

PRIMARY FOUR SCIENCE

TERM I

TOPIC: FOOD AND NUTRITION

Sub topic: Food path

Lesson 1

Learners will be guided on how to;

- Define food path.
- Mention the types of food path.
- Describe village food path.
- List stages involved in food production.

Evaluation activity

1. Explain food path.
2. Outline the types of food path.
3. What is village food path?
4. Identify the stages involved in village food path.

Lesson 2

Sub topic: Stages in village food path

Land preparation

- Ways of preparing land.
- Garden tools used in land preparation.
- Diagrams of the tools.

Evaluation activity

1. Explain land preparation.
2. State different ways of preparing land.
3. Identify garden tools used in land preparation.
4. Draw and give the functions of each garden tool identified.
5. What is the suitable time for land preparation?

Lesson 3

Selecting seeds for planting

- Reasons for seed selection.
- Qualities of good planting materials.
- Seed viability.

Evaluation activity

1. Why do we carry out seed selection?
2. What is seed viability?
3. Mention any four qualities of a good planting material.
4. Why is it not good to plant spoilt seeds?

Lesson 4

Planting

Note: Some seeds are first planted in a nursery bed while others are planted directly in the main garden.

Nursery bed/seed bed

- Definition of a nursery bed.
- Examples of seeds which are first planted in a nursery bed.
- Site for a good nursery bed.
- Importance of a nursery bed.

Evaluation activity

1. Define a nursery bed.
2. State any five examples of seeds that are first planted in a nursery bed.
3. Mention any four good sites of a nursery bed.
4. How useful is a nursery bed to crop farmers?

Lesson 5

Preparation of a nursery bed

- Tools used in preparing a nursery bed.
- Definition of terms: seedling, transplanting
- Suitable time for transplanting and reason why.
- Garden tool used for transplanting (trowel).

Evaluation activity

1. State the different ways of preparing a nursery bed.
2. Identify any four tools used in preparing a nursery bed.
3. Define the following terms;
 - a) Seedling
 - b) Transplanting
4. What is the suitable time for transplanting?
5. Give a reason for your answer in (4) above.
6. Draw and name the garden tool used for transplanting.

Lesson 6

Methods of transplanting

- i) Row planting
- ii) Broadcasting
- Description of each method of planting.
- Seeds planted using each method.
- Advantages of row planting over broadcasting method.

Evaluation activity

1. State the two methods of planting.
2. Define the following:
 - a) Row planting
 - b) Broadcasting method
3. Identify any three seeds planted using the following methods.
 - a) Row planting
 - b) Broadcasting
4. Mention any two advantages of each of the following methods.
 - a) Row planting
 - b) Broadcasting

Lesson 7

Caring for plants in the garden

Ways of caring for plants

(a) Weeding

- Definition of weeding and weeds.
- Examples of common weeds.
- Dangers of weeds to crops and advantages of weeding.
- Uses of weeds.
- Ways of controlling weeds.

Evaluation activity

1. Define the following terms:
 - i) Weeds
 - ii) Weeding
2. Mention any five examples of weeds you know.
3. State any two uses of weeds.
4. How dangerous are weeds to crops?
5. Suggest any four ways of controlling weeds in the garden.

Lesson 8

(b) Manuring

- Definition
- Importance of adding manure.
- Types of manure and their description.

Evaluation activity

1. Explain manuring?
2. State the importance of adding manure to the soil.
3. List the three types of manure.
4. Explain how the following types of manure are got.
 - a) Farm yard manure
 - b) Composite manure
 - c) Green manure

Lesson 9

(c) Watering and pruning mulching

- When is watering done (dry season).
- Suitable time for watering (evening and early morning).
- Garden tool used.

Pruning

- Definition
- Importance of pruning.
- Garden tool used.

Evaluation activity

1. Define pruning.
2. What is the suitable time for watering crops?
3. How useful is a watering can to a crop farmer?
4. State any three importance of pruning.
5. Draw and name any two garden tools used for pruning.

Lesson 10

(d) Mulching

- Definition
- Materials used.
- Advantages of mulching.
- The major reason for mulching (to preserve moisture).

Evaluation exercise

1. Define mulching.
2. State any three materials used for mulching.

3. Give the main reason as to why farmers carry out mulching.
4. List any four advantages of mulching.
5. Outline any three disadvantages of mulching.

Lesson 11

(e) Pest control

- Ways of controlling pests.
- Definition of terms e.g. crop rotation and pesticides.
- Advantages of crop rotation.
- Ways in which crop rotation controls pests.

Evaluation activity

1. State any five ways of controlling pests.
2. Define:
 - a) Crop rotation
 - b) Pesticides
3. How does crop rotation control pests?
4. State any four advantages of crop rotation.

Lesson 12

(f) Thinning

- Staking
- Harvesting.
- Definition of the above terms.
- Ways of harvesting crops.
- Suitable season for harvesting.
- Tools used for harvesting.
- Reason why harvesting is done in the dry season.

Evaluation activity

1. Define the following terms;
 - a) Thinning
 - b) Staking
 - c) Harvesting
2. Write down any four ways or methods of harvesting crops.
3. State the best season for harvesting crops.
4. Give reasons why harvesting is done in the dry season.
5. Draw and name any three garden tools used for harvesting.

Lesson 13

A. Food preservation

- Definition of food preservation.
- Methods of preserving food.
- Advantages of food preservation.

B. Storage of food

- Definition.
- Conditions of a good store.
- Importance of storing food.
- Types of stores.

Evaluation activity

1. Define the following terms;
 - a) Food preservation.
 - b) Storing
2. Write down any five methods of preserving food.
3. State any three advantages of food preservation.
4. Write down any four conditions of a good store.
5. Mention any three importance of food storage.
6. Draw and name the two types of food stores.
7. How useful are rat guards on a granary?

Lesson 14

Types of food path

Town food path

- Description.
- Stages in town food path.

Earning food path

- Description
- Stages in earning food path.

Evaluation activity

1. Describe the following types of food production.
 - a) Town food path
 - b) Earning food path
2. State all the stages involved in:
 - a) Town food path
 - b) Earning food path

Lesson 15

Blocks in food path

- Describe blocks in food path.
- State the blocks in food path.

Evaluation activity

1. Describe blocks in food path.
2. Outline the different blocks in food path.
3. Identify the blocks in the following food path.
 - a) Town food path
 - b) Village food path

Lesson 16

Food preparation

- Ways of preparing food.
- Ways of proper food handling.
- How food gets dirty.
- Importance of proper food handling.
- Uses of food in the body.

Evaluation activity

1. Outline any four ways of preparing food.
2. List any five ways food can be properly handled.
3. State any three ways in which food can get dirty/contaminated.
4. Give three importance of proper food handling.
5. Identify the three uses of food in the body.

Lesson 17

SAMPLE TOPICAL QUESTIONS

1. What do you understand by the term food path?
2. Outline the three types of food path.
3. Identify any three garden tools used in the preparation of land.
4. What should be the suitable time for land preparation?
5. Define the term seed viability.
6. Outline at least three qualities of good planting material.
7. What is a nursery bed?
8. Mention any four crops whose seeds are first planted in a nursery bed.
9. Give at least two uses of a nursery bed.
10. Write the meaning of the following.
 - a) Transplanting
 - b) Seedling
11. Describe the suitable time for transplanting seedlings.

