KOLFRAM EDUCATIONAL SERVICES

STANDARD KOLFRAM IN USE

LEARNER'S WORKBOOK

PRIMARY FOUR TERM THREE 2022

INTEGRATED SCIENCE

NAME:.....

SCHOOL:.....

CLASS: .....

[DATE]

This book is designed for both the learners and the teachers in accordance to the bridged curriculum. Each specific child in a class at a partiedlar school deserves a copy of this book.

[Company address]

STANDARD KOLFRAM IN USE

INTEGRATED SCIENCE

PUPIL'S WORK BOOK

4

TERM III

AUTHOR
OKOL DICKEN OKOL

EDITED BY:
AKOL LILLIAN
MR. WANDA JERALD
APIO JUDITH FELISTER

Based on the new primary four syllabus 2022

FOREWORD AND RECOMMENDATION

COVID 19 pandemic caused a disruption in our education system and made learners missed schooling for two years of 2020 to 2021 schooling period. This has created a need to rethink what and how learners will be taught when schools open.

The Kolfram Educational Services Kampala has developed a series of teaching materials for pre-primary, primary and secondary schools in Uganda. These materials are prepared in accordance to the abridged curriculums right from primary two up to senior six.

"**Special thank goes to all the board of directors and staff of Kolfram Educational Services Kampala for the great work done**.'

Congratulations

This material presents a selection of priority learning competences and concepts, along with psychological support, which should be focus of instruction in the 2022 school year in order to achieve learning recovery.

This material is not a departure from the existing old curricula for this level but is a modification of the same with a purpose of recovering the lost learning time with maximum learning loss. They have been packed for all primary and secondary classes in Uganda including **pre- primary**, **primary one**, **senior one** and **senior five** that are still using the old standard curriculums.

I therefore, recommend this material and ask all stake holders, educational fraternity to support its implementation as a strategic intervention towards the mitigation of the effects of COVID 19 pandemic on the education system. The effective implementation of this material by the implementors will be a great milestone towards the recovery of lost learning time and giving hope and confidence to learners and teachers.

HON. Janet K. Museveni

First Lady and Minister for Education and Sports

ACKNOWLEDGEMENT

- *I'm very grateful to the Almighty God the Most High who enabled us to accomplish the mission and publish this book.*
- *Similarly, we wish to express and convey our gratitude to all those who contributed to the production and reproduction of this book, materially, spiritually and professionally. Thank you very much.*
- *Lastly we do sincerely regret any error, mistakes or incorrect writing in a paragraph which may be found in this book; it could have cropped up unknowingly*

Special thanks to:

1. Mr. Makumbi Diriisa Wasswa,(headteacher Kitagobwa UMEA primary school- Butambala)
2. Mr. Okol Charles (Head teacher Acuta Primary School- Oyam)
3. Mr. Ggoobi Ramathan (Permanent Secretary , Ministry of Finance)
4. Herman ZZiwa, our senior consultant -English Department
5. All the ***Kolfram Educational editorial team*** not forgetting to mention
   - ✓ Okol Dicken Okol(Okol Kole) ,
   - ✓ Wanda Gerald
   - ✓ Apio Judith Felister
   - ✓ Mwesigye Samuel
   - ✓ Muwonge Ramathan,
   - ✓ Sumbatala Hawah among others.

MESSAGE FROM THE DIRECTOR NCDC- UGANDA

Dear reader, having gone through this book reasonably, I strongly recommend you to adopt its implementation with confidence as it covers a wide range of everyday real life experience carefully selected for this level in accordance to the abridged curriculum.

Dr. Grace K. Baguma
DIRECTOR,
NATIONAL CURRICULUM DEVELOPMENT CENTRE

PREFACE

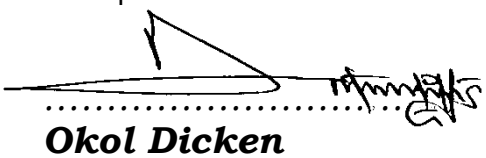
The Standard Kolfram in Use; Abridged Curriculum, pupil's book 6 Integrated Science Workbook is purely based on the New revised Primary seven Syllabus 2021.
It is one of the **60** books set in the same series set to solve the challenges caused by Covid 19 pandemic in teaching and learning in primary and secondary schools. Other books in the series cover all the classes and other subjects which do exist in Ugandan schools.

Features of this book

- ✓ *This book is simple and easy to use.*
- ✓ *The book has the most current content and information as per the academic year 2022.*
- ✓ *Topics and explanations have been simplified to suit the level and the age of the learners.*
- ✓ *The topics and subtopics in the book have been logically and systematically arranged to guide learners in their own revision time.*
- ✓ *The languages used in the book are learner friendly.*
- ✓ *The book contains a number of assessment exercises and tests after every lesson which guides both the teachers and the learners using the book in preparation for the examinations.*
- ✓ *Hundreds of live examples from the Past Primary Leaving Examinations are also included in this book as lesson activities.*

We hope the content in this book will not only amuse or attract the users but also play a tremendous role in solving the teaching and learning problems in Integrated science in both urban and rural private and government primary schools in Uganda.

First published in 2022



Okol Dicken
Head of department

0777886622/ 0784044408

KOLFRAM EDUCATIONAL SERVICES KAMPALA
"Let's Discover Our Potentials"

TABLE OF CONTENT

THEME: THE HUMAN HEALTH

TOPIC 11: SANITATION

Sanitation *is the general cleanliness of our environment.*
Sanitation *is a way of keeping our environment clean.*

Elements of sanitation / activities under sanitation

1. *Sweeping the compound, houses etc.*
2. *Mopping houses, classrooms etc.*
3. *Slashing bushes around our homes, school, road sides, water sources.*
4. *Picking and burning rubbish.*
5. *Proper disposal of garbage or rubbish.*
6. *Draining stagnant water around our homes and schools.*
7. *Dusting tables and chairs.*
8. *Removing cobwebs from the kitchen latrines and houses.*
9. *Digging water channels along the roads, in the schools and home compounds.*
10. *Removing broken bottles from the compound*
11. *Proper disposal of faeces*

Importance of sanitation

1. *Prevents the spread of germs.*
2. *Promotes good health in community.*
3. *It makes a home clean and attractive*
4. *It prevents bad smell*

Dangers of poor sanitation

1. *It leads to the spread of diarrheal disease*
2. *It causes bad smell*
3. *It increases on the expenditure for health services.*
4. *It leads to isolation*

Examples of diseases caused due to poor sanitation

1. *Diarrhoea*
2. *Dysentery*
3. *Typhoid*
4. *cholera*

Items used in keeping proper sanitation

- *Brooms*
- *Rake*
- *Rag / mop*
- *Water*
- *Soap*
- *Slasher*
- *Drier*
- *Scrubber*
- *Rubbish pit*
- *Spade*
- *Bins*

Elements of a good home

1. A kitchen
2. A bathroom
3. A rubbish pit
4. A plate stand / rack
5. A clean toilet / latrine
6. A well ventilated house
7. A clean compound

Qualities of a good home

1. It should have a toilet
2. It should have a bathroom
3. It should have a kitchen
4. It should have a plate stand
5. It should have a rubbish pit

Activity

1. Define the term sanitation

_____

_____

*2. Mention any **two** importance of sanitation*

_____

_____

*3. Write down **two** ways hoe germs enter our bodies.*

_____

_____

*4. Outline any **four** elements of a clean home.*

_____

_____

*5. Give **two** qualities of a good house*

_____

_____

*6. Identify any **two** activities carried to promote sanitation.*

_____

_____

7. Draw and name four items used in promoting sanitation

1	*2*	*3*	*4*

Germs and diseases

A germ is a small / tiny living organism that cause diseases.
Germ are too small to be seen with naked eyes. They are seen using a microscope

Types of germs

- *Virus*
- *Bacteria*
- *Protozoa*
- *Fungi*

Where germs are found

1. *Faeces and Urine*
2. *Contaminated water*
3. *Soil*
4. *Air*
5. *On dirty clothes*
6. *On dirty beddings*
7. *Under dirty finger nails.*
8. *Blood*
9. *Inside the body*
10. *On our bodies*
11. *On dirty food*
12. *On dead bodies*

How germs enter our bodies

1. *Through eating contaminated food.*
2. *Through the nose when we breathe in contaminated air.*
3. *Through open wounds and cuts*
4. *Through skin contact with infected persons.*
5. *Through sharing clothes with an infected person.*
6. *Through vector bites and stings*

THE GERM PATH (4FS)

The *germ path is the way in which food germs are spread.*
These stands for

- *Faeces*
- *Flies*
- *Food*
- *Fingers*

Control of the spreading of germs

1. *Boil water for drinking.*
2. *Wash hands before eating food.*
3. *Wash hands after visiting the latrine or toilet.*
4. *Destroy the breeding places of vectors.*
5. *Kill the vectors by spraying.*
6. *Cover food.*
7. *Have proper disposal of garbage.*
8. *Have children immunized.*
9. *Covering wounds and cuts*

ROTTING / DECAY

Rotting is the breakdown of dead matter by bacteria.
It requires warmth, darkness and moisture.

