KAZO DISTRICT LOCAL GOVERNMENT
LESSON NOTES TERM TWO 2023
P.5 INTEGRATED SCIENCE

LESSON I

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : BACTERIA

Read and write these words;

- Bacteria
- Microscope
- Breed
- Decay
- Single celled
- Tiny

BACTERIA

Bacteria are tiny single celled organisms which we cannot see using our naked eyes.

Bacteria are made up of one cell

This is why they are called single celled organisms.

Bacteria are so tiny that we cannot see with our eyes but we use a microscope.

Places where bacteria are found.

- Plants
- Soil
- Animals
- Water
- Air
- Decaying matter
- Around people who are ill.

Conditions that favour bleeding of bacteria.

- Warmth and food are favourable conditions for bacteria to breed.
- Bacteria can breed at a very high rate in compost pits, dirty latrines, and sick people and on dead organic matter.

LESSON ACTIVITY

1. What are bacteria?

2. Mention any four places where bacteria are found?

3. Why are bacteria called single celled organisms?

4. Name an instrument used to see bacteria

5. Write two conditions favourable for bacteria to breed.

LESSON 2

TOPIC : BACTERIA AND FUNGI

SUB-TOPIC : CHARACTERISTICS OF BACTERIA

Read and write these words;

- Breathe
- Warmth
- Oxygen
- Carbon dioxide

Characteristics of bacteria

- Bacteria need water, food and warmth to grow
- Some bacteria need oxygen to breathe while others need carbon dioxide
- Bacteria live in polluted water, soil, plants, air and on animal bodies.
- Bacteria are so tiny (micro-scopic) not seen by naked eyes.

ACTIVITY

1. Write any three characteristics of bacteria

2. Apart from oxygen, mention any other part of air bacteria breathe in.

3. Why are bacteria referred as single celled organisms?

LESSON 3

TOPIC : BACTERIA AND FUNGI

SUB-TOPIC : REPRODUCTION IN BACTERIA

Read and write these words;

- Binary fission
- Daughter
- Bacterium
- Identical

Reproduction in bacteria

This is a process by which bacteria reproduce or multiply is called Binary Fission /Cell Division.

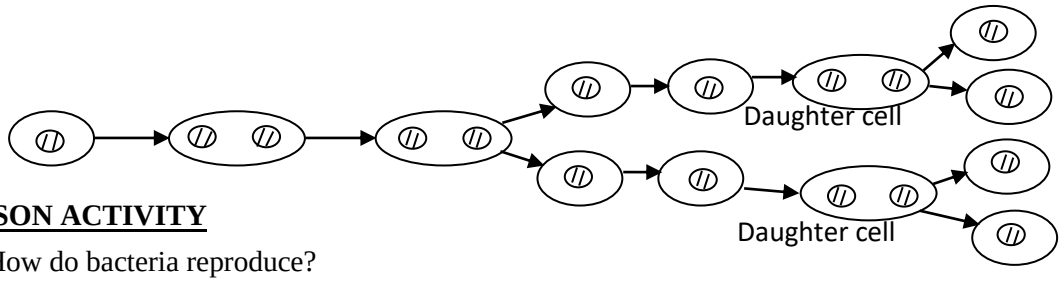
Conditions that enable bacteria to reproduce

- Food
- Warmth
- Moisture
- Air

Reproduction of bacteria by binary fission or cell division

One bacterium divides into new daughter cells.
This bacterium grows very fast and keeps on dividing into other new daughter cells. This process continues when the conditions are favourable.

An illustration of how a bacterium reproduces.



LESSON ACTIVITY

1. How do bacteria reproduce?
2. List any two conditions that enable bacteria to reproduce
3. Explain why food goes bad.

LESSON 4

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : FEEDING OF BACTERIA

Read and write these words;

- Aerobic
- Anaerobic
- Respire
- Sewage
- Nitrogen
- Fermentation

Bacteria feed by absorbing fluids and gas from animals and plants

Respiration of bacteria

- Some bacteria need oxygen to respire while others do not need oxygen.
- Bacteria which need oxygen are called aerobic bacteria.
- Bacteria which do not need oxygen are called anaerobic bacteria.

Nature of bacteria.

Some bacteria are;

- Useful bacteria

- Harmful bacteria

Uses of bacteria

- Bacteria help to fix Nitrogen into soil. They are called Nitrogen fixing bacteria found in root nodules of legumes include beans, peas and groundnuts.
- Bacteria speed up the process of decomposition of organic matter
- Bacteria speed up the process of decomposition of organic matter.
- Bacteria help in the treatment of sewage. They breakdown the amount of faeces in pit latrines as well as sewage tanks.
- Bacteria help in production of bio gas
- Bacteria help in fermentation of alcohol, ghee, yoghurt and cheese.
- Bacteria help in the digestion of food in animals.
- Some bacteria are used to make anti-biotic which are used to treat bacterial infections.

Note: It is not advisable to pour paraffin into a latrine because they kill bacteria and maggots which reduce the volume of faeces.

ACTIVITY

1. Identify two uses of bacteria
2. How do bacteria feed?
3. Differentiate between aerobic bacteria and anaerobic bacteria.
4. Why is it not advisable to pour paraffin into a latrine?

LESSON 5

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : DANGERS BACTERIA

Read and write these words;

- Poison
- Typhoid
- Diphtheria
- Syphilis
- Pathogens
- Gonorrhea.

Dangers of bacteria

- Harmful bacteria make food go bad. They cause food to rot.
- Bacteria cause food poisoning which can cause digestive disorders when people eat such food.
- They cause plant diseases e.g. Tomato blight which leads to poor yields to a farmer.
- Bacteria cause disease to animals such as anthrax, foot rot, mastitis.
- Harmful bacteria (pathogens) cause may diseases to people e.g. Tuberculosis, cholera, typhoid, dysentery, diphtheria, whooping cough gonorrhea, tetanus, meningitis syphilis, anthrax etc.

LESSON ACTIVITY

1. Identify any two animal disease caused by bacteria.
2. A part from being diseases how is gonorrhea similar to anthrax?
3. Give one way of preventing food from going bad.

LESSON 6

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : PREVENTION OF BACTERIAL DISEASES

Read and write these words;

- Isolation
- Infections
- Immunization

- Vaccines
- Preserve
- Disinfectants.
- Antibiotics

Bacterial diseases are diseases which are caused by bacteria.

Methods of prevention of bacterial infections are;

- Isolation-people who are suffering from a disease which can be transmitted by contact should not mix others.
- Drinking boiled water
- Washing hands with soap and water after visiting toilets or latrines.
- Eating cleaned and well cooked food.
- Proper use of latrines or toilets to dispose of human waste.
- Wash hands before handling food and before eating.
- Wash fruits and vegetables which are eaten raw
- Reduce contact with infected people.
- Immunization
- Use of antiseptics and disinfectants to kill germs.
- Use anti-biotic drugs to control and treat bacterial diseases.

ACTIVITY

1. What are antibiotics?

2. Mention two methods of preventing bacterial diseases in humans.

3. Describe how each of the following prevents the outbreak of bacterial diseases.
a) Immunization
b) Drinking boiled water.

LESSON 7

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : CHARACTERISTICS OF FUNGI

Read and write these words;

- Fungus
- Saprophytes
- Parasite
- Moisture
- Yeast
- Moulds.

FUNGI

Fungi are plant like livings that do not have chlorophyll and are not able to make their own food.

Fungi are found everywhere, especially in damp (wet /moist) and dark places. Fungi are organisms which live on other living organism as parasites.

Fungi obtain their food from decaying plants and animals as saprophytes.
Examples of fungi

- Moulds
- Toadstools
- Mushrooms
- Puffballs
- Yeast

Characteristics of fungi

- They feed parasitically or saprophytically
- They have nuclei in the cells
- They don't have chlorophyll

- They exist as unicellular or multi-cellular organisms

LESSON ACTIVITY

1. Write any two examples of fungi
2. How do fungi feed?
3. Give any two characteristics of fungi
4. Explain why fungi are not plants.

LESSON 8

TOPIC : BACTERIA AND FUNGI

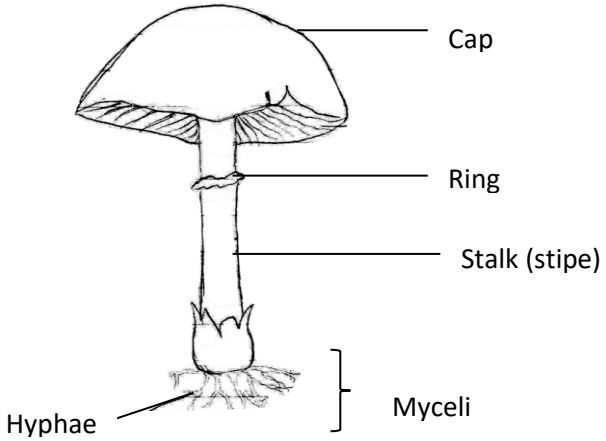
SUB TOPIC : STRUCTURE OF A MUSHROOM

Read and write these words;

- Cap
- Gill
- Stipe
- Ring
- Hyphae
- Mycelium

The structure of a mushroom.