12. Which garden tool does a farmer use to transplant seedlings?

13. Outline the two methods of planting seeds.

14. Identify any three advantages of:

- a) Row planting
- b) Broadcasting methods

15. Write the meaning of these terms.

- a) Weeds
- b) Weeding

16. State any four examples of common weeds.

17. Write down any four ways of controlling weeds.

18. List down the three types of manure.

19. What is pruning?

20. Which garden tools are used for:

- a) Pruning
- b) Watering crops

21. (a) What is mulching?

b) State the main reason to why farmers carry out mulching.

c) Identify any three materials that can be used for mulching.

d) Write down three advantages of mulching.

e) Mention any two disadvantages of mulching.

22. (a) What is a pest?

b) Give any three examples of crop pests.

c) Define crop rotation.

d) How does crop rotation control pests?

e) Outline any three advantages of crop rotation.

23. (a) Define the following terms

- i) Staking
- ii) Harvesting

b) Identify any three crops that can be staked.

c) Why is harvesting done in dry season?

24. (a) Mention any five methods of preserving food.

b) Write down any four conditions of a good store.

c) State any three importance of food storage.

d) How useful are rat guards on a granary.

25. (a) List down any three ways food can be handled properly.

b) What is food contamination?

c) Mention any three ways in which food gets contaminated.

d) Give two ways in which we can prevent food contamination.

e) State any three uses of food in the body.

TOPIC: PLANT LIFE

Lesson 18

Flowering plants

- Definition.
- Structure of a flowering plant.
- Systems of flowering plant.

Evaluation activity

1. Define a flowering plant.
2. Mention any five examples of flowering plants.
3. Identify the two systems of a flowering plant.
4. Draw and name parts of a flowering plant.
5. List any five parts which make up a shoot system.

Lesson 19

Parts of a flowering plant

Leaves

- The structure of a leaf.
- Uses of leaves to both plants and man.
- Types of leaves.

Evaluation activity

1. Draw and name the parts of a leaf.
2. Mention any four uses of leaves to a plant.
3. State any four uses of leaves to man.
4. Outline the two types of leaves.
5. Draw and name the different types of leaves.
e.g simple leaf, compound pinnate, compound bipinnate, trifoliate, digitate

Lesson 20

Leaves

Leaf venation

- Definition.
- Types of leaf venation.
- Illustrations of the different types of venation.

Evaluation activity

1. Define leaf venation.
2. State the two types of leaf venation.
3. List any three examples of plants from each type.
4. Draw diagrams to illustrate each type of venation.

Lesson 21

Processes in leaves

- i) Photosynthesis
- ii) Transpiration

Photosynthesis

- Definition
- Conditions for photosynthesis.
- Importance of each condition.
- Raw materials; carbondioxide and water.
- End products; water and starch (product).

Evaluation exercise

1. Define photosynthesis.
2. State the meanings of the following.
 - a) Photo_____
 - b) Synthesis _____
3. Mention the conditions a plant needs to make its own food.
4. How useful are the following during photosynthesis
 - a) Chlorophyll
 - b) Sunlight
 - c) Carbondioxide and water
5. State the end products of photosynthesis.
6. Why can't photosynthesis take place at night?

Lesson 22

Processes in leaves

Photosynthesis

Testing for starch

- Requirements.
- Reason of the following.
 - Boiling the leaf in water
 - Boiling the leaf in methylated spirit
 - Washing the leaf in water
- Results after boiling.
- Conclusion

Evaluation activity

1. Outline the requirements needed to test for starch.
2. Let each child try the experiment.

Lesson 23

Transpiration

- Definition.
- Experiment to show that plants carry out transpiration.
- Factors affecting the rate of transpiration.

Evaluation activity

1. Define transpiration.
2. List any six factors that affect the rate of transpiration.
3. Carry out an experiment to show that plants transpire.
4. Draw diagrams illustrating the experiment at its results.

Lesson 24

Transpiration

- Importance of transpiration.
- How do plants reduce the rate of transpiration?
- Effects of transpiration.
- Uses of leaves to animals.

Evaluation activity

1. Mention any three importance of transpiration to plants.
2. State any four ways plants reduce the rate at which they are losing water.
3. Why do some plants shed off their leaves?
4. Outline any two effects of transpiration.
5. List down five uses of leaves to man.
6. Identify one plant that reduces the rate of transpiration by covering its stomata with wax.

Lesson 25

Flowers

- Definition.
- The structure of a flower both internal and external parts.

Evaluation activity

1. Define a flower.
2. Mention the main function of a flower to the plant.
3. Draw and name the parts of a flower.

Lesson 26

Flower

- Functions of each part of a flower.
- The general name given to;
Sepals
Petals

Evaluation activity

1. Mention the uses of all the parts of a flower.
2. What general name is given to;
a) Sepals
b) Petals

Lesson 27

The reproductive/essential parts of a flower

- Pistil
- Stamen
- Diagrams showing the essential parts of a flower.
- The parts of a flower that make each i.e. male and female.
- Define pollination.
- Types of pollination.

Evaluation activity

1. The male part of a flower is called _____
2. Name the female part of a flower.
3. Draw the male and female part of a flower and name their parts.
4. Explain pollination.
5. State the two types of pollination.

Lesson 28

Pollination

- Describe each type of pollination.
- Draw diagrams illustrating each type of pollination.
- Agents of pollination.

Evaluation activity

1. Describe the following;
 - a) Cross pollination
 - b) Self pollination
2. Draw diagrams illustrating the following types of pollination.
 - a) Cross pollination
 - b) Self pollination
3. Define agents of pollination.
4. State the two common agents of pollination.
5. Apart from the two common agents named above identify any other three agents you know.

Lesson 29

Agents of pollination

Insects

- Examples of insects that carry out pollination.
- Characteristics of insect pollinated flowers.
- Reason why insects visit flowers.
- Insects that pollinate flowers at night and why?

Evaluation activity

1. List examples of insect pollinators.
2. State any six characteristics of insect pollinated flowers.
3. Why do insects visit flowers?
4. Where is nectar stored in flowers?
5. Name the insect that pollinate flowers at night.

Lesson 30

Wind

- Examples of plants pollinated by wind i.e. maize, wheat and most grasses.
- Characteristics of wind pollinated flowers.
- Example of a bird that pollinates flowers.

Evaluation activity

1. State any two plants that are pollinated by wind.
2. State any five characteristics of wind pollinated flowers.
3. Name the bird that pollinates flowers.
4. How are bats able to pollinate flowers at night (some are fruit eaters).

Lesson 31

Fertilization

- Definition
- Where fertilization takes place in a flower.
- Name the male and female cells of a plant.
- What happens to an ovary and ovules after fertilization?
- Uses of flowers to man.

Evaluation activity

1. Define fertilization.
2. Where does fertilization take place in a flower?
3. What name is given to the male and female cell/gametes of a plant?
 - a) Male _____
 - b) Female _____
4. State what happened to the following after fertilization.
 - a) Ovary _____
 - b) Ovules _____
5. Mention any five uses of flowers to man.

Lesson 32

Stems

- Functions of stems to a plant

Types of stems

- Upright stems
 - a) Description.
 - b) Examples of plants with erect stem.

Evaluation activity

1. State any four functions of a stem to a plant.
2. To which system of a plant does the stem belong?
3. Mention the three types of stems.
4. Describe upright stems.
5. Give any three examples of plants with upright stems.

Lesson 33

Stems

Underground stems/storage stems

- Name the four types of underground stems.
- Characteristics of underground stems.

Stem tubers

- Description of stem tubers.
- Examples of stem tubers.
- Diagram of an irish potato.

Evaluation activity

1. Explain underground stems.
2. State the four types of underground stems.
3. Write down any three characteristics of underground stems.
4. What are stem tubers?
5. List down any two examples of stem tubers.
6. Where does an irish potato store its food?
7. Draw and name the parts of an irish potato.