Importance of rotting / decay

1. *Rotting produces humus from dead organic matter.*
2. *It destroys garbage heaps.*
3. *It destroys faeces in latrines and sewage systems.*

Dangers of rotting

1. *Rotting produces a bad smell.*
2. *Rotting is a source of germs.*
3. *Rotting causes wounds to be septic.*
4. *Rotting attracts some vectors*

Activity

*Suggest any **two** places where we find germs*

_____

_____

*Name the **four** types of germs*

_____

_____

Common diseases caused by germs

Diseases	***Causative germ***
Trachoma	*Virus*
Red eyes / conjunctivitis	*Bacteria*
Cholera	*Bacteria*
Typhoid	*Bacteria*
Dysentery	*Bacteria / amoeba*
Diarrhoea	*Bacteria / virus*
Ring worm	*Fungus*
Chicken pox	*Virus*
Diphtheria	*Bacteria*
Pneumonia	*Bacteria / virus*

Tetanus	*Bacteria*
Measles	*Virus*
Polio	*Virus*
Whooping cough (Pertussis)	*Bacteria*
Scabies	*Itch mites*
Malaria	*Plasmodium (Protozoa)*
Rabies	*Virus*
Typhus fever	*Bacteria*

Ways of keeping our water safe and water sources clean

1. *Avoid dumping rubbish in water sources.*
2. *Slash bushes around water sources.*
3. *Put protective covers on open wells*
4. *Do not share water sources with domestic animals*
5. *Avoid urinating or defecating near or in water sources.*

Activity.

1. Identify the bacteria that cause the following disease

2. Trachoma

_____

3. Cholera

iii) Typhoid

_____

4. Name the protozoa that cause the following diseases.

Sleeping sickness

_____

5. malaria

_____

6. write 4fs in full

_____

_____

*7. Outline any **four** diseases that result from poor sanitation.*

_____

_____

*8. suggest any **two** dangers of rotting*

_____

_____

*9. Mention any **two** ways how one can c control the spread of germs.*

_____

_____

TOPICAL REVISION QUESTIONS

1. What do you understand by term Sanitation?

2. Mention any five activities involved under sanitation.

3. Suggest any two importance of sanitation to a community.

4. Give any four items used in keeping proper sanitation.

5. What is a germ?

6. Outline any four types of teeth.
7. How can germs spread from one person to another? (Give three)
8. Suggest any three places where we can find germs.
9. Write 4Fs in their correct order.
10. Mention any two ways of controlling the spread of germs in our environment.
11. Define rotting?
12. Give any two importance of rotting to our environment.
13. Mention two dangers of rotting to our environment.
14. Which type of germ causes the following diseases
(a) Trachoma (b)Cholera (c) Diphtheria (d) Malaria (e) Polio

THEME: THE HUMAN HEALTH

TOPIC 12: COMMUNICABLE INTESTINAL DISEASES AND WORM INFESTATION

LESSON. 1

DATE: _____

Communicable diseases are diseases that can spread from one person to another.
Communicable diseases can be called infectious diseases or transmissible diseases

Examples of communicable diseases

1. Measles
2. Diarrhoea
3. AIDS
4. Ebola
5. Malaria
6. Bilharzias
7. Dysentery
8. Polio
9. Tuberculosis
10. Cholera
11. Ringworm

Non communicable diseases

These are diseases that do not spread from one person to another.

Examples of non-communicable diseases

1. Diabetes
2. Anaemia
3. Kwashiorkor
4. Rickets
5. High Blood Pressure
6. Cancers
7. Heart Attack
8. Sickle Cells
9. Beriberi
10. Scurvy
11. Pellagra
12. Goitre

ACTIVITY

1. What is communicable disease?

_____

_____

*2. Mention any **three** communicable diseases.*

_____

_____

*3. What is **non**- communicable disease?*

_____

_____

4. State the main difference between communicable and non-communicable diseases.

_____

_____

*5. Mention any **two** non-communicable diseases that you know.*

_____

_____

LESSON 2

DATE: _____

Diarrhoeal intestinal diseases (faecal diseases)

Diarrhoea is the passing out of watery faeces frequently.

Examples of diarrhoeal diseases

1. Dysentery
2. Diarrhoea
3. Cholera
4. Typhoid

Causes of diarrhoea

1. Bacteria
2. Viruses

Dysentery

Dysentery is the passing out of watery faeces with blood stains.

Causes of dysentery

1. Bacteria (shigella)
2. Amoeba

Kinds of dysentery

Bacillary dysentery
Amoebic dysentery

Bacillary dysentery

This is a type of dysentery caused by bacillus bacteria

Amoebic dysentery

This is a type of dysentery caused by protozoa called amoeba

Activity

1. Define intestinal diarrheal diseases.

_____

_____

2. *Mention any **two** examples of diarrheal intestinal diseases*

_____

_____

3. *Mention **two** organisms which cause diarrhoea.*

_____

_____

4. *Define dysentery.*

_____

_____

5. *What do you understand by:*
   *a) Bacillary dysentery*_____
   *b) Amoebic dysentery*_____

LESSON 3

DATE: _____

How dysentery spreads

- ✓ *Drinking contaminated water*
- ✓ *Eating contaminated food*
- ✓ *Eating using unwashed contaminated hands.*

Signs and symptoms of dysentery

1. *Severe bloody diarrhoea*
2. *Abdominal pain*
3. *Loss of appetite*
4. *Dehydration*

How to control or prevent dysentery

1. *Dispose faeces into a toilet/latrine.*
2. *Toilets/latrine should be kept clean.*
3. *Wash hands before touching or eating food.*
4. *Cover cooked or leftover food.*
5. *Wash vegetables and fruits before eating them.*
6. *Destroy all breeding places of houseflies.*
7. *All sick persons must be treated as quickly as possible.*
8. *Isolate the sick persons from the healthy ones.*

Activity

1. *State any **two** ways in which dysentery spread.*

_____

_____

2. *State any **two** signs and symptoms of dysentery*

_____

_____

3. *By which **two** ways can we control or prevent dysentery.*

_____

_____

LESSON 4

DATE: _____

Cholera

Cholera is diarrhoeal disease caused by bacteria known as vibrio cholerae.