Refer New vision primary integrated science learners bk 5



Use of each part

Cap –holds and protects the gills.

Gills –produce and store spores.

Ring –join the upper stalk to the lower stalk.

Stalk –It holds the mushroom upright.

Hyphae –helps to absorb soluble food from decaying matter.

Mycelium – Absorbs food nutrients for the mushroom.

LESSON ACTIVITY

1. Draw a structure of a mushroom and label the following part.

a) Gills

b) hypae

c) Stalk

2. Write the two uses of gills to a Mushroom.

3. How are gills of a mushroom similar to the spiracles of insects?

LESSON 9

TOPIC : BACTERIA AND FUNGI

SUBTOPIC : NATURE OF FUNGI

Read and write these words;

- Penicillium
- Yeast
- Mushrooms

Nature of fungi

Fungi exists in two ways;
- Useful or harmless fungi
- Harmful fungi

Useful or harmless fungi

These are fungi that man can use to carry out his activities or which can be used as his food.
Examples of useful fungi

- Yeast
- Mushrooms
- Penicillium

Harmful fungi

These are fungi that can be dangerous to man. They cause disease to plants, animals and peoples.
Examples of diseases caused by harmful fungi in people include;

- Ring worms
- Thrush
- Candidaisis
- Athlete's foot

ACTIVITY

1. Identify any two examples of useful fungi

2. Mention any two disease caused by harmful fungi to man

3. A part from yeast and mushrooms, give any other one example of a harmless fungi.

LESSON 10

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : REPRODUCTION IN FUNGI

Read and write these words;

- Budding
- Spores
- Cell division
- Asexual

Reproduction in fungi

- Fungi undergo asexual reproduction
- Most of the fungi reproduce by means of spores
- Examples of fungi that reproduce by spores include mushrooms, moulds, toad stools and puff balls.
- The spores are produced and stored in the gills
- Some fungi reproduce by cell division
- Yeast reproduces by means of budding

Illustrations

Refer to New vision primary integrated science pupils Bk 5 pg 144.

ACTIVITY

1. Name any one example of fungi that reproduces by means of budding

2. What type of reproduction do fungi undergo?

3. How are gills of a mushroom different from gills of a fish?

LESSON 11

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : USES OF FUNGI

Read and write these words;

- Humus
- Penicillin
- Decomposition
- Cheese
- Baking
- Anti-biotics

Uses of fungi /importance

- Some fungi are eaten as food e.g. mushroom provide vitamin B and iron
- Some fungi help in the formation of humus by the process of decomposition.
- Yeast is used in brewing of alcohol, fermenting fruit juice to make wine.
- Yeast is used in baking of bread and cake.
- Some fungi, for example penicillium are used to make medicine like penicillin
- Fungi are in the manufacture of cheese.

ACTIVITY

1. List any two uses of fungi

2. Name the fungi used in baking of breads and cakes.

3. How do fungi help to improve soil fertility?

LESSON 12

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : USES OF FUNGI

Read and write these words;

- Humus
- Penicillin
- Decomposition
- Cheese
- Banking
- Anti-biotics

Uses of fungi /importance

- Some fungi are eaten as food e.g. Mushroom provide vitamin B and iron
- Some fungi help in the formation of humus by the process of decomposition
- Yeast is used in brewing of alcohol, fermenting fruit juice to make wine
- Yeast is used in baking of bread and cakes
- Some fungi for example penicillium are used to make medicine like penicillin.
- Fungi are used in the manufacture of cheese.

ACTIVITY

1. List any two uses of fungi

2. Name the fungi used in baking of breads and cakes.

3. How do fungi help to improve soil fertility?

LESSON 12

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : DANGERS OF FUNGI

Read and write these words;

- Hygiene
- Patches
- Itchy
- Candidiasis
- Anthlete's foot
- Genitals

Disadvantages of fungi

- Some fungi cause food to go bad
- Some fungi cause diseases to both plants and animals
- Toad stools are poisonous to man, if they are mistaken to be mushrooms and eaten, they may cause death.

Common fungal disease in people

- Candidiasis: It is a fungal disease which affects our genitals (penis and vagina). Candidiasis spreads through dirty toilets and poor personal hygiene.
- Ring worm: It is a fungal skin infection which forms patches on the skin especially around the neck, cheeks and on the head.
- Athlete's foot: It is a skin fungal infection which attacks the skin in between toes. Athlete's foot is itchy, painful and makes the feet smell.

ACTIVITY

1. Name any one fungi which is poisonous to man

2. Mention any two skin fungal disease

3. Give one way of preventing ringworms.

LESSON 13

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : PREVENTION OF FUNGAL DISEASES

Read and write these words;

- Antiseptic
- Disinfectants
- Fungicides
- Moisture
- Food stuff
- Hygiene.

Prevention of fungal diseases

- Use disinfectants in cleaning bathrooms and toilets
- Avoid warm temperatures and moisture conditions in storage of food materials
- Do not share combs or clothing unless they are washed and ironed properly
- Do not share beddings /beds with infected people.
- Water for drinking should be boiled
- Smear meat and fish with salt to prevent the fungal growth.
- Maintaining proper sanitation and proper hygiene.

Treatment and control of fungal diseases.

- Treat the infected people immediately
- Use soap and water to wash the infected part every day. Antiseptic soaps are recommended.
- Spray the infected plants and animals with fungicides.

ACTIVITY

1. Identify any two ways of preventing fungal diseases

2. How does ironing clothing /beddings prevent the spread of fungal diseases?

3. Why is it advisable for the person infected with a fungal disease to wash with antiseptic soaps?

LESSON 14

TOPIC : BACTERIA AND FUNGI

SUB TOPIC : SIMILARITIES OF FUNGI AND BACTERIA

Read and write these words;

- Micro –organism
- Multi-cellular
- Single
- Decomposer
- Parasitically
- Saprophytic ally

FACTS ABOUT BACTERIA AND FUNGI

Similarities between bacteria and fungi

- Both bacteria and fungi take in oxygen and release carbon dioxide
- Both of them can feed saprophytically .
- Some can cause diseases to animals and plants while others are useful
- Both bacteria and fungi are decomposers of dead animals and plants.
- Both bacteria and fungi grow and spread rapidly

Differences between bacteria and fungi

- Bacteria are very tiny (micro –organisms) white some fungi like mushrooms are larger.
- The rate of reproduction in bacteria is faster than in fungi
- Both bacteria and fungi can be single –celled while fungi can as well be multi-cellular (many cells)
- The fungi reproduce by means of spores or budding while bacteria reproduce by binary fission.
- Some fungi are used as food while there are no bacteria used as food.

ACTIVITY

1.Give any two similarities between bacteria and fungi

2. Differentiate between saprophytic nutrition and parasitic nutrition

3. Write any two differences between bacteria and fungi

LESSON 15

TOPIC : SOIL

SUB TOPIC : FORMATION OF SOIL

Read and write these words;

- Weathering
- Decomposition
- Particle
- Organic matter
- Particle

SOIL

Soil is the upper layer of the earth consisting of weather, rock particles and organic matter in which plants grow.

Ways how soil is formed;

- Weathering
- Decomposition of organic matter.

Weathering

Weathering is the breakdown of rocks into small particles

Agents of weathering

These are things that help in the breakdown of the rock.

a) Plants. Plant roots grow through rock gaps and when the roots grow big the rock crack, forming soil particles.
b) Animals. When hoofed animals move rocks, they break them.
c) Human beings. Human activities such as stone quarrying leads to the breakdown of rocks to form soil particles.
d) Weather changes. During day time, rocks are heated up, while at night, temperatures drop rapidly. This results into expansion and contraction of rocks, thus cracking and breaking down.
e) Running water. Flowing water wears out rocks. As water flows over a rock, it peels off particles of the rock. The rock breaks down into smaller particles called silt

2. Decomposition of organic matter

When living things die, bacteria and fungi decompose them. To decompose is to breakdown dead organic matter into humus.

ACTIVITY

1. What is soil?

2. Apart from weathering of rocks, mention another way how soil is formed.

3. How does man contribute to the formation of soil?

LESSON 16

TOPIC : SOIL

SUB TOPIC : COMPONENTS OF SOIL

Read and write these words;

- Humus
- Bacteria
- Fungi
- Organic

Components of soil

a) Living thing

- Bacteria
- Fungi

b) Non- living components

- Air
-Water
- Humus
- Rock particles

1. Humus

- Humus is the lightest (in weight) soil substance found on the top most layer of the soil. It has a dark colour.
- Humus is made of parts of dead plants and animal. Humus is rich in soil nutrients.
- It provides useful salts like nitrates for the growth of plants
- It makes the soil soft and easy to plough.
- It increases and promotes the activities of the living organisms in the soil.

2. Rock particles

- The rock particles which break off from the parent rock form soil

Experiment to show the presence of humus and rock particle in the soil.

Refer to;

- New vision primary integrated science bk 5 pg 75
- Baroque integrated science pupils text bk 5 pg 69

Experiment II: To find out if soil has humus

Refer. Baroque integrated science pupils book 5 page 72.

LESSON ACTIVITY

1. Identify any two components of soil

2. How is humus different from other components of soil?

LESSON 17

TOPIC : SOIL

SUB TOPIC : COMPONENTS OF SOIL

Read and write these words;

- Evaporation
- Vapour
- Droplets
- Condense
- Germination
- Photosynthesis.