Lesson 34

Stems

Bulbs

- Description of a bulb.
- Examples of bulbs.
- Draw and name the parts of an onion.
- State the functions of each part named.

Evaluation activity

1. Describe a bulb.
2. Mention any two examples of a bulb.
3. Draw an onion, mark and name the following parts;
 - a) Foliage leaves
 - b) Storage leaves
 - c) Scale leaves
 - d) Auxiliary buds
 - e) Stem
4. State the functions of the above named parts.
5. Which part of an onion do we eat?

6. Where does an onion store its food?

Lesson 35

Rhizomes

- Examples of rhizomes.
- Characteristics of rhizomes.
- Diagram showing parts of rhizomes.

Corms

- Description.
- With the help of a real object, learners will identify the characteristics of corms.

Evaluation activity

1. Explain the following;
 - a) Corms
 - b) Rhizomes
2. State any two characteristics of each of the following underground stems.
 - a) Corms
 - b) Rhizomes
3. Draw the diagram of a rhizome and name its parts.
4. List down any one example of a corm.

Lesson 36

Climbing stems

- Learners will be helped to define climbing stems with the help of real objects.
- Learners will use their knowledge acquired in P3 to:
 - a) List examples of climbing stems.
 - b) Give reasons why plant climb others.
 - c) Mention ways in which plants climb others.
- Using the textbooks learners will draw diagrams to illustrate ways plants use to climb others.

Evaluation activity

1. Explain climbing plants.
2. List any three examples of climbing plants.
3. State any two reasons why plants climb others.
4. List the three different ways plants climb others.
5. Draw diagrams to illustrate the different ways plants use to climb others.

Lesson 37

Roots

Learners will be helped by the teacher to;

- Define roots and root system.
- Read the text about functions of roots to a plant.
- State the examples of root system.
- List types of roots.

Evaluation exercise

1. Define the following;
 - a) A root
 - b) A root system
2. State the two examples of root systems.
3. Roots that develop from other parts of plants are called_____.
4. Outline any four functions of roots to plants.
5. Write down any three examples of adventitious roots.
6. Draw and name the different types of roots.

Lesson 38

Prop roots/ storage roots

With the help of a real object, teachers will help learners to;

- Identify prop roots and storage roots.
- Describe prop roots and storage roots.
- State the use of prop roots to a maize plant.
- Give examples of storage roots.

Evaluation activity

1. How useful are prop roots to a maize crop?
2. List any two examples of plants that develop prop roots.
3. At what stage of a growing plant do prop roots develop?
4. What are root tubers?
5. Mention any two examples of root tubers.
6. With the help of a textbook draw the taproot of a carrot.
7. Where does the cassava plant store its food?

Lesson 39

Types of flowering plants

Learners will be helped by the teacher to;

- Identify the types of flowering plants.
- Differentiate the two types of flowering plants.

- Give examples of each type of flowering plants.
- Define monocot and dicot plants.

Evaluation activity

1. Define flowering plants.
2. State the two types of flowering plants.
3. Explain the following terms;
 - a) Monocotyledonous plants
 - b) Dicotyledonous plants
4. List down any two examples for each of the above plants.
5. Mention any three differences between monocotyledonous and dicotyledonous plants.

Lesson 40

Seeds

- Learners will be helped by the teacher t:
 - a) Define seeds
 - b) Mention the two types of seeds.
- Learners should use the previous knowledge in P3 to:
 - a) Define monocots and dicots.
 - b) Give examples of monocots.
 - c) Draw and name parts of monocot seeds (maize).
- Using real objects and well prepared charts, help learners to name the parts of a monocot seed.
- Functions of the parts named above.

Evaluation exercise

1. What is a seed?
2. Mention the two types of seeds.
3. List down any two uses of seeds to man.
4. Define monocotyledonous seeds.
5. Give any three examples of monocots.
6. Draw a maize grain and name its parts.
7. Why is a maize grain called a fruit?
8. What general name is given to the plumule and radical?

Lesson 41

Dicotyledonous seeds

Learners will be helped by the teacher to:

- Define dicotyledonous seeds.
- Structure of a dicot seed (bean).

- Give examples of dicotyledonous seeds.
- Functions of each part named on the diagram.
- Using well prepared charts and textbooks learners will draw the types of seeds.

Evaluation activity

1. Define dicotyledonous seeds?
2. Mention any three examples of dicot seeds.
3. Draw and name the parts of a dicot seed (bean).
4. Mention the function of each part of the seed named.

Lesson 42

Germination

- Learners will use their previous knowledge about germination in P3 to:
 - a) Define seed germination.
 - b) State the types of germination.
 - c) State the conditions necessary for germination.
- Using textbooks, learners will explain and draw the types of germination.

Evaluation activity

1. What is seed germination?
2. State the two types of seed germination.
3. Give any two examples of seeds that undergo:
 - a) Epigeal germination
 - b) Hypogeal germination
4. Explain and draw diagrams showing the types of germination.

Lesson 43

Conditions for seed germination

- Learners will be helped by the teacher to carry out an experiment to identify the different conditions for seed germination.
- Uses of water during germination.
 - a) Softens the testa
 - b) Dissolves food in the cotyledon

Evaluation activity

1. State the three conditions a seed needs to germinate.
2. How useful is water during germination

Lesson 44

Tropism

- Define tropism.
- Define the term stimuli.
- Learners will be guided to mention the types of tropism.
 - a) Photo tropism
 - b) Hydro tropism
- Using textbooks teachers will guide learners to explain the types of tropism and draw diagrams to illustrate photo tropism.

Evaluation activity

1. Define the following terms:
 - a) Tropism
 - b) Stimuli
2. Explain the following types of tropism.
 - a) Hydro tropism
 - b) Photo tropism
3. Draw a diagram to illustrate the photo tropism.

Lesson 45

SAMPLE TOPICAL QUESTIONS

1. What are flowering plants?
2. Give the main function of flowers to the plant.
3. Where does an irish potato store its excess food?
4. What is the importance of chlorophyll during photosynthesis?
5. How useful are stomata to plants?
6. Why is a maize grain called a fruit?
7. What name is given to:
 - a) a group of petals
 - b) a group of sepals
8. Name the two systems of a flowering plant.
9. Identify the type of germination which is common in:
 - a) Monocotyledonous plants
 - b) Dicotyledonous plants
10. Why do some flowers have bright coloured petals?
11. Which insect is likely to pollinate flowers at night?
12. What is transpiration?
13. Outline any three factors that may affect the rate of transpiration.
14. How useful are the root hairs to a plant?
15. Identify the two raw materials plants use to make starch.
16. Which gas do plants give off during photosynthesis?
17. List down any three examples of:
 - a) Compound leaves
 - b) Simple leaves
18. Where does fertilization take place in a flower?

19. What is the role of the cotyledon to a maize grain during germination?

20. Why do some plants shed off their leaves during a dry season?

21. Which part of a irish potato do we eat?

22. Why is transpiration done in the evening?

23. Which part of an onion do we eat?

24. Mention the four types of underground stems.

25. What is phototropism?

26. (a) What is photosynthesis?

b) List down the four conditions needed for photosynthesis.

27. (a) What is germination?

b) Write the three conditions necessary for photosynthesis.

c) What is the role of water during seed germination.

SANITATION

Lesson 46

- Definition of diseases.
- Definition of germ, vector.
- Groups of germs.
- List examples of insect vectors, animal vectors.