Signs and symptoms of cholera

1. *Severe diarrhoea*
2. *Severe vomiting*
3. *Dehydration*
4. *Body weakness*

How cholera spreads

1. *Through drinking contaminated water*
2. *Eating contaminated food*
3. *Eating using contaminated hands*
4. *Eating contaminated fruits and vegetables*

How to prevent cholera

1. *Washing hands before eating.*
2. *Give the infected person a lot of oral rehydration solution (ORS)*
3. *Wash hands after visiting the latrine.*
4. *Dispose faeces in latrines.*
5. *Warm or reheat cold food before eating it.*
6. *Boil water for drinking.*
7. *Cover leftover food.*
8. *Take the infected person to the hospital as soon as possible.*
9. *Isolate the sick person from the healthy ones.*

Activity

1. *a) Define the term dysentery?*

   _____

   *c) Outline the **two** types of dysentery.*

   _____

   _____

3. *Briefly explain how dysentery is spread.*

   _____

   _____

4. *Mention any **two** signs of dysentery*

   _____

   _____

5. *Describe **three** ways of preventing dysentery.*

   _____

   _____

6. *In **one** sentence show cholera is spread.*

   _____

   _____

7. *State any **two** signs of cholera.*

_____

_____

LESSON 5

Typhoid / enteric fever

It is caused by bacteria known as salmonella typhi

Signs / symptoms of typhoid

1. *Abdominal pain*
2. *Body temperature rise (fever)*
3. *Headache*
4. *Diarrhoea*
5. *Abdominal discomfort*

How typhoid spread

1. *Drinking contaminated water*
2. *Eating contaminated food*
3. *Eating with unwashed hands*
4. *Prevention and control of typhoid*
5. *Drinking clean boiled water*
6. *Covering left over food*
7. *Washing fruits and vegetables before eating them.*
8. *Washing hands before eating.*

Prevention of typhoid

1) *Cover all food and drinks properly.*
2) *Wash hands with water and soap before eating*
3) *Wash hands with clean water and soap after visiting the toilet or latrine*
4) *Boil water for drinking.*
5) *Burry or burn rubbish*
6) *Proper disposal of faeces should be done in toilets/latrines*

Activity

1. *What bacteria causes typhoid?*

_____

_____

2. *State any **three** signs / symptoms of typhoid.*

_____

_____

3. *Mention any **two** ways how typhoid is spread*

_____

_____

4. *Mention **two** ways of preventing typhoid.*

_____

_____

LESSON 6

DATE: _____

Dehydration

Dehydration is a condition of the body when the body does not have enough water in it.

Causes of dehydration

1. *Severe diarrhoea*
2. *Severe vomiting*

Signs of dehydration

3. *Sunken eyes*
4. *Passing out little/ no urine out*
5. *Dry lips*
6. *Dry eyes*
7. *Sunken soft spot on a baby's head (fontanelle)*
8. *A pinch of skin takes long to go back to its position.*

Symptoms of dehydration

1. *Headache*
2. *Dizziness*
3. *Body weakness.*
4. *Increased thirst.*

Prevention of diarrhoea

1. *Covering left over food*
2. *Washing hands before eating food*
3. *Drinking clean boiled water*
4. *Washing hands after visiting a toilet*
5. *Proper disposal of faeces in latrines*
6. *Washing fruits and vegetables before eating them*
7. *Destroying breeding places for houseflies*
8. *Proper disposal of rubbish*

Treatment of diarrhoea

1. *Giving the victim Oral Rehydration Solution (ORS)*
2. *Drinking a lot of fluids e.g. water , fruit juice , milk*

Activity

1. *What is dehydration*

   _____

   _____

2. *Mention **two** causes of dehydration*

   _____

   _____

3. *State **two** signs of dehydration*

   _____

   _____

4. *Mention **two** symptoms of dehydration*

   _____

   _____

5. *Give **two** ways of preventing diarrhoea*

_____

_____

***6.** How can diarrhea be treated?*

_____

LESSON 7

ORS

It stands for Oral Rehydration solution (ORS)
ORS is a solution given to a person with diarrhoeal diseases or who is vomiting to replace the lost fluids in the body
ORS is given to a person who is already dehydrated or a person with severe diarrhoea or severe vomiting to prevent dehydration

Why ORS is given

1. *To prevent dehydration*
2. *To replace the lost fluids in the body*

How to prepare ORS from the Sackets

1. *Wash hands with clean water and soap*
2. *Measure one litre of clean cold water in a clean container.*
3. *Open one packet of ORS into water.*
4. *Mix the solution*
5. *Taste the solution*
6. *Give the solution to the victim*

Preparing ORS using salt , sugar and water (local preparation of ORS)

1. *Wash hands with clean water and soap.*
2. *Measure one litre of clean boiled water in a clean container*
3. *Measure one leveled tea spoon of salt and eight leveled tea spoon of sugar in water.*
4. *Mix the sugar and the salt with water to dissolve*
5. *Taste the solution*
6. *Give the solution to a dehydrated person.*

ACTIVITY

1. *Give ways of preventing cholera.*

_____

_____

_____

_____

2. *Identify the bacteria which causes typhoid*

_____

_____

3. *Briefly explain how typhoid is spread?*

_____

_____

4. *Mention **two** ways of preventing typhoid.*

_____

_____

5. *Write ORS in full?*

_____

_____

6. *Briefly explain the steps how ORS is prepared in four steps.*

_____

_____

_____

_____

7. *How can we replace the lost fluids in our bodies?*

_____

_____

LESSON 8
DATE: _____

Solutes, solvents and solutions
Solutes and solvents used in preparing ORS
Solutes is any solid which can be dissolved by water.
***Examples of solutes** are sugar and salt*

***Solvent** is any liquid which can dissolve a solute*
Example of solvent is water

Qn: Why is water known as a universal solvent?
Water dissolves all solutes

Intestinal worms
Worms are parasites which live in our bodies and feed on blood or digested food
NB: Most worms live in the intestines

What are parasites?
Parasites are living organisms that live and get food from other living organisms for survival.
***A host** is a living organism on which a parasite depends.*
Activity

1. *What is a solute?*

_____

_____

2. *What is a solvent?*

_____

_____

3. *Mention any **two** examples of*
   Solute *Solvent*

_____

_____

4. *Why is water known as a universal solvent?*

_____

_____

5. *Write SSS in full.*

_____

_____

LESSON 9
DATE: _____

Ecto parasites
These are parasites that live on the body of the host.
A host is an organism from which another organism obtains food and shelter

Examples of ecto parasites
1. *Ticks*
2. *Lice*
3. *Fleas*
4. *Tsetse flies*

Endo parasites
These are parasites that live inside the body of the host.

Examples of intestinal worms include:-
1. *Hook worms*
2. *Guinea worms*
3. *Round worms*
4. *Fluke worms*
5. *Tape worms*
6. *Thread worms*
7. *Pin worms*

Activity

1. In one sentence show how you understand by the following.
*Parasites*_____
*Worms*_____
*A host*_____
2. How are ecto parasites different from endo parasites?

_____

_____

_____

*3. Identify any **two** examples of each of the following.*
a. Endo parasite

_____

b. Ecto parasites

_____

LESSON 10
DATE: _____
Hook worms
They are about 8 – 13mm in length
They live in small intestines where they hook themselves to the walls of the intestines with their hooked mouth and feed on blood.
The female lays eggs which pass out in stool or faeces.
The eggs hatch out in water or damp soil and enter through bare feed especially around the ankles.
They penetrate the skin and enter the blood streams where blood carries them to the lungs.
From lungs they are coughed to the gullet and swallowed to the stomach and then to the small intestines where they stay.
Hook worms are dangerous because when they become many in number they suck blood and cause anemia.

Signs and symptoms
1. *Abdominal discomfort*
2. *Loss of weight*
3. *Body becomes tired and weak.*
4. *There is development of diarrhoea*
5. *The tongue, gums, eyelids and finger nail becomes pale.*

Prevention of hook worms
1. *Boiling water for drinking.*
2. *Wearing sandals or gumboots while walking in dirty and wet areas.*
3. *Washing fruits and vegetables before eating them.*

Treatment
1. *Go to be examined by doctor in the hospital.*
2. *Eat meat, fish, eggs and dark green leafy vegetables.*

Activity
1. *What causes anemia?*

   _____
2. *In which way do hookworms enter our body?*

   _____

   _____
3. *Mention **three** signs of hookworm infection.*

   _____

   _____

   _____

4. *Mention **two** ways of preventing hook worms*

_____

_____

5. *Give any **two** ways of treating hookworms infections.*

_____

_____

LESSON.11

DATE: _____

Ascaris worms (round worms)

- *They are about 15 – 35cm long.*
- *They live in the small intestines and feed on digested food.*
- *Children can get ascaris worms in contaminated food dirt around houses, in gardens and get round worms eggs in the finger nails.*
- *Ascaris worms enter our bodies through eating un washed fruits and raw vegetables where the eggs may be attached.*
- *When one eats un washed fruits and vegetables the eggs get into mouth, stomach and into the intestines and remain feeding or digested food.*
- *When they are many in number, they block the intestines and cause constipation or diarrhoea.*
- *Ascaris worms cause an infection called ascariasis*

Signs and symptoms of roundworms

1. *Abdominal pain.*
2. *Fever, diarrhea and restlessness.*
3. *Grinding of the teeth in children.*

Prevention of roundworms

1. *Wash your hands before eating anything.*
2. *Do not play in dirty places.*
3. *Do not share plates because others may not have washed their hands.*
4. *Wash fruits and vegetables before eating.*
5. *Wash hands after visiting the latrine.*
6. *Defecate in latrines only.*
7. *Cut finger nails to avoid keeping round worm eggs.*

Treatment of roundworms

Seek medical advice immediately you think you have round worms.