Water /moisture

Water /moisture is a liquid component of soil.

The importance of water as a component of soil.

- Water cools the soil. When soil is heated, the water evaporates and this cools the soil.
- It makes the soil soft for seed germination
- It dissolves mineral salts and transports them round the soil
- Water is important for living organisms in the soil to survive eg. Bacteria and fungi need moisture to multiply.
- It is a raw material during photosynthesis
- It helps in the rotting (decomposition) of organic matter.

Experiment to find out if soil contains water

Refer;

1. Baroque integrated science bk 5 page 71
2. New vision primary int. science bk 5 pg 75.

ACTIVITY

1. Name the liquid component of soil

2. How is water important in the soil?

3. A part from photosynthesis, identify any other plant process which involves the use of water..

LESSON 18

TOPIC : SOIL

SUB TOPIC : COMPONENTS OF SOIL

Read and write these words;

- Bubbles

- Respiration
- Germinate
- Ploughing

Air

- Air is important in soil
- It is used for respiration of living organisms in the soil
- It enables seeds to germinate
- Digging and ploughing helps to increase the air content of the soil

Experiment to find out if soil contains air

Refer;

1. Baroque integrated science bk 5 page 70
2. New vision primary int. science bk 5 74.

ACTIVITY

1. Give two ways how air is important in the soil

2. Identify any one human activity that can increase the air content in the soil.

LESSON 19

TOPIC : SOIL

SUB TOPIC : COMPONENTS OF SOIL

Read and write these words;

- Aeration
- Fertile
- Termites
- Worms

Living organisms

- There are many living organism in the soil
- Bacteria and fungi decompose matter to make humus.
- Termites, millipedes, ants, centipedes and worms live in the soil
- They create holes or spaces in the soil
- They improve on the aeration of soil
- They make the soil soft and fertile through their wastes.

TASK

Learners will be asked to collect a soil sample from a compost pit in the school

- Observe carefully
- Record any living thing seen
- Compare their findings.

ACTIVITY

1. Identify any two living organisms found in the soil

2. A part from bacteria, name another living organism that help in the decomposition process.

3. Describe how earthworms help in the soil aeration.

LESSON 20

TOPIC : SOIL

SUB TOPIC : TYPES OF SOIL

Read and write these words;

- Clay

- Particle
- Drainage
- Nutrients

Types of soil

These are three types of soil, namely;

- Clay soil
- Sandy soil
- Loam soil

Sandy soil

- Sandy soils have the largest particles
- Sandy soil drains very easily because the particles are large
- The particles leave big air spaces.
- It does not hold water for a long period of time.

Clay soil

- Clay soil has very small, fine sticky particles and very small air spaces.
- Clay soils can easily become water logged
- Clay soils do not easily allow water to pass through them.

Loam soil

- Loam soil is a mixture of clay and sandy soil
- It has medium sized particles with moderate sizes of air spaces.
- It is well drained and fertile because it contains humus.

ACTIVITY

1. Give the three types of soil

2. Which type of soil holds water for a long time?

3. Why is loam soil the best type of soil for agriculture?

LESSON 21

TOPIC : SOIL

SUB TOPIC : TYPES OF SOIL

Read and write these words;

- Drainage
- Particle
- Clay

Drainage in different types of soil

Soil drainage means how water passes through different and types of soil

- All types of soil have different sizes of particles and air spaces.

For example

1. Sand soil has the largest particles and therefore biggest air spaces
2. Loam soil has medium –sized particles with moderate size of air spaces.
3. Clay soil has very small particles and very small air spaces

The drainage is therefore determined by the air spaces in the soil as shown in the experiments;

Experiments on water drainage in different types of soil

Refer;

- Baroque int. science pupils book 5 page 64

- New vision primary int. science book 5 page 71.

ACTIVITY

1. Which type of soil drains water fast?

2. Give the reason why the soil named above drains water fast.

LESSON 22

TOPIC : SOIL

SUB TOPIC : IMPORTANCE OF SOIL

Read and write these words;

- Mining
- Pottery
- Construction

Importance of soil

- Soil supports plants life (plants obtain water and nutrients from the soil)
- Soil is used for building
- It is used for construction
- Soil acts as a natural habitat of some animals (worms, rats, snakes)
- Soil is used in pottery (clay)

ACTIVITY

1. Write any two importance's of soil to man

2. How does man use soil to earn a living?

3. A part from making ceramics, how else is clay soil important to man.

LESSON 23

TOPIC : SOIL

SUB TOPIC : PROPERTIES OF SOIL

Read and write these words;

- Drain aerated
- Humus capillarity
- Plough retain

Properties of each type of soil

Sand

- It is well aerated
- It can drain easily
- It has poor rate of capillarity
- It lacks humus and minerals
- It has bigger particles

Clay

- It is poorly aerated because of very tiny spaces
- It has high rate of capillarity
- It is good for pottery
- It is made up of very small fine particles of rocks
- It is sticky and difficult to plough

Loam soil

- It is a mixture of clay, sand and humus
- It contains good quantity of humus
- It is well aerated

- It contains all soil components in a balanced amount.
- Loam soil is the best type of soil can allow water to pass through it.

ACTIVITY

1. Identify the three types of soil

2. Which type of soil is good for building and construction?

3. Why is loam soil the best soil for agriculture?

LESSON 24

TOPIC : SOIL

SUB TOPIC : SOIL EROSION

Read and write these words;

- Altitude
- Element
- Agent
- Sheet

Soil erosion

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

Agents of soil erosion are the elements that take away soil. They are;

- running water
- wind
- Moving animals.

1. Running water. Running water from rain causes loss of soil from a high altitude to a lower altitude.
2. Wind
   Wind is moving air. It is responsible for washing away great amounts of soil on plain or flat land. This results into sheet erosion.
   ACTIVITY

1. Define soil erosion

2. Name any two agents of soil erosion

3. How do moving animals carry out soil erosion?

LESSON 25

TOPIC : SOIL

SUB TOPIC : SOIL EROSION

Read and write these words;

- Sheet
- Rill
- Splash
- Gully

Types of soil erosion

1. Sheet erosion. It is the washing away of the top soil evenly along a wide area.
2. Splash erosion. It happens when rain drops hit bare soil. This causes water to form a shape at the spot.
3. Rill erosion. This is the erosion which occurs in areas where there is little or no vegetation.
4. Gully erosion. This is the erosion that forms big and deep ditches.

For diagrams refer to New vision primary integrated science book 5 page 79.

ACTIVITY

1. Identify the agent of soil that is responsible for gully erosion.

2. How do we call the type of soil erosion where small channels begin in the fields which have been newly cultivated?

LESSON 26

TOPIC : SOIL

SUB TOPIC : CAUSES OF SOIL EROSION

Read and write these words;

- Deforestation
- Overgrazing
- Over grazing
- Over cultivation
- Bare.

Causes of soil erosion

1. Overgrazing is keeping of many farm animals on a small piece of land. The animals eat the vegetation to ground level leaving the land bare.
   This exposes the soil to agents of erosion
2. Deforestation / Devegatation. It is the cutting down of trees in large numbers.
3. Bush burning. When bush and grass are burnt, it leaves land bare. This enables the agents of erosion to wash away the top soil.
4. Over- cropping /over cultivation. This is when a farmer grows crops on the same piece of land season after season; soil structure is broken down, forming small soil particles that can be easily carried away by agents of soil erosion.

ACTIVITY

1. Identify any two causes of soil erosion

2. How does overgrazing cause soil erosion.

3. Besides causing soil erosion, state any other danger of bush burning.

LESSON 27

TOPIC : SOIL

SUB TOPIC : EFFECTS OF SOIL EROSION

Read and write these words;

- Fertility
- Productive
- Silting
- Drainage
- Irrigation
- Soil exhaustion

Effects of soil erosion

- Soil loses most of its fertility and become less productive soil exhaustion.
- It washes away crops
- It causes blockage of drainage system and irrigation channels
- Creation of unwanted trenches or gullies
- It leaves the soil bare and hard, making it difficult to dig.
- It causes silting (mud settling in rivers or lakes)
- Washing away of bridges.

Activity

1. Identify any two effects of soil erosion

2. Explain how soil erosion leads to soil exhaustion

LESSON 28

TOPIC : SOIL

SUB TOPIC : EFFECTS OF HARMFUL MATERIALS ON THE SOIL

Read and write these words;

- Polythene
- Plastic
- Toxic
- Disposal
- Pesticide
- Penetration
- Nutrient
- Waste.

Effects of harmful materials on the soil

- Poor disposal of rubbish causes land /soil pollution.
- Things which cannot rot/which do not allow water to enter into the soil include, broken glasses, plates, cups, used tins, plastics, polythene paper etc.
- They need to be collected and disposed of proper.
- If they are left on the top of the soil they also stop the circulation of air in the soil and suffocate living organisms in soil.
- Other harmful material on the soil is chemical, pesticides, insecticides herbicides and fertilizer.
- They kill organisms that would make the soil fertile.