Evaluation activity

1. What do you understand by the term disease?
2. What is the different between a vector and a germ?
3. Name the four groups of germs.
4. List any five examples of insect vectors.
5. List any five examples of animal vectors.

Lesson 47

HOUSEFLY

- How a housefly transmits germs.
- Structure of a housefly.
- Life history of a housefly.

Evaluation activity

1. How does a housefly transmit germs from one place to another?
2. Draw and name the life cycle of a housefly.
3. Which stage in the life cycle of a housefly is dangerous to our lives?
4. Which stage is useful to humans?

Lesson 48

- Diseases spread by houseflies.
- Signs and symptoms of those diseases.
- Prevention and control of the diseases.

Evaluation activity

1. Mention any four diseases spread by a housefly.
2. For each of the following diseases, mention two symptoms.
 - a) Typhoid
 - b) Cholera
 - c) Dysentery
 - d) Trachoma
 - e) Diarrhea

Lesson 49

COCKROACHES

- Where they live.
- Diseases spread by cockroaches.
- How to prevent the diseases.
- Life cycle of a cockroach.

Evaluation activity

1. Name any two places where cockroaches live.
2. State four diseases spread by houseflies.
3. Give two ways of preventing diseases spread by cockroaches.
4. Draw and name the lifecycle of a cockroach.

Lesson 50

FLEAS

- Where they live.
- Diseases spread by fleas.
- Ways of preventing fleas.

LICE

- Where they live.
- Types of lice.
- Diseases spread by lice.
- How to control lice.

Evaluation activity

1. Identify two places where we find lice.
2. Name any two diseases spread by fleas.
3. State two ways of preventing fleas.
4. List two places where lice live.
5. Mention two types of lice.
6. State the disease spread by lice.
7. State two ways of controlling lice.

Lesson 51

BED BUGS

- Characteristics of bed bugs.
- Where they live.
- Prevention and control of bedbugs.

TICKS

- Characteristics of ticks.
- Where they live.
- Diseases they spread.
- Control.

Evaluation activity

- Mention two characteristics of bed bugs.
- Where do bed bugs live?
- State two ways of preventing and controlling bed bugs.
- Mention the disease spread by ticks.
- Mention the characteristics of ticks.
- Where do ticks live?
- Mention two ways of controlling ticks.

Lesson 52

ITCH MITES

- Characteristics of itch mites.
- Diseases spread by itch mites.
- How scabies is spread.
- Effects of scabies.
- Prevention of scabies.

Evaluation exercise

1. Mention any two characteristics of itch mites.

2. Name the disease spread by itch mites.
3. Suggest three ways in which scabies is spread.
4. State two effects of scabies to human beings.
5. Identify any two ways of preventing scabies.

Lesson 53

ANIMAL VECTORS

- i) Rats
 - ii) Mice
- Characteristics of rats and mice.
 - Where they live.
 - Dangers of rats and mice in animals.
 - Controlling rats and mice.

Evaluation exercise

- State two characteristics of rats and mice.
- Name two places where rats and mice live.
- State two dangers of rats and mice.
- Suggest two ways of controlling rats and mice.

Lesson 54

MOSQUITOS

- i) Types of mosquitoes
- ii) History of each mosquito
- iii) Diseases spread by each

Evaluation activity

1. Name the three types of mosquitoes.
2. Identify the diseases spread by each of the following mosquitoes.
 - a) Female anopheles mosquito
 - b) Culex mosquito
 - c) Aedes/tiger mosquito
3. Draw a diagram showing the life history of the following;
 - a) Anopheles mosquito
 - b) Culex mosquito

Lesson 55

ANOPHELES MOSQUITO

- Diseases spread.

- Signs and symptoms.
- Effects of malaria.
- Control.

Evaluation activity

1. Identify the disease spread by female anopheles mosquito.
2. List the signs and symptoms of the above disease.
 - a) Signs
 - b) Symptoms
3. Write down two effects of malaria.
4. State any two ways of controlling malaria.
5. Name two other mosquitoes and the diseases they spread.

Lesson 56

TOPICAL QUESTIONS

1. What is sanitation?
2. Name three activities that promote sanitation in homes?
3. Define the following terms;
 - a) Disease
 - b) Vector
 - c) Germ
4. Where do cockroaches live?
5. How is a housefly dangerous to human beings?
6. How many stages does a housefly undergo?
7. Mention any two disease spread by houseflies.
8. Name any one disease spread by fleas.
9. State any two types of lice.
10. Why should we keep our hair short and clean?
11. Outline the 7 Fs mentioned in the spread of germs.
12. State two ways of controlling bedbugs.
13. Where do ticks live?
14. What vector spreads scabies?
15. State two ways of controlling scabies.
16. State two effects of scabies to human beings.
17. Name two places where rats and mice live.
18. State two dangers of mice.
19. How can we control rats and mice in a home?
20. Name any three types of mosquitoes.
21. Give the diseases spread by the above mentioned types.
22. Draw a diagram showing the larva of a culex mosquito.
23. List any two signs and symptoms of malaria.
24. Write down two ways of controlling mosquitoes.

Lesson 57

TOPIC: INTERDEPENDENCE OF THINGS IN THE ENVIRONMENT

- Definition of environment.
- Components of the environment.
- Importance of the components of the environment.
- Grouping things in the environment.

Evaluation activity

1. What do you understand by the term environment?
2. Mention any four components of the environment.
3. Identify two components of the environment under each of the following.
 - a) Living things
 - b) Non living things
4. Give one importance of each of the following components.
 - a) Water
 - b) Air
 - c) Soil

Lesson 58

INTERDEPENDENCE

- What is interdependence?
- How animals and plants depend on each other.
 - a) Plants to animals
 - b) Animals to plants
 - c) Animals to animals

Evaluation activity

1. What is interdependence?
2. State two ways in which the following depend on each other.
 - a) Animals to plants
 - b) Plants to animals
 - c) Animals to animals
 - d) Plants to plants

Lesson 59

SAMPLE TOPICAL QUESTIONS

1. What do you understand by the term environment?
2. State any two components of the environment.
3. How can you tell that there is air around you?
4. Give two uses of soil.

5. What do you understand by the following terms?
 - a) Predator
 - b) Prey
 - c) Parasite
6. What is interdependence?
7. Define (i) Food chain (ii) Food web
8. Give two importance of each of the following.
 - a) Water
 - b) Air
9. State one natural source of water.
10. Why do plants climb other plants?
11. How do animals depend on plants?
12. Give three ways in which plants depend on animals.
13. Name the type of manure got from animals.
14. Name any animals which live in:
 - a) Soil
 - b) Water
15. Why do bees visit flowers?
16. Why do people put manure in their gardens?
17. Name any two conditions plants need to make their own food.
18. Define the term photosynthesis.

TERM II LESSON NOTES FOR P.4

LESSON 60: MASCULAR AND SKELETAL SYSTEM

- Definition of skeleton.
- Functions of the skeleton.
- Types of skeleton.

Evaluation activity

1. What is a skeleton?
2. Write down four functions of the skeleton.
3. Name the organs of the body protected by the following.
 - a) Skull
 - b) Backbone
 - c) Pelvis
 - d) Ribcage
 - e) Teeth
4. State the three types of skeletons.
5. Give one example of animal with each of the mentioned types of skeletons.

LESSON 61: THE HUMAN SKELETON

- Structure of the human skeleton.
- Number of bones in the human skeleton.

Evaluation activity

1. Draw and name the parts of the human skeleton.
2. How many bones does the human skeleton have?

LESSON 62: TYPES OF BONES

- Examples of each type of bone.
- Diagrams of the above examples.