Activity

1. *How do children get roundworms?*

_____

2. *In which way do roundworms enter our body?*

_____

3. *Mention **two** signs of roundworms infection.*

_____

_____

4. *Mention **two** ways of preventing roundworms*

_____

_____

5. *Give any **two** ways of treating roundworm infections.*

_____

_____

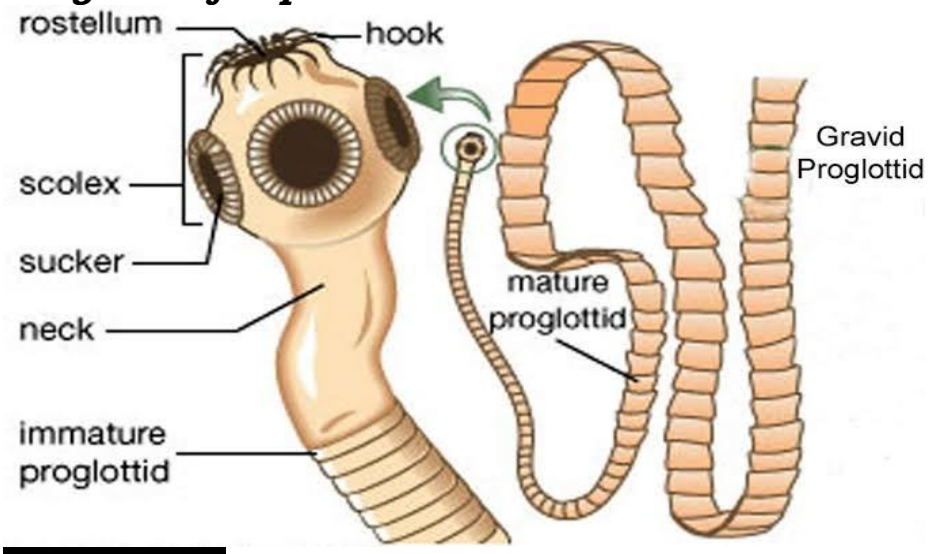
LESSON. 12

DATE: _____

Tape worms

They grow to more than 30ft or 10m long.
They enter our bodies through eating half cooked beef or pork and live in our small intestines.
They hook themselves on the walls of the intestines and suck digested food.
When mature, the tape worms shed their segments containing thousands of mature eggs which are passed through faeces or stool.
The mature eggs can stay up to one year on grass until either a cow or pig eats the grass with the eggs.
When the eggs are swallowed by either pig or cow, they enter their bodies into their blood and go for another stage of development in the mucus.

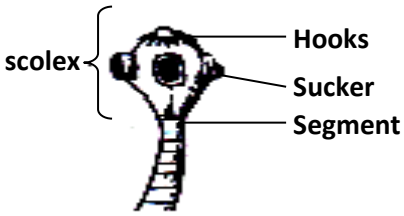
Diagram of tapeworm



LESSON.13

DATE: _____

A head of a tape worm (scolex)



Functions

Segments: They enable a tape worm to absorb digested food from its host-

Hooks and suckers: They enable a tapeworm to attach itself on the wall of the ileum of its host.

NB: Tape worms enter our bodies when we eat under cooked meat from infected animals.

Signs and symptoms of tape worm infection

1. *General body weakness*
2. *Loss of body weight.*
3. *Loss of appetite.*
4. *The person passes out stool with tape worms mature egg segments*
5. *The person passes out watery stool (diarrhoea)*

Spread

Through eating half cooked meat

Prevention and treatment of tape worms

1. *Always eat well cooked/roasted beef or pork*
2. *Always deworm every after 3 months*
3. *Dispose feces in toilets/latrine*
4. *Seek treatment from a health worker*

ACTIVITY

*1. In **two** ways, show how you can identify someone with hookworm infection.*

_____

_____

*2. State **three** ways of preventing hook worm infection.*

_____

_____

3. What special name is given to the head of a tape worm?

_____

_____

*4. Cite down **two** signs of tape worm infection.*

_____

_____

5. How is a segment important on a segment?

_____

LESSON. 14

DATE: _____

PIN WORMS / THREAD WORMS

- *These live in the large intestines especially in the rectum.*
- *The female crawls out at night through the anus and lays its eggs around the skin.*
- *This cause itching around the anus especially at night.*
- *They are white in colour and small of about 8 – 13mm long.*
- *When the infected person scratches the itching part and later handles food staff or puts fingers in the mouth, the eggs are swallowed therefore reinfecting him / herself.*
- *If the eggs hatch out around the anus, the worms crawls back into the large intestines.*
- *However, if the infected person shares edible with someone without washing hands, the eggs are spread and the next person will swallow the eggs and become infected.*
- *The eggs can contaminate beddings, under wears, knickers and they can be spread through this way.*

LESSON. 15

DATE: _____

Signs and symptoms of thread worms

1. *Abdominal discomfort.*
2. *Lack of sleep*
3. *Restlessness.*
4. *Itching around the anus especially at night.*
5. *They secrete mucus around the anus which causes itching*

Prevention and control

1. *Seek treatment from a qualified health worker.*
2. *Have an infected person wear tight fitting shorts to prevent scratching of the anus.*
3. *Change under clothing and bedding daily.*
4. *Scrub toilet seats with soap and water every day.*
5. *Have family members treated.*
6. *Wash hands with soap and clean water after the toilet.*
7. *Cut finger nails short and keep them clear.*

Activity

1. *Where do pin worm live inside the human being?*

   _____

   _____

2. *Why are pin worms called thread worms?*

   _____

   _____

3. *Name the worm characterized by itching anus at night.*

   _____

   _____

4. *Mention any **three** signs and symptoms of pin worms.*

   _____

   _____

5. *State ant **three** ways of preventing thread works.*

   _____

   _____

LESSON. 16

DATE: _____

Ascaris

They are intestinal worms which live in the small intestines.
They feed on digested food.
The adult can measure between 15 to 3o cm long.
A person can get ascaris if he or she consumes food or drinks water containing eggs of ascaris.

Signs and symptoms of ascaris.

1. *Diarrhoea*
2. *Loss of weight*
3. *Abdominal pain.*
4. *General body weakness.*

Prevention of ascaris

Dispose human wastes in the latrine
Boil water for drinking.
Wash hands before eating.
Wash fruits and vegetables when eaten in raw form.
Seek medical attention from the qualified doctor.
NB. Ascaris cause a disease called Ascariasis.

Activity

1. *Which intestinal worms live in the small intestines?*

   _____

   _____

2. *State **two** signs and symptoms of ascaris*

   _____

   _____

3. *Mention **two** ways of preventing of ascaris*

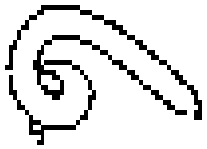
   _____

   _____

LESSON.17

DATE: _____

WHIP WORM



- *They are about 35 to 50mm in length with the head smaller than the tail.*
- *Whip worms are called so because they look like whips.*
- *They live in the large intestines without causing any symptom.*
- *They produce large numbers of eggs.*
- *If great in number, they cause diarrhea and intestinal discomfort.*
- *The eggs pass out with stool and hatch out in the soil.*
- *They enter our bodies in the same way as the round worms'*

Prevention of whip worms

1. *Boiling water for drinking.*
2. *Washing hands before eating.*
3. *Ensuring proper disposal of human faeces.*
4. *Washing fruits and vegetables before eating them.*

ACTIVITY

1. *Identify **two** ways one can prevent pin worm infection.*

   _____

   _____

2. *Give any **two** signs and symptoms of thread worms.*

_____

_____

3. *How do whip worms enter our bodies?*

_____

_____

4. *Give **two** ways of preventing whip worm infection.*

_____

_____

THEME: THE HUMAN HEALTH

TOPIC 13: VECTORS AND DISEASES

LESSON.18

DATE: _____

Vectors

Vectors are living organisms that spread disease germs.
Germs are living organisms that cause diseases.