ACTIVITY

1. List any two examples of harmful materials on the soil

2. How do chemicals, pesticides and fertilizer make soil infertile?

3. Suggest on effect of poor disposal of rubbish on soil.

LESSON 29

TOPIC : SOIL

SUB TOPIC : SOIL CONSERVATION

Read and write these words;

- A forestation
- Conservation
- Contour
- Terracing

Soil conservation

- Soil conservation is the maintaining or preventing the soil from losing its nutrients or fertility.

Methods of soil conservation

- Planting grass
- Planting cover crops
- Planting windbreaks
- Reforestation
- A forestation
- Terracing
- Contour ploughing.

i) Planting grass. We should plant grass on bare land e.g. In the school compound.

ii)Aforestation. This is the practice of planting trees in a place where they have never existed.

iii) Re-aforestation. This is the practice of growing trees in a place where a forest once existed.

ACTIVITY

1. What is soil conservation?

2. Identify any two methods of conserving soil

3. Differentiate between a forestation and re- a forestation

LESSON 30

TOPIC : SOIL

SUB TOPIC : SOIL CONSERVATION

Read and write these words;

- Terracing
- Nitrate
- Fertility
- Legumes
- Contour

i) Terracing

This is a practice in which land on a steep slope is made flat strips thereby reducing the steepness of the slope.

- Terraces reduce the speed of running water which would carry away the fertile top soil
- Terraces conserve water in the soil by allowing water to infiltrate into the soil.

ii). **Contour ploughing**

- This is the practice of ploughing across a slope
- This practice reduces the amount of water running down the slope which would carry away to fertile soil.

iii). **Crop rotation**

- This is the practice of growing different crops on the same piece of land season after season.
- When legumes are included in crop rotation because they add nitrogen in the soil.

Advantages of crop rotation

- It controls soil erosion
- It improves soil fertility
- It controls the growth of weeds
- It controls pests and diseases.

ACTIVITY

1. Write any two advantages of crop rotation

2. How does terracing control soil erosion?

3. How is contour ploughing similar to terracing?

LESSON 31

TOPIC : SOIL

SUB TOPIC : FERTILIZERS

Read and write these words;

- Organic
- Fertilizer
- Texture
- Natural
- Poisonous
- Nutrient

Fertilizers are grouped into two;

- Artificial (inorganic) fertilizers
- Nature (organic) fertilizers

These are fertilizer manufacture from chemicals.

Advantages of using artificial fertilizers.

- They are readily available on the market
- They respond very fast, if applied correctly
- They supply the required nutrients

Disadvantages of using artificial fertilizer

- They are expensive
- They kill living organisms in the soil
- Some fertilizer can be poisonous. They may change the texture of the soil.
- They are light and can easily be washed away by rain
- They do not last long in the soil.

ACTIVITY

1. What are inorganic fertilizers?

2. Give any two advantages of artificial fertilizers

3. Write two disadvantages of using artificial fertilizer

LESSON 32

TOPIC : SOIL

SUB TOPIC : NATURAL FERTILIZERS

Read and write these words;

- Litter
- Decomposition
- Waste
- Infiltration
- Fibers

Natural (organic) fertilizers

- Natural fertilizers are prepared
- They are not manufactured
- They are organic manure. They include; Farm Yard manure, organic mulches, Green manure, compost manure.

Farm yard manure.

- It is from animal wastes, feed remains and beddings.
- Farm yard manure should be applied when hot.

ii) **Green manure.**

- This is got from decomposing green plants, e.g. Bean leaves, pumpkin leaves, maize leaves.

iii) **Compost manure.**

- It is got from plants, animal materials and house hold waste, such as leftover food.
- Compost manure can be made by heaping organic waste on the surface of the soil or in pit.
- It is then taken to the garden it is ready after decaying

iv) Organic mulches

- Mulches are grass or leaves or fibres that are used to cover the soil
- When mulches rot, they make organic manure.
- Mulches improve on water infiltration into the soil.

ACTIVITY

1. Identify any two types of organic manure

2. How is compost manure different from farm yard manure?

3. A part from forming organic mulches manure, give another use of mulches to the soil.

LESSON 33

TOPIC : SOIL

SUB TOPIC : ADVANTAGES OF ORGANIC MANURE

Read and write these words;

- Environment
- Manure
- Stink
- Pathogen

Advantages of organic manure

- Organic manure is easy to apply
- Materials are easy to collect from the garden
- Organic manure improves soil quality
- Organic manure is environmentally –friendly
- Organic manure lasts for a long time.
- Provides a variety of soil nutrients.

Disadvantages of using organic manure

- Storage of organic manure is major problem farm yard manure is dirty and stinks.
- If the manure lacks nutrients, it is hard to identify the missing nutrients.
- Sometimes, manure may harbor pests and pathogens that can easily damage crops.

ACTIVITY

1. Write any two advantage of organic manure

2. Identify any two disadvantage of using organic manure.

LESSON 34

TOPIC : SOIL

SUB TOPIC : METHODS OF APPLICATION OF FERTILIZERS.

Read and write these words;

- Aerial
- Placement
- Broadcasting
- Irrigation

Methods of applying fertilizers in the garden

- Broadcasting
- Placement
- Drilling
- Side dressing
- Bund placement
- Application through irrigation water
- Aerial application

Broadcasting

- It refers to spreading fertilizers uniformly all over the field.

Placement

- It refers to the placement of fertilizers in the soil at a specific place with or without reference to the position of the seed.

Drilling

- This refers to the application of fertilizers at the time of sowing.

Side dressing

- It refers to the spreading of fertilizers in between the rows of crops.

Bund placement

- This is the placement of fertilizers along the bunds of crops.

Application through irrigation water

- It refers to the application of water soluble fertilizers with irrigation water.

Aerial application

- In areas where ground application is not practicable, the fertilizer solutions are applied by aircraft, particularly in hilly areas, forest land, grasslands or sugar cane fields.

ACTIVITY

1. Identify any two methods used to apply fertilizers in the garden.
2. Which of the methods is commonly used by the local farmers?
3. Give the difference between placement method and drilling.

LESSON 35

TOPIC : SOIL

SUB TOPIC : MAKING OF COMPOST MANURE

Read and write these words;

- Waste
- Compost
- Peelings
- Dampness
- Decomposition
-

Making compost manure

- Materials needed
- Three buckets of pots
- Household waste such as peelings of banana, cassava and potato
- Leftover food
- Grass
- Leaves

Learners will be guided to collect the above materials and put them in the pit, bucket or pot being guided by the teacher.

Refer to the activity on page 87 in New vision primary integrated science learners book 5.

LESSON 36

TOPIC : TYPES OF CHANGES

SUB TOPIC : Changes in the environment (biological changes)

Read and write these words;

- Biological
- Growth
- Irreversible
- Seedling
- Incubate
- Hatch

Types of changes

Changes in the environment are group into;

- Biological changes
- Physical changes
- Chemical changes.

Biological changes

These are changes that take place in living things

Characteristics of biological changes

- Biological changes are irreversible
- Change in size i.e. Small become big
- Growth. Young ones mature and become adults

Examples of biological changes.

- A seed germinates into a seedling
- A hen lays egg are incubated and hatch into chicks.
- In people growth is notice in three groups;

i)Childhood. The time between birth and adolescence.

ii)Adolescence. The time between childhood and adulthood.

iii) Adult hood. The period after adolescence to death.

Managing body changes

- When the child is still young, he or she is looked after by the parents.
- When a boy or a girl grows, he or she needs to look after him or herself. For example, bathing, washing clothes, brushing teeth and cutting finger nails.
- During adolescence, pubic hairs grow around their private parts. This hair should be shaved.
- Girls increase in size breasts start to grow, menstruation periods begin.
- Boys grow big in size, grow beards and start thinking about girls.
- Both girls and boys should be guided on how to cope up with these changes.
- They should be encouraged to tell the elder, parents, teacher in case they get problems caused by these changes.

ACTIVITY

1. What are biological changes?

2. Give any two characteristics of biological changes.

3. Describe two ways how body changes in adolescents can be dangerous.

4. State two ways of managing changes in adolescents.

LESSON 37

TOPIC : TYPES OF CHANGES

SUB TOPIC : CHEMICAL CHANGE

Read and write these words;

- Permanent
- Shape
- Rot
- State
- Formation
- Decay

Chemical change

These are permanent changes, when it has taken place it cannot go back to its original state.

Characteristics of chemical changes

- Chemical change forms a new substance
- The change is irreversible i.e. once it has taken place the object does not come back to its original state.
- The weight changes but sometimes mass does not change.

Examples of chemical changes

There are many examples of chemical changes which include;

1. Rusting
2. Fermentation
3. Respiration
4. Rotting and decaying
5. Burning of materials

ACTIVITY

1. Define a chemical change

2. Mention two examples of chemical changes?

3. How has chemical change, helps man in preparation of Alcohol.

LESSON 38

TOPIC : TYPES OF CHANGES IN THE ENVIROMENT

SUB TOPIC : PHYSICAL CHANGE

Read and write these words;

- Refrigerator
- Condense
- Evaporate
- Physical
- Solution

Physical changes

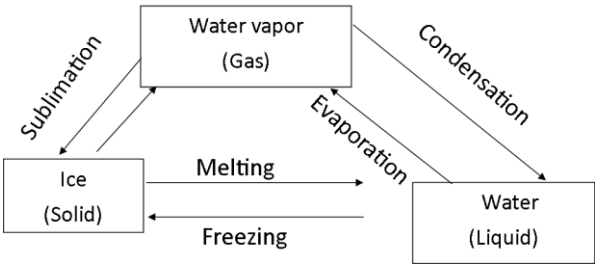
These are changes which take place in our environment and can be reversed.
Characteristics of physical changes

- The change is reversible
- There is no change in weight
- No new substance is formed
- No heat or light is given out or absorbed.