Evaluation activity

1. Identify four types of bones.
2. For each type of the above mentioned bones, give two examples.
3. In which part of the body do we find the longest bone?
4. Draw a diagram showing the femur.

LESSON 63: JOINTS

- Definition of joints.
- Types of joints.
- Description of joints.
- Examples of joints.

Evaluation activity

1. What is a joint?
2. Identify the two types of joints.
3. In which way is a hinge joint different from a ball and socket joint?
4. State two examples of movable joints.
5. In which part of the body do we find the immovable joint?

LESSON 64: JOINTS

Learners should be able to identify;

- Parts and functions of joints.
- Define the following terms.
 - a) Ligaments.
 - b) Tendons

Evaluation activity

1. Draw a joint and name the parts.
2. Write down the function of each part.

LESSON 65: MUSCLES

- Learners use the textbook to find the meaning of “muscles”.
- Types of muscles.
- Give examples of each type.
- Find the function of muscles.

Evaluation activity

1. What are muscles?
2. State two types of muscles.
3. Identify two examples of each type.
4. Suggest two functions of muscles to animals.

LESSON 66: POSTURE

Learners will use the knowledge of the text books to find;

- Definition of posture.
- Importance of good posture.
- Dangers of bad posture.

Evaluation exercise

1. What is posture?

20. Which immunisable disease affects the skeleton?
21. What is the best way of preventing the disease named above in (20 above).
22. Which deficiency disease affects the skeleton?
23. What type of skeleton has an earth worm?
24. Where on the human skeleton do we find the immovable joint?
25. State any two functions of muscles in the body.

TOPIC: ACCIDENTS

LESSON 69

Learners will be helped by the teacher to;

- Define the term accidents, first aid.
- Identify types of accidents and places where they occur.
- State the causes of accidents.
- Suggest ways of preventing accidents.

Evaluation activity

1. What do you understand by the following terms;
a) Accident b) First aid
2. Suggest two accidents that occur in each of the following places.
a) Home b) School c) Road
3. Write down two common causes of accidents at;
a) Home b) School
4. State four ways of preventing accidents at home and school.

LESSON 70: FIRST AID

Learners will read and find;

- Meaning of first aid.
- Reasons for giving first aid.
- Give the responsibilities of a first aider.
- Suggest the qualities of a good first aider.
- Outline the uses of a first aid kit.
- List the components of first aid kit.

Evaluation exercise

1. What is first aid?
2. Give four reasons why we give first aid.
3. Write down two responsibilities of a first aider.
4. Mention two qualities of a good first aider.
5. State the importance of a first aid kit.
6. Outline the components of a first aid kit.

LESSON 71: TYPES OF ACCIDENTS

ROAD OR TRAFFIC ACCIDENTS

Learners will use the knowledge of textbooks to;

- Find causes of road accidents.
- Explain how one can cross the road.
- Identify the importance of zebra crossing.
- Suggest ways of preventing road accidents.

Evaluation activity

1. Outline four causes of road accidents.
2. Give the steps taken when crossing the road.
3. In which way is a zebra crossing in (incomplete question).
4. Write down four ways of preventing road accidents.

LESSON 72: TYPES OF ACCIDENTS

Fractures

Learners will read the textbook and find;

- The meaning of fracture.
- Types of fractures.
- The causes of fractures.
- The first aid for fractures.
- The difference between compound and simple fractures.
- Ways of preventing and controlling fractures.

LESSON 73

Learners will use the knowledge of the textbook to;

- Define the terms: sprain, strain and dislocation.
- Explain ways of giving first aid to casualties with: sprain, strain, dislocation.

LESSON 74: SAMPLE TOPICAL QUESTIONS

1. Define the terms;
 - a) First aid
 - b) Casualty
 - c) Accidents

2. Mention any one accident that may take place in the following places.
 - a) Kitchen
 - b) School compound
 - c) Way to school
3. Give any two causes of road accidents.
4. Identify two types of fractures.
5. Moses got his femur bone broken at it appeared out of the thigh. Name the type of fracture Moses got.
6. What first aid can be given to Moses?
7. What is the value of splints in giving first aid?
8. Why shouldn't the broken bone be pushed back into the flesh?
9. State any two signs of fractures.
10. Define the following terms;
 - a) Sprain
 - b) Strain
11. What first aid can you give to a person with a sprain?
12. What first aid can you give to a person with a deep cut?
13. State three ways of controlling road traffic accidents.
14. List three components found in a first aid kit.
15. What is the importance of a first aid kit?
16. State any two places which should have first aid kits.

TERM III LESSON NOTES FOR P.4

TOPIC: TYPES OF CHANGES IN WEATHER AND CLIMATE

SUBTOPIC: WEATHER

LESSON 75

- Learners use their knowledge in P3 to define the term “weather”.
- Using textbooks, the teacher will help learners to describe the term “climate”.
- Using the learners’ previous experience in P3, learners will state the;
 - a) Elements of weather
 - b) Types of weather
 - c) Draw diagrams to illustrate the different types of weather.

Evaluation activity

1. Define the following terms;
 - a) Weather
 - b) Climate
2. State at least any six elements of weather.
3. Outline the types of weather you know.
4. Draw diagrams to illustrate the different types of weather.

LESSON 76: ELEMENTS OF WEATHER

RAINFALL

Learners will be helped by the teacher to;

- Describe rain and rainfall.
- Rain cycle and the processes involved.

Evaluation exercise

1. Define the following terms;
 - a) Rain
 - b) Rainfall
2. Mention all the processes involved in water cycle.
3. Describe the following terms;
 - a) Evaporation
 - b) Condensation
 - c) Transpiration
4. Draw a diagram to illustrate the water cycle.
5. How useful is the sun during water cycle?

LESSON 77: TYPES OF RAINFALL

- With the help of textbooks, prepared charts and social studies knowledge learners will mention and explain the different types of rainfall.
- Draw diagrams to illustrate the types of rainfall.

Evaluation activity

1. State the three types of rainfall.
2. Explain how the following types of rainfall are formed.
a) Convectonal rainfall b) Relief rainfall c) Cyclonic rainfall
3. Draw well labeled diagrams to illustrate the types of rainfall.

LESSON 78: RAINFALL

- Learners will be helped by the teacher to mention the advantages and disadvantages of rain.

Evaluation activity

1. State the instrument used to measure rainfall.
2. Why is a rain gauge put in an open space?
3. Give a reason why a rain gauge is placed 30cm above the ground.
4. State the units used in measuring rain.
5. Outline any four advantages and disadvantages of rainfall.
a) Advantages of rainfall
b) Disadvantages of too much rainfall

LESSON 79: ELEMENTS OF WEATHER

SUNSHINE

Using the previous knowledge in P3 and knowledge acquired in P4 first term in social studies, learners will be guided to;

- State the instrument used to measure sunshine.
- Where the sun rises and sets in.
- Draw the diagram showing the sunshine recorder.
- Advantages and disadvantages of sunshine.

Evaluation activity

1. Name the instrument used to determine how much it has shone.
2. The sunrises from and sets in the
3. At what time of the day are shadows said to be:
a) Shortest b) Longest
4. Why do shadows appear shortest at mid-day?
5. Outline any four advantages of the sun in our environment.
6. How dangerous is too much sunshine in our daily life?

LESSON 80: ELEMENTS OF WEATHER CONT'D

CLOUD COVER

- Learners will be guided by the teacher to mention the types of clouds and their characteristics.
- State the advantages of clouds.