Examples of common vectors

1. *House flies*
2. *Ticks*
3. *Tsetse flies*
4. *Lice*
5. *Cockroaches*
6. *Mad dogs*
7. *Mosquitoes*
8. *Mites*
9. *Fleas*
10. *Water snail*

a) Insect vectors

Houseflies , tsetse flies , cockroaches , mosquitoes

b) Animal vectors

Mad dogs / rabied dogs.

Life cycle of insect vectors

These are two types of life cycles namely

1. *Complete metamorphosis*
2. *Incomplete metamorphosis*

Activity

1. *What are vectors?*

_____

_____

2. *What do you understand by the term germs?*

_____

_____

3. *State **two** common vectors you know.*

_____

_____

4. *Mention any **two** types of vectors*

_____

_____

5. *Give any **two** examples of insect vectors*

_____

_____

6. *Mention **any** one example of animal vector.*

_____

_____

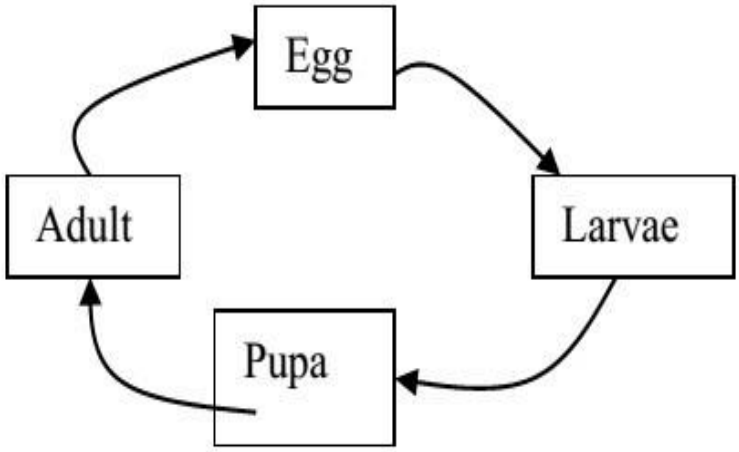
LESSON.19

DATE: _____

1. Complete metamorphosis:

This is the life cycle with four stages of development / growth.
These stages are eggs. Larva, pupa and adult.

Illustration of complete metamorphosis



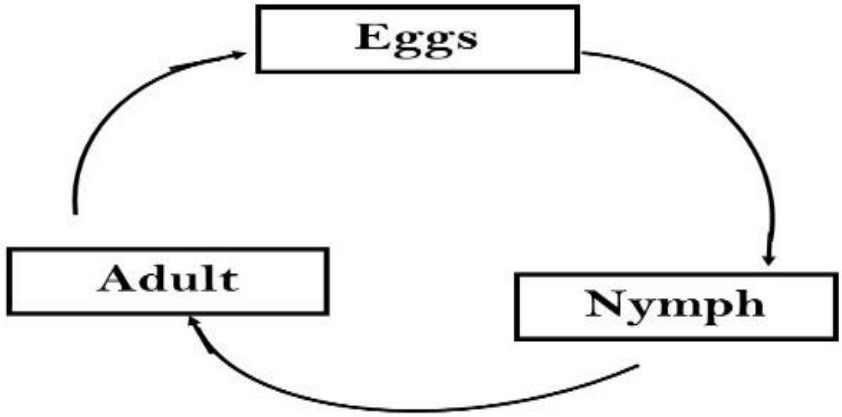
Examples of vectors which undergo complete metamorphosis

1. *Houseflies*
2. *Mosquitoes*
3. *Black flies*
4. *Bees*
5. *Butterflies*
6. *Moths*

2. Incomplete metamorphosis:

This is the life cycle with three stages of growth.
These stages are eggs, nymph and adult.

Illustration of incomplete metamorphosis



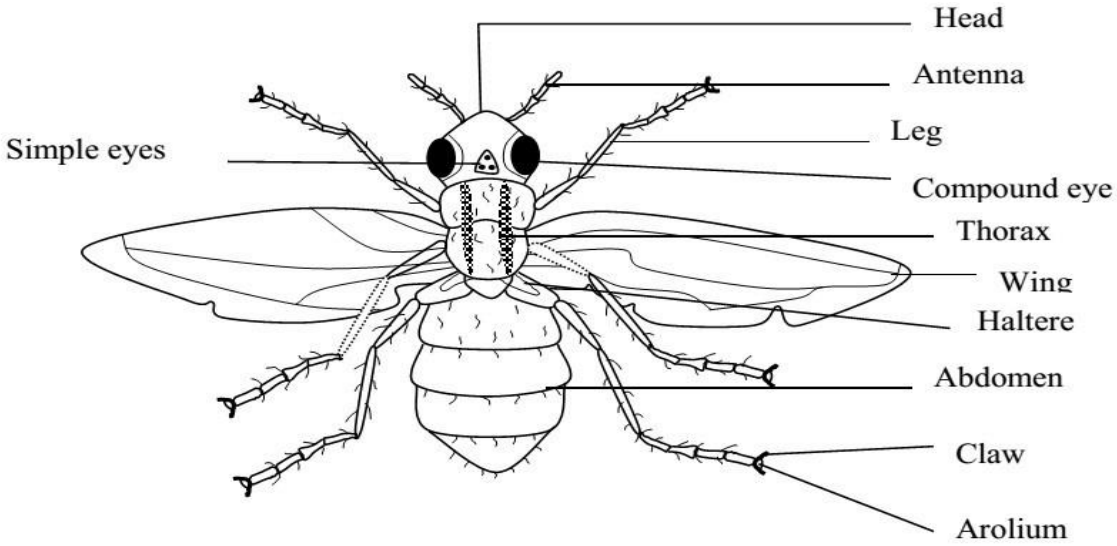
LESSON. 20

DATE: _____

Examples of vectors which undergo incomplete metamorphosis

1. Cockroaches
2. Fleas
3. Lice

Structure of a housefly



Where houseflies lay their eggs

1.On manure heaps
2. On rotting bodies
3.On exposed food

Diseases spread by a housefly

1. Cholera
2. diarrhea
3. Typhoid
4. Dysentery

ACTIVITY

1. Define vector.

_____
_____

2. Where do house flies lay their eggs?

_____
_____

*3 .Apart from house fly, name any other **three** examples vectors.*

_____
_____

4. How do houseflies spread diseases?

_____
_____

5. What do house flies use for;
*a. Breathing*_____
*5. b. feeling*_____

LESSON. 21

DATE: _____

Trachoma

It is a highly contagious / infectious disease which affects the eyes.
It is caused by a virus called Chlamydia.

How is trachoma spread

1. *Sharing of the same basin of water with an infected person.*
2. *Shaking hands with another infected person and then transfer the hands to the eyes.*
3. *Sharing of towels and handkerchiefs with an infected person.*

Signs and symptoms of trachoma

1. *Redness and itching of the eyes.*
2. *Swelling of the eye lids.*
3. *Pain while looking at light.*
4. *Watery discharge from the eye lids.*

Prevention and control of trachoma

1. *Avoid sharing basins, towels and handkerchiefs with an infected person.*
2. *Avoid shaking hands with an infected person.*
3. *Observe personal hygiene*
4. *Get treatment as soon as possible because trachoma can make one blind.*

Mosquitoes

There are three types of mosquitoes namely:-

1. *The anopheles mosquito.*
2. *Culex mosquito.*
3. *Aedes or Tiger Mosquito.*

The mosquito lays its eggs in stagnant water.
The eggs hatch into Larva, pupa then into an adult.
The larva stage of a mosquito is called a wriggler.
Note:

1. *A mosquito goes through a complete metamorphosis.*
2. *Mosquitoes have a sucking mouth part called a proboscis which they use to feed.*

LESSON. 22

DATE: _____

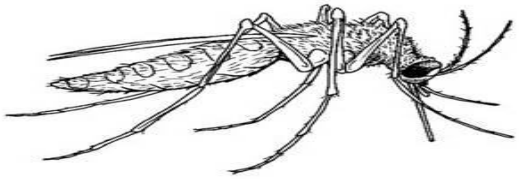
Habitat of Mosquitoes

Mosquitoes lay their eggs in stagnant water or they breed in stagnant water.