Examples of physical changes.

- Melting
- Evaporation
- Sublimation
- Condensation
- Freezing or solidification
- Mixing water and sand.

Diagram illustrating physical changes in states of matter



ACTIVITY

1. Give any two examples of physical changes
2. How is freezing different from condensation

LESSON 39

TOPIC : TYPES OF CHANGES

SUB TOPIC : WEATHERCHANGES

Read and write these words;

- Faulting
- Land slides
- Season
- Floods
- Atmosphere
- Rainfall formation.

Weather

Weather is the daily conditions of the atmosphere at a given time and place.
Weather is a natural change it place in the atmosphere. Weather is a natural change because it takes place without the involvement of man.

Examples of weather changes (types of weather)
Examples of changes in weather include;

- Rainy
- Windy
- Cloudy
- Sunny

Elements of weather
These are things that make up the weather of a particular day. These include;

- Rainfall
- Sunshine
- Clouds
- Wind
- Humidity

LESSON ACTIVITY
1. Define weather

2. Why is weather referred to a natural change?

LESSON 40

TOPIC : TYPES OF CHANGES IN THE ENVIRONMENT

SUB TOPIC : CHANGES OF STATES OF MATTER

Read and write these words;

- Deposition
- Sublimation
- Freezing
- Evaporation
- Melting

Changes of states of matter

Changes in the states of matter include;

- Melting
- Evaporation
- Sublimation
- Condensation
- Freezing or solidification

Learners will be guided to do an experiment about changes in states of matter. Refer to Activity 9.6, page 155, New vision primary integrated science bk 5.

Heat affects matter in the following ways;

- The process by which liquids turn into gases is called evaporation

- The process by which gases turn into liquids is called condensation
- The process by which liquids change to solids is called freezing
- When solids like ice turn into water, the process is called melting
- Sublimation is a process where solids turn directly to gases

ACTIVITY

1. Identify any two types changes in the states of matter.

2. How do we call the process where liquids turn into gas?

LESSON 41

TOPIC : TYPES OF CHANGES IN THE ENVIRONMENT

SUB TOPIC : NATURAL CHANGES IN THE ENVIRONMENT

Read and write these words;

- Natural
- Volcanic
- Eruption
- Slide
- Season
- Flood.

Natural changes

Natural changes are changes that happen without the involvement of man. These are controlled by God. Natural changes man has no control over their occurrence.

Examples of natural changes

1. Rainfall formation
2. Floods
3. Land slides
4. Earth quakes
5. Wind movement
6. Volcanic eruptions
7. Changes of seasons

The above mentioned natural changes have good and bad effects to the environment.

LESSON ACTIVITY

1. Define a natural change

2. Outline any four natural changes in the environment.

3. Why are they called natural changes?

LESSON 42

TOPIC : TYPES OF CHANGES IN THE ENVIRONMENT

SUB TOPIC : COMPARISON OF CHANGES IN THE ENVIRONMENT

Read and write these words;

- Reversible
- Volume
- Irreversible
- Substance

Characteristics of various types of changes in the environment.

Biological changes.

- The changes are irreversible. They occur in living things only.
- There is change in size.

Chemical changes

- A new substance is formed
- Change is irreversible
- Heat and light are sometimes given out
- There is change in weight

Physical changes

- The change is reversible. –No-heat or light is given out

There is no change in weight – No new substance is formed.

Comparison of the types of changes in the environment

Biological changes occur in living things only

Biological changes are similar to chemical changes because in new substances are formed, there is change in size and the changes are irreversible.

Chemical changes	**Physical changes.**
Anew substance is formed Heat is given off or absorbed Change is irreversible.	No new substance is formed No heat loss or gain Change is reversible.

ACTIVITY

1. Give one way how biological changes are similar to chemical changes

2. How are biological changes different from other types of changes in the environment?

3. Differentiate between physical changes and chemical changes.

LESSON 43

TOPIC : TYPES OF CHANGES IN THE ENVIRONMENT

SUB TOPIC : CONSEQUENCES OF CHANGES IN THE ENVIRONMENT

Read and write these words;

- Breed
- Improve
- Species
- Variety
- Decompose.

Consequences of the types of change in the environment

The changes that takes in the environment have brought effects to the environment and these changes are two sided that is to say they have caused the negative effects and positive effects.

The positive effects of types of change

- Young ones are produced to replace old ones
- An old organism dies and creates room for young ones.
- Dead organisms decompose to form soil
- Rocks are broken down to form soil
- Changes in weather helped in the formation of rainfall.

Negative effects of types of changes in the environment

- The birth of many children leads to over population.
- Over population lead to destruction of forests for farming.
- The search for food leads to destruction of plants and animal species
- Changes in the environment cause floods and bland slides, leading to loss of property and lives.

Note: It is to know that some changes make new substances and other do not. Some change places permanently, placement faulting changes even shape of the landscape.

LESSON ACTIVITY

1. Name the three positive effects of types change.

2. Write the type of change that helps in the formation soil

LESSON 44

TOPIC : SANITATION

SUB TOPIC : SANITATION

Read and write these words;

- Sanitation
- Kitchen
- Urinals
- Compound
- Environment

SANITATION

What is sanitation?

Sanitation is the keeping of the environment clean and healthy.

- Environment means all things that surround man
- The places in our environment that should be kept clean include, compound, latrines or toilets, kitchens, school urinals and animal houses.

Ways of keeping the environment clean

- Sweeping compound, houses, kitchen and latrines etc.
- Mopping the floor of houses, latrines, toilets, bath rooms etc.
- Washing utensils and drying them
- Washing clothes and sun drying them.

Importance of good sanitation

- Clean environment keeps away flies and other vectors that spread diseases.
- A clean environment looks smart and beautiful.

ACTIVITY

1. What is sanitation?

2. Why should we clean latrines or toilets regularly?

3. Identify any two ways of maintaining proper sanitation in your classroom.

LESSON 45

TOPIC : SANITATION

SUBTOPIC : GERMS AND DISEASES

Read and write

- Microscope
- Tiny
- Magnify
- Germ
- Harmful
- Useful

GERMS AND DISEASES.

- What are germs? These are tiny (small) living organisms that cannot be seen with naked eyes. These can be seen by an instrument called a microscope. A microscope is used by health workers (doctor)
- A disease is a state of the body to feel unhealthy. This condition is brought the germs after entering the body.

Types of Germs.

There are four types of germs namely

- Bacteria
- Virus
- Protozoa
- Fungi

BACTERIA.

Bacteria are in two forms of nature

1. Useful Bacteria (Good Bacteria)
2. Harmful Bacteria (Bad Bacteria)
- Bad bacteria. These cause harm to the body when it enters

VIRUS.

Virus is smaller than Bacteria. These cause diseases and are seen only under a powerful microscope. Virus cause diseases like AIDS, Polio and Measles.

FUNGUS

Fungi feed on dead decaying matter

- They cause ringworms in human beings

PROTOZOA.

Protozoa are germs carried by vectors. For example, flies such as house flies, Mosquitoes and Tsetse flies.

ACTIVITY

1. Define the following;
   (i) A germ
   (ii) A disease
2. Name the instrument the health worker uses to see the germs.
3. Mention the four types of germs
4. How is sharing of Clothes a hygiene act.

LESSON 46.

TOPIC: **PRIMARY HEALTH CARE**

SUB TOPIC: **WHERE GERMS ARE FOUND**

Read and write

- Rubbish
- Un boiled
- Wastes
- Decaying
- Germ

Where are germs found?

- Germs are found everywhere especially in dirty places such as Soil, Latrines, Rubbish pits and other places with decaying matter.
- Un boiled water can also contain germs
- Human and animal wastes have germs
- A sick person or animal carries germs

ACTIVITY

1. Identify any two places where germs are found
   (i)
   (ii)
2. Why is it not good to drink un boiled water?
3. How can one protect oneself from getting diseases from a sick person?

LESSON 47

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: HOW GERMS ARE SPREAD

Read and write

- Vector
- Tsetse fly
- Cockroach
- Mosquito
- Ring worms

How germs are spread.

Germs move from place to place or from one person to another in many ways. These include;

- Body to body contact
- Insect bites and stings
- Sharing things
- Through air
- Drinking dirty unboiled water
- The 4Fs germ path

1. Body to body contact.
   - By touching each other. For example handshakes, sharing of beds or hugs
   - Sharing clothes with an infected person
   - Embracing each other
   All these spread diseases like scabies, and ring worms
2. Insect bites and Stings
   Some insects are Vectors
   -A vector is an infected animal or insect that passes on germs that cause diseases to people
   common vectors include; Mosquitoes, Tsetse flies, Cockroach.