Evaluation activity

1. State the four types of clouds.
2. Mention the characteristics of each of the following clouds.
 - a) Nimbus
 - b) Cumulus
 - c) Cirrus
 - d) Stratus
3. Which clouds are the highest in the sky?
4. How important are nimbus clouds to farmers?
5. State any two uses of clouds in our environment.

LESSON 81: ELEMENTS OF WEATHER CONT'D

WIND

- Using the previous knowledge in P3 learners will explain wind.
- With the teachers' guidance, learners will be helped to mention the different types of instruments used in measuring wind.
- Advantages and disadvantages of wind.
- Draw diagrams of the instruments mentioned above.

Evaluation activity

1. What is wind?
2. Mention the instrument used to:
 - a) Measure the speed of wind.
 - b) Show the direction of wind.
 - c) Measure the strength of wind.
3. Draw and name the instrument named above.
4. State any three uses of wind.
5. How dangerous is wind in our environment?

LESSON 82: ELEMENTS OF WEATHER

HUMIDITY

Learners will be guided by the teacher to explain;

- Humidity
- Instrument used to measure humidity.
- Draw a diagram of a hygrometer.

ATMOSPHERIC PRESSURE

- Definition.
- Instrument used.
- Diagram.

Evaluation exercise

1. Define the following terms;
 - a) Humidity
 - b) Atmospheric pressure
2. Identify the instrument used to measure the following;
 - a) Humidity
 - b) Air pressure
3. Draw diagrams showing these instruments.
 - a) Hygrometer
 - b) Barometer

LESSON 83: ELEMENTS OF WEATHER

TEMPERATURE

- Definition of temperature.
- Instrument used to measure temperature.
- Scales used to read temperature.
- The types of thermometer.
- Draw and name a clinical thermometer.

Evaluation activity

1. What is temperature?
2. Name the instrument used to measure temperature.
3. State the two scales used when reading temperature.
4. Mention the two types of thermometer.
5. Draw a clinical thermometer and name its parts.
6. How useful is a clinical thermometer to health workers.

LESSON 84: TEMPERATURE

CLINICAL THERMOMETER

- Uses of the parts of a clinical thermometer.
- By using a text, learners will be guided to state the reasons why mercury is commonly used in clinical thermometer.
- Learners will use the knowledge they acquired in P3 to mention the places where a clinical thermometer can be placed.

MINIMUM AND MAXIMUM THERMOMETER

- Learners will be guided to describe the minimum and maximum thermometer.
- Using a well prepared chart, learners will draw a well labeled diagram of the minimum and maximum thermometer.

- They will also mention the liquids used in the minimum and maximum thermometer.
- Stevenson's screen.

Evaluation activity

1. How is a constriction useful to a clinical thermometer?
2. Why is a clinical thermometer placed in a place which surrounds the bulb?
3. Mention four places where a clinical thermometer is placed.
4. State four reasons why mercury is commonly used in a clinical thermometer.
5. Identify two liquids used in a minimum and maximum thermometer.
6. Why is a minimum and maximum thermometer called the Six's thermometer?

LESSON 85: SAMPLE TOPICAL QUESTIONS

1. What do we call the condition of the atmosphere at a given place and time?
2. What is the importance of the sun in the water cycle?
3. Why should a rain gauge be put in an open space?
4. What is temperature?
5. Which instrument is used to measure temperature?
6. List down the four types of weather.
7. State the use of a wind vane.
8. Write down the four types of weather.
9. Which instrument is used to measure the human body temperature?
10. State the main source of water in the environment.
11. What is humidity?
12. Identify one activity people do during dry seasons.
13. Write down the three types of rainfall.
14. What term is used to describe air in motion?
15. Which clouds are friendly to farmers?
16. Outline any two weather instruments that can be kept in the Stevenson's screen.
17. Why is the minimum and maximum thermometer sometimes called the Six's thermometer.
18. Write down any three dangers of wind to people.
19. In which units is temperature measured?
20. Describe the three processes which are involved in the formation of rain.
21. Which thermometer measures the highest and lowest temperature?
22. Why is a clinical thermometer placed in the mouth put under the tongue?
23. State any three basic units for measuring rainfall.
24. Of what value is the keeping of weather records to a farmer?

TOPIC: MEASUREMENTS

LESSON 86: LENGTH

Learners will be helped by the teacher to find;

- The definition of measurements.

Learners will be guided by the teacher to;

- Find the definition of irregular objects.
- Find the method used in finding volume of irregular objects.
- Name the instruments involved.
- Find the volume of irregular objects.

Evaluation exercise

1. What are irregular objects?
2. State the method used in finding the volume of irregular objects.
3. Mention three items used in measuring the volume of irregular objects.
4. Find the volume of a;
 - a) Stone
 - b) Irish potato

LESSON 90: WEIGHT AND MASS

Learners will read the textbook and find;

- Definition of weight.
- Factors affecting weight.
- Units for weight.
- Instruments for measuring weight.
- Definition of mass.
- Units for mass.
- Instruments for measuring mass.

Evaluation exercise

1. Define the following terms;
 - a) Weight
 - b) Mass
2. List down two factors affecting weight.
3. State the standard units of measuring weight.
4. State the standard units for measuring mass.
5. Name the instrument used for measuring mass.

LESSON 91: DENSITY

Learners will use the knowledge of the textbook to find;

- Definition of density.
- Units used to measure density.
- The instruments used to measure density.
- Densities of give objects.

Evaluation exercise

1. What is density?

7. Work out the volume of the following;

8. Work out the density of an object whose volume is 30cc and mass of 90gm.

TOPIC: FOOD AND NUTRITION

LESSON 94

Learners will read textbooks and come up with;

- Definition of terms.
 - a) Food
 - b) Feeding
 - c) Nutrition
- Get reasons as to why people eat (5Hs).

Evaluation activity

1. Briefly explain the meaning of the following terms.
 - a) Food
 - b) Feeding
 - c) Nutrition
2. State the five reasons as to why people eat.

LESSON 95: BALANCED DIET

Learners will be guided by the teacher to;

- Define a balanced diet.
- List down the five classes of food.
- Define nutritional deficiency.

Evaluation activity

1. What do you understand by the term balanced diet?

2. State the seven classes of food that make up a balanced diet.
3. What is nutritional deficiency?

LESSON 96: CARBOHYDRATES

Learners will be guided by the teacher to;

- Mention the sources of carbohydrates.
- State the importance of carbohydrates.
- Identify the deficiency disease (marasmus).
- Signs and symptoms of marasmus.
- Prevention and treatment of marasmus.

Evaluation activity

1. Write down five sources of carbohydrates.
2. How are carbohydrates important in our bodies?
3. Name the disease one is likely to suffer when she/he lacks enough carbohydrates.
4. Suggest three signs and symptoms of marasmus.
5. What advice will you give somebody whose child is suffering from marasmus?

LESSON 97: PROTEINS

Learners will read textbooks and come up with;

- Sources of proteins.
- Uses of proteins in the body.
- Deficiency of proteins (kwashiorkor).
- Signs and symptoms of kwashiorkor.
- Prevention and treatment of kwashiorkor.

Evaluation activity

1. Mention four examples of foods rich in proteins.
2. Suggest two importance of proteins in our bodies.
3. What disease is one likely to suffer from if he/she lacks enough proteins in the body?
4. Write down three signs of kwashiorkor.
5. Musa's child is suffering from kwashiorkor. What advice do you give Musa?

LESSON 98: VITAMINS

Learners will read textbooks and find;

- Sources of vitamin A.
- Importance of vitamin A.
- Deficiency of vitamin A.
- Signs and symptoms of the deficiency.
- Prevention and treatment of night blindness.