1. The anopheles mosquito

This mosquito spreads a germ called plasmodium.

This germ (Plasmodium) is spread by a female anopheles mosquito which cause Malaria.



A male anopheles mosquito doesn't bite human beings. It instead feeds on nectar of flowers and juices of plants.

Malaria

a) causes - by plasmodia protozoa
b) Spread - by female anopheles mosquito

Signs and symptoms of malaria

- *Tiredness or weakness.*
- *Rise in the body temperature.*
- *Rapid breathing and rapid pulse rate.*
- *Serious sweating of 2 – 4 hours.*
- *Abdominal pain, diarrhea and vomiting.*
- *Shivering and chattering of teeth.*
- *Joint paint*

2. Culex Mosquito

This mosquito spreads a worm called filaria which causes elephantiasis. Elephantiasis makes legs to grow big and look like those of elephants hence the name elephantiasis.
The female culex mosquito feeds on blood before it lays eggs in stagnant water.

Activity

1. *Which germ causes malaria?*

   _____
   _____

2. *Which vector spreads malaria?*

   _____
   _____

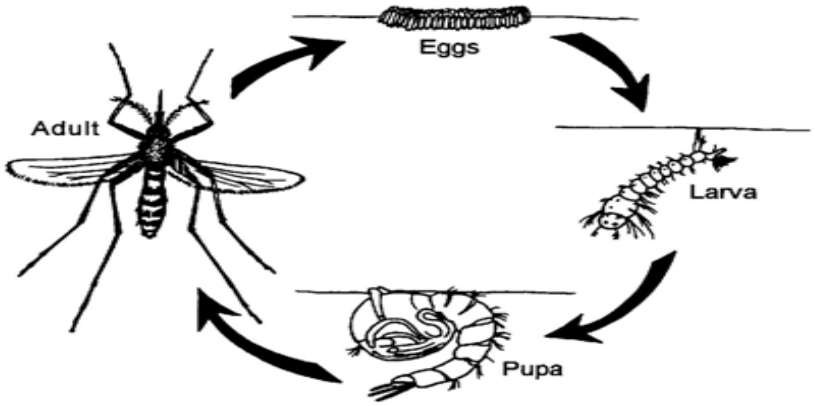
3. *State any **two** signs and symptoms of malaria*

   _____
   _____

LESSON.23

DATE: _____

Life cycle of a culex mosquito



3. Aedes / Tiger mosquito

This mosquito spreads a virus which causes either yellow fever or dengue fever in human beings.

The mosquito spreads the virus from an infected person to another and it lays eggs in stagnant water.

Note: Yellow fever can be prevented by immunization

How to control Mosquitoes

- ✓ *Destroying any area with stagnant water.*
- ✓ *Slashing or cutting long grass near home or school.*
- ✓ *Spray insecticides to kill mosquitoes.*
- ✓ *Keep fish in ponds and dams to feed on mosquito larva.*
- ✓ *Pour oil on stagnant water. This stops the larva from breathing by cutting off oxygen supply.*
- ✓ *Sleep under a treated mosquito net.*
- ✓ *Using screens on ventilators to prevent mosquitoes from entering.*

Activity

1. *Which mosquito carries filaria worms?*

   _____

2. *Name the mosquito which causes dengue fever to human beings?*

   _____

   _____

3. *Mention **three** ways of controlling mosquitoes.*

   _____

   _____

LESSON. 24

DATE: _____

COCKROACHES

A cockroach has a flat body. Most cockroaches are dark brown while others are black.

A cockroach is an insect with three main body parts i.e. head, thorax abdomen.

Feeding habits of cockroach

Cockroaches mainly move at night looking for food and water and during day time, they do not move.

Cockroaches are active at night.
A note: A moth is also an active insect at night.
Cockroaches feed on our food and they transmit germs on it.

Where cockroaches live

1. *Cupboard*
2. *Refrigerators*
3. *Boxes*
4. *Book Shelves*
5. *Suit Cases*
6. *Stores*
7. *Cracks Of walls*

Dangers of cockroaches

Cockroaches carry germs which cause diseases to us.
Cockroaches damage our books.
They spoil our clothing.

Diseases spread by cockroaches

Cockroaches are suspected of carrying germs (pathogens) which cause diseases.

Activity

1. *Name the **three** body parts of a cockroach*

   _____
   _____
2. *Name **two** insects that are commonly seen at night.*

   _____
   _____
3. *State **three** places where cockroaches live.*

   _____
   _____
4. *Mention **two** dangers of a cockroach.*

   _____
   _____

LESSON. 25

DATE: _____

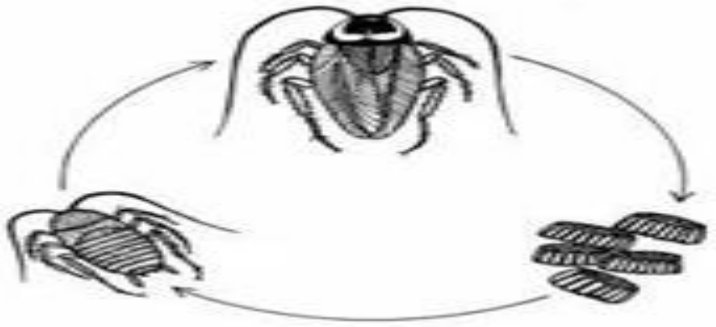
Diseases caused by the cockroaches

1. *Polio*
2. *Leprosy*
3. *Typhoid*
4. *Diarrhoea*
5. *Amoebic dysentery*
6. *Cholera*
7. *Food poisoning*

Prevention and control of cockroaches

1. *Cover all the food.*
2. *Keep the house clean.*
3. *Smoke the latrine regularly.*
4. *Spray the cockroaches with insecticides.*
5. *Keep covered food in the cupboard.*

The life cycle of a cockroach



The female cockroach lays eggs in an egg case each having about 16 eggs
The eggs hatch into nymph
The nymph develop into adult
NB: A cockroach under goes an incomplete metamorphosis (three stages of development)

Activity

1. *Outline **two** diseases spread by a cockroach*

   _____

   _____

2. *What name is given to the second stage of a cockroach?*

   _____

3. *Why are rat fleas called vectors?*

   _____

   _____

4. *Give **two** signs of bubonic plague.*

   _____

   _____

5. *Mention any **two** diseases spread by a cockroach.*

   _____

   _____

6. *Write down any **two** ways of controlling diseases in the community.*

   _____

   _____

7. *Draw and name a life cycle of a cockroach.*

LESSON. 26

DATE: _____

TSETSEFLY

Breeding places for tsetse flies

1. In thick vegetation
2. Along river banks
3. Shady vegetation
4. Open grasslands

Note:

1. A tsetse fly undergo complete metamorphosis.
2. A tsetse fly does not lay eggs.
The eggs are just hatched within the abdomen.

Diseases spread by tsetse flies

Tsetse flies transmit a germ called Trypanosoma which cause
1. Sleeping sickness (in human beings)
2. Nagana in (Animals)

Note: Sleeping sickness and Nagana are transmitted by a female tsetse fly.
The female tsetse fly feeds on blood.
The male tsetse fly feeds on plant juices.