ACTIVITY

1. Identify any two ways how germs spread.
2. Give any one disease spread through body to body contact.
3. How are tsetse flies dangerous to people?

LESSON 48

TOPIC: SANITATION

SUB TOPIC: HOW GERMS SPREAD

Read and write

- Combs
- Infect
- Towel
- Flu
- Tuberculosis

How germs spread

Spreading is movement of disease germs from one place to another

There many ways how germ spread or moves from a place to place or from a person to another person. These include;

- Sharing things
  sharing things like Combs, Clothes, Towels and Shoes make us get diseases from infected persons. Ringworms spread very fast through sharing clothes.
- Through Air
  Some germs are found in air with germs he or she gets germs and infect others with diseases such as infect others with diseases such as cough, flu, Measles and tuberculosis

ACTIVITY

1. Define a germ.
2. How can germ spread
3. Outline any three diseases Spread through breathing contaminated air.

LESSON 49

TOPIC: **PRIMARY HEALTH CARE**

SUB TOPIC: **HOW TO KEEP WATER SAFE**

Read and write

- Dysentery
- Typhoid
- Cholera
- Germ
- Dirty

Drinking dirty or unboiled water

- Dirty or unboiled water contain germs
- When we drink such water, germs enter into our bodies
- These germs cause diseases like dysentery, typhoid and Cholera.
- People make water sources such as wells dirty by washing in them.
- Some children also play in the water sources
- Some animals drink in the same water sources with people.

How to keep water safe?

- We should protect water source from people and animals misusing them to make the dirty
- Always boil water for drinking. Boiling water kills germs in it.

ACTIVITY

1. Mention any two diseases caused by drinking un boiled water.
2. How can dirty water be made safe for drinking?
3. Why is it important to protect water sources from being misused by people and animals?

LESSON 50

TOPIC: **PRIMARY HEALTH CARE**

SUB TOPIC: **4Fs GERM PATH**

Read and write

- Germs
- Contaminated
- Utensils
- Un washed
- Dirty
- Cleanliness

HOW GERMS SPREAD

Germs move from a place to a place or from a person to a person in many ways the following are the ways how germs spread

- **Through 4Fs**
  the 4F's stands the four 4F's that assist in transportation of a germ these are;
  Feaces
  Flies
  Fingers
  Food

The above mentioned things help in transportation of a germ from a place to place or from a person to a person.

- Draw an illustration of 4F's germ path in the text book (St. Bernard Integrated Science Pupils book 4 Page 119.

ACTIVITY.

1. Define a germ.
2. Write the 4F's in full.
3. Draw a diagram show a germ path (4F's).

LESSON 51

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: HOW GERMS CAUSE ROTTING

Read and write

- Feed
- Rot
- Refrigerate
- Multiply
- Smell
- Dead

How germs cause rotting.

When pants and animals die, the germs get feeds from the, when food is not stored well such as in a refrigerator, sun drying, smoking or salting, germs feed on it. As germs fed on food or dead plants and animals. They multiply and break down the food, dead plants or dead animals into small particles. This process is called rotting. As things rot a smelly gas is given off and these things become bad and not good for eating.

If it is a plant or animal, it rots and forms soil.

ACTIVITY.

1. What makes things rot?
2. How do germs help in the formation of soil?
3. Mention the best ways of storing food in order to stop rotting

LESSON 52

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: WAYS OF PROTECTING AGAINST GERMS AND DISEASES

Read and write

- Insecticide
- Dispose
- Contaminated
- Utensils
- Mosquito

Ways of protecting ourselves against germs and diseases.

We need to do the following in order to be protected against germs;

- Keep our environment clean

- Clean our toilets or latrines and keep them covered.
- Keep our hands and body clean
- Wash our hands with soap after visiting a toilet
- Clean our utensils and keep them dry.
- Keep our food well covered or refrigerated not to allow germ to multiply and cause rotting.
- Proper cooking of food.
- Protect water sources from people and animals misusing them to avoid contaminated.
- Sleeping under a treated mosquito net
- Drink boiled water
- Dispose wastes in toilets or latrine
- Spray our houses using insecticides to kill vectors such as cockroaches and mosquitoes.

ACTIVITY

1. Identify any two ways of protecting ourselves against germs and diseases
2. How can we protect our food from contamination?
3. Why should we sleep under a treated mosquito net?

LESSON 53

TOPIC: PRIMARY HEALTH CARE

Sub Topic: ELEMENTS OF PHC

Read and write

Hygiene

Health

Essential

Individual

What is Primary Health Care?

Primary health Care is the essential health care where individuals, families and communities work together to solve their health problems.

Elements of primary Health Care.

- Oral and dental health care
- Sanitation
- Food and Nutrition (food Hygiene)
- Provision of safe water
- Provision of essential drugs
- Diagnosis and management of common diseases
- Health education.

1. **Oral and dental health**
   - We need to keep our teeth and the mouth clean and in good conditions.
   - We should brush our teeth every after a meal to remove any food particles from the teeth.
2. **Sanitation**
   Sanitation is the keeping of the environment clean and healthy. This should be done to prevent diseases
3. **Food and Nutrition.**
   We should feed ourselves and children on a balanced diet. A balanced diet is a meal that contains all food values in their right amounts. This prevents malnutritional diseases.
4. **Provision of safe water including management of water supply**

LESSON 54

TOPIC: Primary Health Care

SUB TOPIC: Elements of primary Health Care

Read and write.

- Health
- Diagnose
- Care
- Nutrition
- Maternal
- Data

ELEMENTS OF PRIMARY HEALTH CARE

Elements of primary health care. These are programs meant to protect and maintain good health.

These programmes include.

1. Family planning
2. Maternal and child health care
3. Environmental health services
4. Immunization
5. Personal hygiene
6. Collection of basis statistical data
7. Control of communicable diseases and vector diseases

PERSONAL HYGIENE

Personal hygiene. It is the cleanliness of the body. This can be done by each person should live away that proper washing of the body and face at least once a day.

- Should wash hands before meals and after using a latrine.
- Brushing teeth every meals
- Washing face and eyes every after waking up
- Grooming finger nails
- Washing clothes and beddings

LESSON ACTIVITY

1. Define elements of primary health care?
2. Name the elements of primary health care that caters pregnant mothers.
3. How important is the grooming of finger nails the health of an individual?

LESSON 55

TOPIC: PRIMARY EALTH CARE

SUBTOPIC: PRINCIPLES OF PRIMARY HEALTH CARE

Read and write

- System
- Laws
- Concerns
- Primary health care

PRINCIPLES OF PRIMARY HEALH CARE.

These are laws that are followed to have a systematic way of dealing with health concerns

The principles of primary health care include;

1. There is need of total health for individuals, families and communities
2. Activities of the communities are organized according to priorities. The most required and Urgent are dealt first.
3. All people in community should be totally involved and should participate in all activities
4. Many approaches should be followed where all people of all walks of life work for the purpose of improving the health of the community.
5. Equitable distribution of health care to everyone.

LESSON ACTIVITY

(i). Define principles of primary health care.

(ii). Outline any four principles of primary health care.

LESSON 56

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: ACTIVITIES OF PHC THAT PROMOTE OF THE COMMUNITY HYGIENE.

Read and write.

- Stagnant
- Faeces
- Contamination
- Rubbish
- Diarrhea

Activities that promote community hygiene.

- A community is a place where people live and work together.
- Community hygiene is an important aspect in PHC.
- It is very important to work together as community members to see that good hygiene is maintained in the community.
- Such activities we do as a community include;
- Draining all stagnant water.
- Proper rubbish disposal
- Proper disposal of human faeces and urine.
- Protecting all water sources from contamination.

All those control diseases especially diarrhorial diseases.

Refer.

1. Baroque Science Book 5. Page 195
   Activity 12.03
2. New vision primary Int. Science Book 5. Pg. 203
   Figure 12.1

ACTIVITY.

1. Identify any two activities a community should do to promote community hygiene.
2. What kind of disease can result from doing the above activities?
3. Why should we drain all stagnant water near the places we live?

LESSON 57

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: RENSPONSILITIES FOR INDIVIDUAL AND COMMUNITY IN PRIMARY HEALTH CARE.

Read and write

- Habits
- Sponge
- Flossing
- Hygiene
- Grooming
- Dental

Responsibilities of individual in health promotion.

These what an individual can do or practice in promoting primary health care. These practices include.

1. Bathing regularly should use clean water sponge and soap.
2. Washing hair, face regularly
3. Cutting finger nails short (Grooming finger nails)
4. Washing hands before handing any food and after visiting the toilet or latrine

5. Brushing teeth is also important when brushing teeth, brush the tongue as well as to make the breath pleasant.
6. Wash clothing and beddings regularly
7. Care for those younger than you by teaching them good health habits.

LESSON ACTIVITY

1. Mention any four responsibilities of an individual in promoting primary health care?

LESSON 58

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: Responsibility of individual, family and community in health promotion.