Evaluation activity

1. List down five examples of food rich in vitamin A.
2. State the importance of vitamin A in the body.
3. What disease will one suffer from if he/she lacks vitamin A in the body?
4. Write one sign of the above deficiency.
5. How can you prevent the above disease?

LESSON 99: VITAMIN B₁ AND B₂

Learners will be guided by the teacher to come up with;

- Sources of vitamins B₁ and B₂.
- Importance of vitamins B₁ and B₂.
- Deficiency of vitamins B₁ and B₂.
- Signs and symptoms of deficiencies e.g.
 - a) Beriberi
 - b) Pellagra
- Ways of preventing and treating pellagra and beriberi.

Evaluation exercise

1. Write down the sources of the following vitamins;
 - a) Vitamin B₁
 - b) Vitamin B₂
2. How are the following vitamins important in the body?
 - a) Vitamin B₁
 - b) Vitamin B₂
3. Give two ways you can identify one suffering from each of the following diseases.
 - a) Beriberi
 - b) Pellagra
4. Suggest any one way of controlling each of the above diseases.

LESSON 100: VITAMIN C AND D

Learners will read textbooks and find;

- Sources of vitamin C.
- Sources of vitamin D.
- Deficiency of each of the following vitamins.
 - a) Vitamin C
 - b) Vitamin D
- Importance of vitamins C and D.
- Signs and symptoms.
 - a) Scurvy
 - b) rickets
- Prevention and treatment of each of the above diseases.

Evaluation exercise

1. List down the sources of each of the following vitamins.
 - a) C
 - b) D
2. What will happen to a family whose children lack;

- a) Vitamin C in their diet.
- b) Vitamin D in their diet.
3. How are the following vitamins important in our bodies?
 - a) C
 - b) D
4. Suggest one way how one can prevent each of the following diseases.
 - a) Scurvy
 - b) Rickets

LESSON 101: MINERAL SALTS

Learners will be guided by the teacher on;

- Calcium (sources, uses and deficiency).
- Phosphorous (sources, uses and deficiency).
- Iron (sources, uses and deficiency).

Evaluation activity

1. Write down two sources of each of the following mineral salts.
 - a) Calcium
 - b) Phosphorous
 - c) Iron
2. For each of the above mineral salts, write down one use to the body.
3. Suggest the problems one is likely to face if he/she lacks any of the above mineral salt.

LESSON 102

Learners will read textbooks and come up with the following;

- Iodine (sources, uses and deficiency).
- Sodium chloride (sources, uses and deficiency)
- Fluoride (sources, uses).

Evaluation exercise

1. For each of the following mineral salts write down one example of food source;
 - a) Iodine
 - b) Sodium chloride
 - c) Fluoride
2. Suggest the problem one will face if he/she lacks enough of each of the following mineral salts.
 - a) Iodine
 - b) Sodium chloride
 - c) Fluoride
3. For each of the above problems suggest one way of controlling it.

LESSON 103

Learners will read textbooks and find;

- Sources of fats and oils.
- Importance of fats and oils.
- Effects of fats and oils (good and bad).
- Sources of roughages.

- Uses of roughages.

Evaluation exercise

1. List down three sources of fats and oil.
2. Suggest any two importance of fats and oil.
3. State any dangers of fats.
4. How are roughages important in the body?
5. Identify any one source of roughages.

LESSON 104: WATER

Learners will be helped by the teacher to come up with;

- Uses of water in the body.
- Problems faced due to lack of enough water in the body.
- Sources of water.

Evaluation exercise

1. Write down four uses of water in the body.
2. State any problem one is likely to suffer from if he/she lacks enough water in the body.
3. Suggest four ways in which one can get water in the body.

LESSON 105: A BALANCED DIET FOR DIFFERENT GROUPS OF PEOPLE

Learners will be guided by the teacher to find out different groups of people who need special feeding.

- Pregnant women
 - a) Food they need.
 - b) Reason as to why they need such food.
- Babies
 - a) Food they need.
 - b) Why they need such food.

Evaluation exercise

1. Write down four groups of people who need special feeding.
2. Suggest one reason why a pregnant mother should be fed on food with more proteins.
3. Why is it advisable to feed babies on a balanced diet?

LESSON 106: WORKERS, SICK PEOPLE AND BREASTFEEDING WOMEN

Learners will read textbooks and discuss;

c) Why should pregnant mothers be fed on food rich in proteins?

TOPIC: THE DIGESTIVE SYSTEM

LESSON 110

Using textbooks learners will be guided by the teacher to describe these terms;

- Digestion.
- Digestive system.
- Ingestion.
- Egestion.
- Indigestion.
- Absorption.
- Learners will be helped to know where the digestion of food begins and ends.

Evaluation activity

1. Define the following terms;
 - a) Digestion
 - b) Digestive system
 - c) Indigestion
 - d) Egestion
 - e) Ingestion
2. The digestion of food begins from and ends in the

LESSON 111: THE STRUCTURE OF THE DIGESTIVE SYSTEM

- Learners will use textbooks, prepared charts and wall charts to draw the structure above.
- Using textbooks, learners will be guided to name the parts of the digestive system.

Evaluation exercise

1. Draw and name all parts of the digestive system.
2. Identify the two parts that make up the following;
 - a) Large intestines
 - b) Small intestines

LESSON 112: PARTS OF THE DIGESTIVE SYSTEM

FOOD IN THE MOUTH

Learners will be helped by the teacher to explain the following;

- The role of the teeth, saliva and tongue in the mouth during food digestion.
- The digestive juice produced in the mouth, its use and the enzymes it contains.
- The use of salivary amylase.
- Explain an enzyme.

Evaluation activity

1. Food is broken down into small particles by the and rolled into bolus by the
2. Name the digestive juice produced in the mouth.
3. Identify the glands that produce saliva.
4. How useful is saliva in the mouth?
5. What is the importance of salivary amylase?
6. Explain an enzyme.

LESSON 113: DIGESTION

FOOD IN THE GULLET

Learners will be guided by the teacher to discuss about;

- Another name for gullet.
- It's the tube that leads food to the stomach.
- The gullet pushes food towards the stomach in a wave-like movement called peristalsis.

Evaluation exercise

1. The tube which leads food to the stomach is called.....
2. Another name for the gullet is
3. The gullet pushes food in the wave-line movement called.....

LESSON 114: DIGESTION

FOOD IN THE STOMACH

Learners will be guided by the teacher to explain;

- what happens to food in the body;
- The action through which food is fully turned.
- State the digestive juice produced in the stomach, its use and the enzymes it contains.
- Identify the acid produced by the stomach walls and its use.
- Three foods absorbed in the stomach.

Evaluation activity

1. Food in the stomach is fully turned over and over (churned) intoby the process called.....

LESSON 120: DISORDERS OF THE DIGESTIVE SYSTEM

Learners will be helped by the teacher to;

- Identify the disorders related to the digestive system.
- Explain constipation, its cause and how to prevent it.
- Describe indigestion, vomiting, their causes and prevention.

Evaluation activity

1. Explain the following terms;
a) Constipation b) Vomiting c) Indigestion
2. State any two causes of constipation, vomiting and indigestion.
3. How can we avoid the following disorders;
a) Constipation b) Indigestion

LESSON 121: DIGESTIVE SYSTEM

HOW TO CARE FOR THE DIGESTIVE SYSTEM PROPERLY

Learners will be helped by the teacher to identify the ways we can care for our digestive system.

Note: Observing good eating habits.