Signs and symptoms of sleeping sickness

1. Prolonged fever
2. Dullness
3. Loss of body weight.
4. Body weakness
5. One becomes sleepy.

Prevention and control of sleeping

1. Spray insecticides to kill tsetse flies.
2. Use traps to trap adult tsetse flies.
3. Treat the infected ones in hospitals.
4. Clear bushes around homes

Activity

1. *Mention **two** breeding places for tsetse flies.*

_____

_____

2. *Name any **one** disease spread by tsetse flies to man.*

_____

3. *Name the tsetse fly which feeds on blood.*

_____

4. *Name the tsetse fly which feeds on plant juices.*

_____

_____

5. *State **two** signs and symptoms of sleeping sickness*

_____

_____

6. *Mention **three** ways of preventing and controlling of sleeping sickness.*

_____

_____

LESSON. 27

DATE: _____

BLACK FLY

It is small and black
It is also called Jinja fly or simulium fly.

Note:
A black fly breeds in fast flowing rivers where it lays its eggs.
It undergoes a complete metamorphosis.
A black fly spreads a filarial worm called onchocerca vulvulus which causes river blindness.

Signs and symptoms of river blindness.

1. *Lumps appear on legs and hips.*
2. *Severe skin itching.*
3. *Skin rashes appear on the body.*

Prevention and control

Spray insecticides to kill the adult black fly and its larvae.
Treat infected people.

LICE

There are three types of lice namely:-
1. The body lice:
They live in clothing.
Their eggs are found in the folds and seams of clothing.

2. Hair lice:

They live in the hair on our heads.
They are spread by infected combs, hair brushes, hats, turbans.

3. Crab lice:

they live on the hair around our private body parts.
They are spread when the male and female partners join their private parts during sexual intercourse.
Note: The lice suck blood, cause itching, irritation and also spread / transmit diseases called typhus fever and relapsing fever.

LESSON. 28

DATE: _____

How lice are controlled

1. *Keeping hair short.*
2. *Washing clothing*
3. *Ironing clothes.*
4. *Combing hair every day.*
5. *Spread beddings in sunshine.*
6. *Do not share clothes.*

RATS FLEAS

Rat fleas are carried by rats.
They transmit bacteria which causes bubonic plague.
Bubonic plague is caused by bacteria called yersinia perstis

Signs and symptoms

1. *High fever.*
2. *Chills*
3. *Swollen glands*
4. *Swelling in the neck and arm pits.*
5. *Headache.*

Prevention and control

1. *Kill all rats.*
2. *Spray with insecticides to kill fleas.*
3. *People should be given anti – plague immunization in case of an outbreak.*

Activity

1. *Mention any **two** ways how fleas can be controlled.*

   _____

   _____

2. *Which animal carries rat fleas?*

   _____

   _____

3. *State **two** signs and symptoms of rat fleas*

   _____

   _____

4. *Mention any **three** ways how rat fleas can be controlled.*

   _____

   _____

5. *How can spraying control rat fleas?*

   _____

   _____

LESSON. 29

DATE: _____

WATER SNAILS

Water snails transmit the Schistosoma worm which causes bilharzia (Schistosomiasis)
Bilharzias is caused by bilharzia flukes (schistosomes)

Where does the Schistosoma live in the body?

1. *In the urinary bladder.*
2. *Large intestines*
3. *Small intestines.*

How do we get bilharzias

1. *Bathing with contaminated water.*
2. *Drinking contaminated water.*
3. *Swimming in contaminated water.*

Signs and symptoms of bilharzias

1. *Passing out blood in urine.*
2. *Enlargement of the liver and spleen*
3. *Passing out blood in faeces.*

How to prevent bilharzia

1. *Wearing shoes when walking in wet places e.g. swamps.*
2. *Boiling water for drinking.*
3. *Killing water snails*
4. *Use latrines / toilets for proper disposal of wastes.*

Activity

1. *Mention any two ways how bilharzia can be controlled.*

   _____

   _____

2. *Which germs cause bilharzia?*

   _____

   _____

3. *Where does the Schistosoma live in the body?*

   _____

   _____

4. *How do we get bilharzias?*

   _____

5. *State **two** signs and symptoms of bilharzias*

   _____

   _____

6. *How do we prevent bilharzia?*

   _____

   _____

LESSON.30

DATE: _____

MAD DOGS

Dogs transmit a virus which causes rabies.

Other animals which transmit rabies

1. *Infected foxes.*
2. *Infected domestic cats.*

Signs and symptoms of rabies

1. *Fever*
2. *Headache*
3. *Body weakness*
4. *Salivation*
5. *Mental confusion*
6. *Difficult in swallowing*
7. *Sudden death*

Prevention and control

Kill all suspected mad dogs.

Vaccinate all dogs with anti – rabies vaccine

TICKS

They are parasites because they suck blood from animals

- ✓ *Ticks have eight legs*
- ✓ *Ticks don't have wings*
- ✓ *Ticks have two main body parts*
- ✓ *Ticks transmit a germ called rickettsia which causes typhus fever*
- ✓ *Ticks live on bodies of both wild and domestic animals and humans*
- ✓ *They feed by sucking blood from animals.*

Prevention and control of ticks.

1. *Spray all domestic animals e.g. dogs and cats.*
2. *Dip / spray all domestic animals e.g. cattle.*
3. *Keep the kraal clean.*

Ticks are not insects because they have

- ❖ *eight legs and*
- ❖ *have no wings.*
- ❖ *Two main body divisions*

Activity

1. *Which animal transmits virus which causes rabies?*

   _____

   _____

2. *Mention any **two** signs and symptoms of rabies*

   _____

   _____

3. *Why are ticks considered as parasites?*

   _____

   _____

4. *Why are ticks not grouped as insects?*

   _____

   _____

5. *State **two** ways of preventing ticks.*

   _____

   _____

LESSON.31

DATE: _____

Bedbugs

They are flat red brown insects without wings

Where bedbugs live

1. *In cracks of walls*
2. *In cracks of floors*
3. *In beddings*

bedbugs become active at night by sucking blood hence causing irritation to the body
Bedbugs protect themselves from enemies by producing a bad smell when touched.

Prevention and control of bedbugs

1. *Spread all beddings under the sun*
2. *Pour hot water on furniture like beds to kill bedbugs*
3. *Spray insecticides on cracks of floors/ walls to kill adult bedbugs ad their nymphs*
4. *Wash beddings and iron them regularly*

Activity

1. *Mention any **three** places where bedbugs live.*

   _____

   _____

2. *How do bedbugs protect themselves?*

   _____

   _____

3. *Mention **three** ways of preventing and controlling bedbugs*

   _____

   _____

LESSON. 32

DATE: _____

SUMMARY

Vector	***Disease (s)***	***Cause***
Housefly	✓ *Cholera* ✓ *Typhoid* ✓ *Trachoma* ✓ *Dysentery* ✓ *Diarrhoea*	*Bacteria (Vibro cholera)* *Bacteria (salmonella typhil)* *Virus (Chlamydia)* *Bacteria (Shigella), amoeba* *Virus, bacteria, worms*
Mosquitoes ***Female anopheles*** ***Culex mosquito*** ***Tiger / aedes mosquito***	✓ *Malaria* ✓ *Elephantiasis* ✓ *Dengue fever and yellow fever*	*Protozoa (Plasmodium)* *Filaria worm.* *Dengue fever virus and yellow fever virus.*
Cockroach	✓ *Leprosy* ✓ *Polio* ✓ *Typhoid* ✓ *Cholera* ✓ *Diarrhoea* ✓ *Dysentery*	*Bacteria* *Virus* *Bacteria (salmonella)* *Bacteria (Vibrio cholera)* *Virus, bacteria worms.* *Protozoa (entamoeba), bacteria*
Tsetse fly	✓ *Sleeping sickness in man.*	*Protozoa (Trypanosoma)*
Black fly	✓ *River blindness*	*Worm (onchocerca*

		vulvulus)
Rat fleas	✓ *Bubonic plague*	*Bacteria (Yersinia pestis)*
Itch mites	✓ *Scabies*	*Itch mites*
Water snail	✓ *Bilharzias*	*Worm*
Dogs	✓ *Rabies*	*Virus*
Lice	✓ *Typhus fever*	*Bacteria (rickettsia)*

Activity

1. *Mention any **two** vectors that spread cholera.*

   _____

   _____
2. *Which disease is spread by itch mites?*

   _____

   _____
3. *Name the germ that causes leprosy*

   _____

   _____
4. *Give **two** diseases spread by houseflies*

   _____

   _____

THEME: THE HUMAN HEALTH

TOPIC 14: ACCIDENTS, POISONING AND FIRST AID

LESSON 33

DATE: _____

Accidents

Accident is a sudden happening that can cause harm to the body or death.