Read and write

- Garbage
- Information
- Breeding
- Balanced diet
- Vector

FAMILY RESPONSIBILITIES IN HEALTH PROMOTION

- Family members can help each other by;
- Feeding family members on a balanced diet
- Sharing information on health
- Proper use of toilets and latrines
- Clearing breeding places for vectors near the home
- Keeping members away from drug abuse
- Proper disposal of rubbish / garbage.
- Practicing good food hygiene
- Boiling water for family members to drink.

ACTIVITY

1. Define food hygiene.
2. How is smoking of one of the family members dangerous to the entire family?
3. Explain why it is an important aspect for a family to boil all drinking water.

LESSON 59

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: Responsibilities of individual, family and Community in promoting Primary Health Care

Read and write.

- Dispose
- Drain
- Rubbish
- Protect
- Hygiene
- Stagnant

Responsibilities of a community in promoting Primary Health Care.

These are activities done by community members in order to promote Primary Health Care. The following are activities done which include;

- A community is a group of people living together in a locality like a village town, trading Centre or a block of flats. Individuals and families make up a community.
- By working together, the individuals and families who form the community can achieve goals which would be difficult for one person or one family alone. The family can promote health by
- Organizing self-help projects e.g. If a health facility is needed in a community the people could co-operate and find ways and means of planning constructing, constructing and raising funds for operating or maintaining.

- Health Centres.
- Community rubbish pits
- Road repair to prevent accidents
- Rehabilitation Centres for disabled
- A protected spring well or borehole

LESSON ACTIVITY

1. Define a community?
2. Mention the activities performed by health care.

LESSON 60

TOPIC:PRIMARY HEALTH CARE

SUB TOPIC: Responsibilities of individuals, family and community in health promotion.

Read and write

- Immunization
- Breeding
- Health parades
- Cleanliness

Organizing community health committees.

A community can start a health committee made up of local people whose responsibility could be to work on;

- Control of diseases such as malaria by destroying breeding places for mosquitoes.
- Immunization – By working with District Medical Officer (DMOs) and other immunization authorities to establish immunization centre.
- Training people to become community health workers
- Having village cleaning sessions
- The community should build community latrines and maintain their cleanliness.
- A community health committee should link with community health workers (CHWs) and Traditional Birth Attendants (TBAs) who report the problems they see in the community.
- School as communities should encourage health Parades. in these parades teachers and prefects should check for cleanliness of nails, hair, jiggers and cleanliness of teeth, ears, and clothing

ACTIVITY

1. Identify any two responsibilities of health committee in a community.
2. Give any two importance of health parades in schools.
3. **LESSON 61**

TOPIC: PRIMARY HEALTH CARE

SUB TOPIC: Suitable health life styles and Good Health practices

Read and write

- Feed
- Sanitation
- Physical exercise
- Fitness
- Rest

Suitable Health life styles and Good health practice.

Good health life styles. These are practices of health that can make a person to live with a good health.

These life styles include;

- Carrying out regular physical exercise
- Having enough rest and sleep
- Good food and proper feeding.
- Living in a good sanitation.

One should keep in one's place of residence, study. Worth and play as fee from sickness and danger to health as possible we can do this by protecting food and water from contamination and keeping houses, classroom and compounds clean.

Addition to live health we need to do

- Routine checkups
- By maintain good posture when reading and even walking.
- Avoid smoking, Alcohol and other drugs
- Always seek medical attention and use health services whenever needed.
- Pray to the almighty.

LESSON ACTIVITY

1. Define a good health life style?
2. Outline any four good life styles one can perform to live with good health.
3. As a primary five pupils which good life style can you practice in order to maintain the normal functioning of the heart?

LESSON 62

TOPIC: PRIMARYR HEALTH CARE

SUB TOPIC: People with special need

Read and write

- Medication
- Bathe
- Feeding
- Vulnerable
- Isolate

People with special needs.

- These are people who are weak and are easily injured because of their physical conditions
- We should not isolate them
- Examples of such people include the sick, disabled, children and elderly people.

Caring for people with special needs.

People with special needs should be cared for in the following ways;

- Feeding those who have no hands
- Playing with them to give them comfort.
- Taking them to hospitals for medication
- Bathing those who cannot bathe themselves
- By cooking food for them
- By washing their clothes
- By helping them to walk

ACTIVITY

1. What term is used to refer to the people with special needs?
2. Write any two ways of caring for the people with special needs.
3. Why is it important for the children with special needs to play with others?

LESSON 63

TOPIC: FOOD AND NUTRITION

SUB TOPIC: Breast feeding

Read and write

- Nutrition
- Breast feeding
- Vitamin
- Proteins

- Carbohydrates
- Nutrients

Food and Nutrition.

Nutrition is the process by which the body takes in food nutrients necessary for health and growth.

Breast feeding.

Breast feeding is the act of feeding a baby on milk produced by the mother's mammary glands (Breasts)

Breast milk is considered to be the best food for babies because it contains all food values (nutrients) required by the body

It contains mineral salts, Vitamins, fats, carbohydrates and proteins

Advantages of breast feeding to a baby.

- The breast milk provides a complete balanced diet for the baby.
- Breast milk contains antibodies which protect a new born baby against some diseases.
- Breast milk is ever ready to feel the baby without preparation and always at right temperature.
- It is easy to digest.
- It promotes love between the mother and the baby.
- Breast milk promotes a baby's health weight.

ACTIVITY.

1. Define the term nutrition
2. Give any two advantages of breast feeding to a baby.
3. Why is the breast milk considered to be the best food for babies?

LESSON 64.

TOPIC: FOOD AND NUTRITION

SUB TOPIC: Advantages of Breast feeding

Read and write

- Pregnancy
- Menstruation
- Stress
- Depression

Advantages of breast feeding to mother and family.

- It delays the mother's next pregnancy. (it is a natural family planning method)
- Breast feeding reduces the risk of breast and ovarian cancer in mothers
- Breast feeding prevents menstruation in mothers
- It saves time, convenient and available whenever the baby needs it
- Mothers who breast feed have a lower risk of suffering from stress and depression.
- Breast feeding manages the weight of a mother. It promotes faster weight loss after birth.
- Breast feeding saves money in the family as there is no need to buy milk.

Activity

1. Identify any two advantages of breast feeding to a mother.
2. How does breast feeding help as a natural method of family planning
3. Explain how breast feeding saves money for the family

LESSON 65

TOPIC: FOOD AND NUTRITION

SUBTOPIC: Disadvantages of Breast feeding

Read and write

- Breast
- Feed

- Cancer
- Diarrhea
- Severe
- Illness

Disadvantages of breast feedings to a baby.

Breast feeding is the act of feeding a baby on breast milk produced by a mother's breasts.

Breast feeding has disadvantages to a baby who is being feed. The disadvantages of breast feeding they include;

1. Breast milk may be a health problem for those who are breastfeeding as the breast milk may spread diseases such as AIDS in case of breast feeding mothers who are infected.
2. Breast milk may not be available in case the mother goes away to work as teachers, doctors, engineers.
3. Breast milk may be misused in case the mother dies
4. Breast milk may lead to severe diarrhea as the baby takes in germs from breasts as they given to babies if not washed

LESSON ACTIVITY

1. Define breast feeding?
2. Outline the disadvantages of breast feeding to a baby.
3. How breast feeding lead to severe diarrhea?

LESSON 66

TOPIC: FOOD AND NUTRITION

SUB TOPIC: BOTTLE FEEDING

Read and write

- Bottle
- Replace
- Produce
- Warm
- Satisfy
- Death

ADVANTAGES OF BOTTLE FEEDING.

Bottle feeding is act of dealing a baby on cow milk put in a bottle

This act of feeding a baby using a bottle has advantages which includes;

1. Bottle feeding keeps a baby satisfied when the mother is away for work.
2. In case the mother produces less breast milk the bottle feeding is used immediately to feed the baby.
3. Bottle feeding can be used in case the mother is sick.
4. Bottle feeding works best in case the mother is HIV positive
5. Bottle feeding enables mothers to regain her strength faster

LESSON ACTIVITY

1. Define bottle feeding?
2. Outline any two advantages of bottle feeding.
3. Describe any two situations which can lead to bottle feeding.

LESSON 67

TOPIC: FOOD AND NUTRITION

SUB TOPIC: DISADVANTAGES OF BOTTLE FEEDING

Read and write

- Feeding
- Bottle

- Death
- Warm
- Satisfy

DISADVANTAGES OF BOTTLE FEEDING.

Bottle feeding is the act of giving or feeding a baby using a bottle. It is disadvantaged to a baby in the following ways;

- Cow's milk does not provide a complete balanced diet for the human babies. It only has a balanced diet for the calf of a cow.
- Cow's milk is expensive of which most families could not afford buying it.
- Bottle feeding is time consuming in terms of preparation.
- It is difficult for the baby to digest cow's milk since its digestion takes time.
- Poor hygiene of bottles may lead to spread of diseases such as diarrhea.
- Bottle feeding does not create natural bond between a mother and a baby. This leads a baby to grow knowing that a helper is its mother
- Cow's milk does not provide immunity to the baby against germs.

LESSON ACTIVITY

1. Outline four disadvantages of bottle feeding.
2. How can bottle feeding facilitate the spread of diseases to a baby

LESSON 68

TOPIC : FOOD AND NUTRITION

SUBTOPIC : VULNERABLE GROUPS OF PEOPLE

Read and write these words;

- Vulnerable
- Convalescent
- Elderly
- Invalid

The vulnerable group of people

Vulnerable people are groups of people who can be easily harmed because of their conditions.

