulary:

- natural
- streams
- artificial
- valley
- well

Natural sources of water

- lakes
- streams
- rivers
- oceans
- rain
- seas

Artificial sources of water

- bore holes
- valley dams
- ponds
- springs
- wells

Activity

Observing items used in harvesting rain water.

EXERCISE

1. Name the main natural source of water.
2. Identify two other natural sources of water.
3. Mention two artificial sources of water.
4. Name the instrument used to measure rainfall.
5. Identify two ways of harvesting water.
6. Mention two ways of maintaining water sources.

LESSON FIVE

Managing Water

1) Importance of water

To people

- Water is used for cooking food
- Water is used for washing clothes
- Water is used for drinking
- Water is used for washing utensils

To plants:

- Plants use water to make their own food.
- Water is used for seed germination

ACTIVITY: Recording activities done using water at home

EXERCISE

1. Give three importance of water to people.
2. Write any two uses of water to plants.

LESSON SIX

Water harvesting

Water harvesting is the collection of rain water for use.

Ways of harvesting water

- By using buckets, water tanks, basins, etc.

Importance of harvesting water

- It provides water for home use.
- It provides water for irrigation.
- Harvested water can be used later when water is scarce.
- It reduces water bills

Items used in harvesting water

- tanks
- jerry cans
- buckets
- basins
- pots

WEEK EIGHT: LESSON ONE

How water sources get contaminated

- Urinating in a water source.
- Dumping industrial wastes in a water source.
- Defecating in a water source
- Bathing/ swimming in a water source.
- Using dirty containers to collect water.
- Sharing a water source with animals.

Maintenance of water sources

- Repairing the damages.
- Fencing the water sources.
- Avoid dumping wastes in water sources.
- Avoid bathing in water sources.
- Avoid urinating in a water source.

Activity

Demonstrating how to clean water sources

Exercise

1. Identify any two ways water sources get contaminated.
2. State any two ways of maintaining water sources.
3. Why is it good to use clean containers to harvest water?

LESSON TWO

Vocabulary:

- vapour
- evaporation
- condensation
- condense
- rain
- rainfall

RAIN

How rain is formed: Rain is formed through the water cycle.

A diagram to show the water cycle

1. The sun **heats** the water.
2. Water **evaporates** to form water vapour.
3. Water vapour rises and **condenses** to form nimbus clouds.
4. When the clouds become heavy, they fall as rain.

ACTIVITY: Drawing diagram of the water cycle

EXERCISE

1. What is the use of sun in the rain cycle?
2. Which clouds give us rain?
3. Name the processes that take place in the rain cycle.

LESSON THREE

Vocabulary:

- natural
- temperature
- formation
- cycle

Importance of rain

- Rain provides water for domestic use
- It cools down temperature.
- Rain water is used for watering plants.

ACTIVITY: Drawing the water cycle

EXERCISE

1. Identify the main natural source of water
2. Give four uses of rain to animals.
3. In which season do farmers plant their crops?

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LESSON FOUR

Vocabulary:

- Rain gauge
- instrument

How rainfall is measured

A rain gauge is used for measuring the amount of rainfall.

A diagram of a rain gauge:

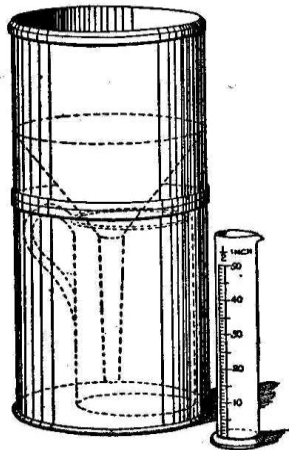


Fig. 151.—Standard rain-gauge.

ACTIVITY

Observing parts of a rain gauge

Drawing a rain gauge

EXERCISE

1. Name the different parts of a rain gauge.
2. Give the functions of the different parts of the rain gauge.
3. Draw and name the parts of a rain gauge.
4. Where a rain gauge should be placed?
5. Why is a rain gauge important to a farmer?

Drawing a rain

LESSON FIVE

Vocabulary: Strike, floods, mud, lightning, conductors, drainage

Dangers of heavy rainfall

- Leads to soil erosion.
- Lightning can strike people and other animals.
- It breaks down houses and crops.
- It leads to floods.
- It makes murrum roads muddy.

Solutions to the above problems

- By practicing better methods of farming

- By putting lightning conductors on the roofs
- Planting trees to act as wind breaks
- To avoid swamp drainage
- Tarmac the roads

ACTIVITY

Identifying and recording dangers caused by rain in the environment.

EXERCISE

1. Give three dangers of heavy rainfall.
2. State any two ways of controlling:
 - i) Soil erosion
 - ii) Floods
 - iii) Lightning

LESSON SIX

Vocabulary:

- | | |
|-----------|------------|
| • nimbus | • clouds |
| • cirrus | • cumulus |
| • stratus | • drizzles |

CLOUDS

Types of clouds

- | | |
|-----------------|------------------|
| • Nimbus clouds | • Stratus clouds |
| • Cirrus clouds | • Cumulus clouds |

Cirrus - are the furthest/highest clouds.

Stratus - clouds are commonly dark grey and sometimes cause drizzles.

Cumulus clouds: commonly white in colour.

Cumulo nimbus clouds – bring rain/storms.

Nimbus clouds - bring steady rainfall.

EXERCISE

1. Which clouds bring steady rainfall?
2. Name the clouds that bring drizzles.
3. Mention the highest clouds

ACTIVITY

Observing different clouds in the atmosphere

WEEK EIGHT: LESSON ONE

Vocabulary:

- temperature
- transport
- lightning
- weather
- environment
- accident

How clouds affect the environment:

- Nimbus clouds bring steady rains.
- Clouds cool the temperature.

Dangers of clouds

- Clouds cause lightning
- Clouds bring heavy rain fall which cause floods
- Clouds cause accidents to people who use air transport.

EXERCISE

1. Mention two effects of clouds to the environment.
2. Give two dangers of clouds to people.

ACTIVITY

Observing dangers caused by clouds.