Evaluation activity

1. Outline the different ways in which we can care for the digestive system properly.

LESSON 123: DIGESTIVE SYSTEM CONT'D

THE TEETH

Learners will be helped to;

- Give the use of teeth during digestion.
- State the two sets of teeth.
- Describe the milk teeth.
- Draw arrangements of milk teeth in the jaw.

Evaluation exercise

1. How useful are the teeth during food digestion?
2. List the two sets of teeth in the human jaw.
3. How many teeth make up the milk teeth?
4. Mention the types of teeth that make up the milk teeth.
5. Copy and complete the table below.

Arrangement of milk teeth in the jaw

Types	Incisors	Canines	Pre-molar	
Lower jaw	4			
Upper jaw		2	4	
Total				20

LESSON 124: THE TEETH

PERMANENT TEETH

Learners will be helped by the teacher to read about the permanent teeth;

- How many are they in the jaw?
- When do they develop in the jaw?
- The types of teeth that make up permanent teeth.
- The arrangement of permanent teeth in the jaw.

Evaluation activity

1. Identify the set of teeth that replace the milk teeth.
2. How many teeth make up the permanent teeth?
3. State the types of permanent teeth.
4. Draw a diagram to illustrate the arrangement of the permanent teeth in the jaw.

LESSON 125: THE TEETH

TYPES OF TEETH AND THEIR CHARACTERISTICS

INCISORS

- Their number in the jaw.
- Structure.
- Their use and how they are adapted to that function.

CANINES

- Use
- Structure
- Number in the jaw

Evaluation exercise

1. State the four types of teeth in the human jaw.
2. How useful are the following teeth in the jaw during food digestion.
 - a) Canines
 - b) Incisors
3. Draw diagrams showing the following types of teeth.
 - a) Canines
 - b) Incisors

LESSON 126: TYPES OF TEETH

LESSON 129: FUNCTIONS OF EACH PART OF THE TEETH

Evaluation activity

1. Name the mineral salt responsible for the strong formation of teeth.
2. State the functions of each part of the tooth.
3. When does pain begin to be felt in the tooth?

LESSON 130: TEETH DISEASES

TYPES OF TEETH DISEASES

DENTAL CAVIES

- Causes of dental cavies.
- Effects of dental cavies.

Evaluation exercise

1. State the three teeth diseases.
2. Dental cavies means
3. Dental cavies is caused when thefeeds on theand.....that remain on the teeth.
4. The bacteria that cause dental cavies produce an acid called.....
5. How dangerous is the acid named above on the teeth?
6. Write down any two ways it can be prevented or controlled.

LESSON 131: PLAQUE

- Explain cause.
- Causes of plaque.
- The effect of plaque to the teeth.
- The black substance on the teeth.

Evaluation activity

1. Explain plaque.
2. What causes plaque in teeth?
3. How do we call the swellings in gums?
4. When plaque is neglected, it forms black hard substances called.....on the teeth.

LESSON 132: PERIODONTAL DISEASES

- Causes of periodontal diseases.
- Signs of periodontal diseases.
- General ways of caring for the teeth.

18. (a) What takes places in the large intestines?

b) What is the function of the rectum?

c) How useful is the pancreas during digestion.

19. State any four ways of keeping the digestive system health.

20. What is the different between the molar and pre-molar teeth?

21. In which part of the tooth are blood vessels and nerve endings found?

22. (a) State any two toothpastes commonly used in Uganda.

b) Name the mineral found in the toothpastes mention in (a) above which prevent teeth from decaying.

23. State any two ways you can avoid constipation.

24. Which process takes place in the stomach?

25. Dental cavies means.....

LESSON 134: COMMUNICABLE DISEASES

Learners will use the knowledge of the textbook to find the;

- Definition of the term communicable diseases.
- Definition of diarrhea diseases.
- Examples of diarrheal diseases.
- Causes of diarrhea diseases.
- Prevention and control of diarrheal diseases.

Evaluation activity

1. Define the terms;
a) Communicable diseases b) Diarrhea
2. State two examples of diarrheal diseases.
3. Write down three causes of diarrheal diseases.
4. Suggest three ways of controlling diarrheal diseases.
5. State the dangers of diarrheal diseases.

LESSON 135: DEHYDRATION

Learners will be guided by the teacher to;

- Define the term dehydration.
- Causes of dehydration.
- Signs and symptoms of dehydration.
- Prevention and treatment of dehydration.

Evaluation activity

1. What is meant by the term dehydration?

2. Suggest causes of dehydration.
3. Suggest two signs and symptoms of dehydration.
 - a) Signs
 - b) Symptoms
4. Suggest one way of treating dehydration.

LESSON 136: TREATMENT OF DEHYDRATION

Learners with the guidance of the teacher will;

- State the components of ORS.
- Prepare ORS from a sachet.
- Importance of each component in preparation of ORS.

Evaluation activity

1. List down the materials needed in the preparation of ORS locally.
2. In four sentences, explain how we can prepare SSS at home.
3. How is each of the following important in the preparation of ORS;
 - a) Salt
 - b) Sugar
 - c) Water

LESSON 137: SAMPLE TOPICAL QUESTIONS

1. (a) What do you understand by the term “communicable diseases”?
 - b) Suggest two examples of communicable diseases.
2. (a) What are diarrheal diseases?
 - b) Identify two examples of diarrheal diseases.
 - c) Write down any two dangers of diarrhea.
3. (a) Write down two ways of controlling diarrhea.
 - b) What are the 3Ds in full?
4. (a) Briefly explain the term dehydration.
 - b) List down two signs of dehydration.
 - c) State any two causes of dehydration.
5. Give two ways in which one can control dehydration in babies.
6. (a) Write ORS in full.
 - b) State two items used in the making of ORS.
7. (a) Suggest one reason why each of the following is used in the making of ORS.
 - a) Salt _____
 - b) Sugar _____
 - c) Water _____
8. (a) In about 4 sentences, explain how you prepare ORS at home.

b) Write SSS in full.

TOPIC: **INTESTINAL WORMS**

LESSON 138: TYPES OF WORMS

Learners will be guided to read the text about worms and;

- Describe worms.
- Identify the types of worms e.g.

TAPE WORMS

- Describe tape worms.
- Using a well prepared chart, the learners will draw the structure of a tape worm.
- Describe how tape worms;
 - a) Are spread.
 - b) How they feed.
 - c) How tape worms can be prevented.

Evaluation activity

1. What are intestinal worms?
2. Outline any three types of intestinal worms.
3. How do tapeworms enter our bodies?
4. Describe the way in which tape worms feed.
5. List down any three ways how we prevent the spread of tape worms.

HOOK WORMS

Learners will read the text about hook worms and;

- Describe hook worms.
- Describe the way in which hook worms enter our bodies.
- Explain how hook worms feed.
- Learners will draw the diagram showing a hook worm using a well labeled chart.
- Learners will be guided by the teacher to explain ways of preventing hook worms.

Evaluation activity

1. What are hook worms?
2. Why are they called hook worms?
3. How are hook worms spread?
4. Explain how hook worms feed.
5. Where in the body do hook worms live?
6. Outline any three ways in which we can prevent the spread of hook worms.

4. What type of worms feed on blood in our bodies?
5. State three common signs of worms.
6. Which type of worm has the head structure shown below?

7. How do the following types of worms get into people's bodies?
 - a) Tape worms
 - b) Hook worms
 - c) Thread worms
8. Why is it dangerous to walk bare footed?
9. Which disease is one likely to suffer due to having many hook worms?
10. In the space below, draw a diagram to show a hook worm.