Vulnerable people need special care and attention

Examples of vulnerable groups of people include;

- Baby
- Elderly
- Pregnant women
- The sick and convalescent.

Note: A sick person who cannot do anything for him or herself is called an Invalid.

A person who is undergoing treatment or medication and is recovering is called a Convalescent.

ACTIVITY

1. What are vulnerable groups of people?
2. Identify any two examples of vulnerable groups of people.
3. Describe the difference between the invalid and convalescents.

LESSON 69

TOPIC : FOOD AND NUTRITION

SUB TOPIC : SPECIAL DIET FOR VULNERABLE GROUPS OF PEOPLE

Read and write these words;

- Expectant mother
- Proteins
- Calcium
- Iron
- Weaning babies
- Tissue

Special diet for vulnerable groups of people

a)Babies

- They need proteins to build their cells.
- They need vitamins to protect them against infections
- They need carbohydrates and fats to provide extra –energy to them.

b) The sick

- Need proteins to repair the worn out cells
- Vitamins to help the body become resistant to disease and to replace the lost mineral salts and fluids.

c) The elderly

- They need much protein to repair the worn-out tissues.
- Vitamins for health giving
- Fats to provide energy.
- They generally need soft foods and drinks like juice.

d) Pregnant mothers. They need;

- Proteins to build tissues of the baby growing inside her uterus and to repair the mother's worn out tissues.
- Carbohydrates to give the mother enough energy to carry the baby in her womb and herself
- Iron is needed by the baby to make its own blood.
- Calcium to build up strong bones for the baby.
- Vitamins to protect herself and the unborn baby from getting diseases.

ACTIVITY

1. Identify any two classes of food that must be in the diet of the pregnant mother.
2. How is the food rich in proteins important to the sick people?
3. Why should the elderly be given protein rich in foods?

LESSON 70

TOPIC : FOOD AND NUTRITION

SUB TOPIC : Traditional custom and food taboos in our communities.

Read and write these words;

- Customs
- Totems
- Taboos
- Slaughter

TRADITIONAL CUSTOMS AND FOOD TABOOS IN OUR COMMUNITY

Food taboos are practices that forbid people from eating certain types of food in their communities. Some of the food taboos include the following;

1. In some communities they do not allow women to eat chicken.
2. In some clans do not eat certain animal meat because they regard meat as their totem
3. Some Christians do not eat meat on Fridays during the lent period.
4. Moslems are not allowed to eat meat slaughtered by non-Muslims.
5. The Hindu do not eat beef.
6. Muslims and seventh day Adventists do not eat pork

LESSON ACTIVITY

1. Define the following;

a) A totem
b) A food taboo

2. Mention any four food taboos in your locality

LESSON 71

TOPIC : FOOD AND NUTRITION

SUB TOPIC : advantages of food taboos in our community

Read and write these words;

- Clan
- Conserve
- Malnutrition
- Respect

Advantages of food taboos in our community

Food taboos. The practices that forbid some communities on certain types of food. It is advantageous in following ways. These include;

1. The food taboos help to conserve environment. This means that some species of animals live long if not hunted and killed for food.
2. Some families will get enough food to eat. This is because if a family member of a community is not taking a certain type of food then another family will feast on it leading that family to have it in pretty.
3. Food taboos helps to conserve wild life in the environment.

ACTIVITY

1. Define a totem.

2. Mention any three advantages of food taboos and totems?

LESSON 72

TOPIC : FOOD AND NUTRITION

SUB TOPIC : Traditional custom and food taboos in our communities.

Read and write these words;

- Customs
- Totems
- Taboos
- Slaughter

TRADITIONAL CUSTOMS AND FOOD TABOOS IN OUR COMMUNITY

Food taboos are practices that forbid people from eating certain types of food in their communities. Some of the food taboos include the following;

7. In some communities they do not allow women to eat chicken.
8. In some clans do not eat certain animal meat because they regard meat as their totem
9. Some Christians do not eat meat on Fridays during the lent period.
10. Moslems are not allowed to eat meat slaughtered by non-Muslims.
11. The Hindu do not eat beef.
12. Muslims and seventh day Adventists do not eat pork

LESSON ACTIVITY

1. Define the following;

a) A totem
b) A food taboo

2. Mention any four food taboos in your locality

LESSON 73

TOPIC : FOOD AND NUTRITION

SUB TOPIC : Traditional custom s and food taboos in our communities.

Read and write these words;

- Clan
- Conserve
- Malnutrition
- Respect

Advantages of food taboos in our community

Food taboos. The practices that forbid some communities on certain types of food. It is advantageous in following ways. These include;

4. The food taboos help to conserve environment. This means that some species of animals live long if not hunted and killed for food.

5. Some families will get enough food to eat. This is because if a family member of a community is not taking a certain type of food then another family will feast on it leading that family to have it in pretty.
6. Food taboos helps to conserve wild life in the environment.

ACTIVITY

1. Define a totem
2. Mention any three advantages of food taboos and totems?

LESSON 74

TOPIC : FOOD AND NUTRITION

SUB TOPIC : Good Eating Habits in Our Community

Read and write these words;

- Handle
- Containers
- Minimize
- Swallow
- Raw food
- Chocking

Good eating habits in communities

These are practices that one should observe when he or she is taking food or meals. These procedures of practices are referred to as good eating habits. The good eating habits include;

1. Washing hands before handling food
2. 2. Chew food properly before swallowing it.
3. Food should be cooked and served in clean containers.
4. Food, especially meat should be cooked properly before eating it. Raw food may contain worms and germs.
5. Raw food such as fruits must be thoroughly washed before eating them to avoid germs.
6. People should minimize talking when eating to avoid chocking on food.

LESSON ACTIVITY

1. What are good eating habits?
2. List any four good eating habits you know.

LESSON 75

TOPIC : FOOD AND NUTRITION

SUB TOPIC : EFFECTS OF FOOD TABOOS IN NUTRITION

Read and write these words;

- Nutrition
- Healthy
- Proteins
- Religious
- Kwashiorkor

Effects of food taboos in nutrition

- If the society where you belong considers eating meeting as a taboo, the people in that society will lack proteins in the diet. Young children in that society are likely to suffer from Kwashiorkor. The people in this society need to use alternative sources of proteins like beans, soya beans, fish and others.
- Religious food taboos e.g. Christians are not allowed to eat meat during lent period may also lead to lack proteins in diet. Muslims not allowed drinking alcohol; this reduces the chances of having many crimes related with drinking alcohol.
- Other malnutrition diseases such as marasmus, rickets and beriberi may result depending on the food taboo and the food value lacking in the body.

ACTIVITY

1. Give any two malnutrition diseases which result from food taboos.
2. How can such diseases be controlled?

LESSON 76

TOPIC : FOOD AND NUTRITION

SUB TOPIC : Food Consumption Patterns in the Community

Read and write these words;

- Food path
- Food stuffs
- Consumption
- Type

Food consumption patterns in our community

- Consumption is the way how people use food in their locality.
- Consumption pattern is sequence of people prepares food and eating it. Consumption pattern depend on the following factors;

i) Environment
ii) The food chain

Different communities eat different types of food that to say that people near Lake shoes and other water sources have their diet rich in proteins from fish but they may lack some food stuffs such as vegetables.

The food eaten mainly by different communities is called a staple food.

The staple food may be rich in proteins, carbohydrates, fats vitamins and mineral salts. Examples of staple food include cassava, sweet potatoes, rice, millet and maize which contain carbohydrates. The staple food depends on the food commonly grown by a given community for consumption at home.

The different communities eat different food according to their location.
People who live in rural areas tend to have their diet including oranges or flesh products such as fruits and vegetables.

People who live in towns may have food stuffs that may not be as flesh as food in rural areas. People who live in town buy food stuffs from the markets, shops, super markets which might spend there some days.

LESSON ACTIVITY

1. What is a staple food?
2. Mention any two factors that make a staple food for an area.
3. What is the staple food for your locality?

LESSON 77

TOPIC : FOOD AND NUTRITION

SUBTOPIC : THE STAPLE FOODS

Read and write these words;

- Staple food
- Carbohydrates
- Consumption
- Vegetables
- Environment

Staple foods of different communities

What is a staple food?
A staple food is a type of food that is commonly eaten by most people in a particular area.
Examples of staple food in Uganda

1. In central region. Bananas, sweet potatoes, cassava, coco yams and white yams. The sauce for above food includes beans, ground nuts, fish and green vegetables.
2. Eastern region. Millet cassava, sweet potatoes, banana, white coco yams, maize. The above food is eaten along with fish, ground nuts, beans green vegetables etc.
3. Eastern Uganda. Millet mixed with cassava flour, sweet potatoes, sorghum mixed with cassava.
4. Western and south western Uganda. Irish potatoes, sorghum, sweet potatoes, bananas. The source for the above food includes ground nuts and beans.

LESSON ACTIVITY

1. Define a staple food
2. Give the staple food for the people in the south western region of Uganda.
3. Why do you think the people in the central region have fish as one of their staple sauces?