Or: It is an unexpected injury to the body.

***Casualty** is a person who has been injured in an accident and needs First Aid.*

Examples of accidents

1. *Fractures*
2. *Poisoning*
3. *Falls*
4. *Cuts*
5. *Burns*
6. *Drowning*
7. *Electric shocks*
8. *Wounds*
9. *Scalds*
10. *Snake bite*
11. *Bruises*

FIRST AID

This is the immediate / first / Initial help given to a casualty before being taken to the health centre.

Note: The major reason for giving first aid is to save life.

Why do we give first aid?

1. *To save life.*
2. *To reduce pain.*

3. *To promote quick recovery.*
4. *To reduce / stop bleeding.*
5. *To prevent further injuries.*
6. *To prevent the situation from worsening*

Activity

1. *What is an accident?*

   _____

   _____

2. *Who is a casualty?*

   _____

   _____

3. *Mention any **two** common accidents at school*

   _____

   _____

4. *What is first aid?*

   _____

   _____

5. *State the main reason for giving first aid.*

   _____

   _____

6. *Mention any other **three** reasons for giving first aid.*

   _____

   _____

LESSON. 34

DATE: _____

Who is a first aider?

A first aider is a person who gives first aid service to a casualty.

Qualities of a good first aider

1. *Should be observant*
2. *Should be knowledgeable*
3. *Should be sympathetic*
4. *Should be skilled*
5. *Should be clean*
6. *He/she should be gentle and tactful*
7. *He/she should be trained*
8. *He/she should be kind.*
9. *Should be able to use common sense.*

Responsibilities of a first aider

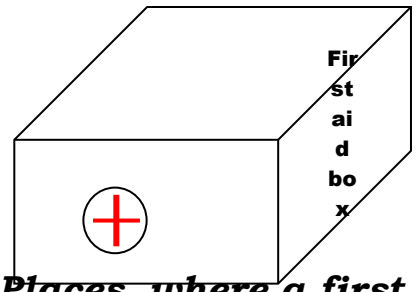
1. *To assess the situation of the casualty.*
2. *To help in identifying the problem using the signs and symptoms.*
3. *To assist the casualty as quickly as possible.*
4. *To take the casualty to the hospital/health Centre.*

First Aid box and First Aid kit

First aid kit *is a set of items used for giving first aid to a casualty.*

First aid box:

This is a container where things used to give first aid are kept.



Places where a first aid box can be found

1. *Schools*
2. *Airport*
3. *Homes*
4. *Aeroplanes*
5. *Industries*
6. *Offices*
7. *Vehicles*
8. *Petrol stations*
9. *Factories*
10. *Banks*

Activity

1. *Write 3Bs in full.*

_____

_____

2. *Explain the following.*
   a) *First aid*_____
   b) *Accident*_____
   c) *A causality*_____
3. *Give* ***three*** *reasons why we give first aid.*

_____

_____

4. *How is first aid kit different from a first aid box?*

_____

_____

5. *Suggest* ***two*** *responsibilities of a first aider.*

_____

_____

LESSON 35

DATE: _____

Items found in a first aid box

1. *Razor blades* : *Used to cut plasters and bandages.*
2. *Safety pins* : *Used fasten the bandage.*
3. *Bandage* : *Used to tie broken bones*
4. *Pair of scissors* : *Used to cut plasters and gauze.*
5. *Surgical spirit* : *Used to wash and kill germs around the wound.*
6. *Pain killer* : *Used to kill pain.*
7. *Cotton wool* : *Used to clean cuts.*

8. *Clinical thermometer : Used to measure human body temperature*
9. *Surgical gloves : Used to prevent contamination.*
10. *Plaster : Used to cover wounds and cuts.*
11. *Splints : Used to tie and keep the broken in position.*

How to use the first aid kit/box

1. *All drugs in the first aid/kit box should be well labeled*
2. *Use clean sterilized instruments*
3. *Don't use dirty things/drugs that have expired*
4. *Expired drugs should be removed from the box and destroyed*
5. *When you are not sure at what to do, ask a health worker*
6. *Always make sure that your hands are clean before touching the things in the first aid box.*

Activity

1. *Name the item in the first aid box used to;*

a) *cut plasters and bandages:*

_____

b) *Used to tie broken bones*

_____

c) *Used to clean cuts*

_____

2. *State the main use of the safety pin in the first aid box.*

_____

3. *Name any **two** items found in the first aid kit that can cause accident if poorly used.*

_____

_____

4. *Mention any **two** metallic items found in the first aid kit.*

_____

_____

5. *State the reason why all the drugs in the first aid kit should be well labelled.*

_____

6. *Mention any **one** disadvantage of keeping expired drugs in the first aid box.*

_____

LESSON 36

DATE: _____

Road traffic accidents and road safety

Road traffic accidents

***Traffic refers** to the movement of vehicles and people in a particular area.*

Road traffic accidents *are sudden happenings that cause death or harm to road users.*

Examples of road users include:-

1. *Pedestrians: These are people who walk along roads on foot.*
2. *Cyclists: These are people who ride motorcycles and bicycles.*
3. *Drivers and passengers:*
4. *Animals e.g. cattle, camel, horses, donkeys.*

Causes of road traffic accidents.

1. *Over loading*
2. *Over speeding.*
3. *Driving under the influence of alcohol.*
4. *Failure to follow road signs.*
5. *Playing on roads.*
6. *Poor conditions of roads.*
7. *Overtaking in sharp corners.*
8. *Careless crossing of roads.*
9. *Driving vehicles in dangerous mechanical conditions (D.M.Cs)*

Activity

1. *What is traffic?*

   _____

   _____

2. *What is road traffic accidents?*

   _____

   _____

3. *Mention* ***three*** *road users you know.*

   _____

   _____

   _____

4. *Mention* ***three*** *causes of road traffic accidents*

   _____

   _____

   _____

LESSON 37

DATE: _____

Ways of prevention road traffic accidents

1. *Following or observing road signs.*
2. *Avoid over loading vehicles.*
3. *Never drive while drunk.*
4. *Avoid playing on or near roads.*
5. *Buildings should be at least 20 metres from the road.*
6. *Put zebra crossings on busy roads.*

7. *Avoid speeding of vehicles*
8. *Put road signs on the road*
9. *Drive vehicles in good mechanical conditions*
10. *Traffic police men should check speeding vehicles*
11. *Repair bad roads*

How to cross a busy roads

a) First stop alongside the road.
b) Look right - look left.
c) Look right again.
d) If the road is clear then cross but don't run.

Where can we cross busy roads from?

1. *At zebra crossing*
2. *Fly overs*
3. *Traffic lights*
4. *Using islands on the road*
5. *Where there are traffic officers / guides*

Activity

1. *In which ways can drivers avoid road traffic accidents?*

   _____

   _____

2. *Why are drivers advised not to drink and drive vehicles?*

   _____

   _____

3. *Mention any **three** places where we are supposed to cross the busy roads from.*

   _____

   _____

   _____

4. *State the main reason why we aren't supposed to run while crossing the road*

   _____

   _____

LESSON 38

DATE: _____

Examples of road traffic injuries

a) Deep cuts
b) fractures
c) Bruises
d) Wounds

Examples of road traffic accidents

a) Falls
b) Knocks

Bruises

A bruise is a swelling caused by bleeding inside the skin or muscle

First aid for bruises

a) Apply a cold compress like a piece of cotton wool
b) Dip a clean cloth in water and press it on the bruise
c) The cloth or the compress should be changed three times a day

Activity

*1. Mention **four** ways of preventing road accidents.*

_____
_____
_____
_____

*2. State **two** causes of road accidents.*

_____
_____

3. Identify the injury caused by bleeding inside the skin or muscles.

_____
_____

4.Explain the first aid for bruises.

_____
_____

*5. State **two** examples of road traffic accidents.*

_____
_____

6. What is a wound?

_____
_____

*7. State down the **four** types of wounds.*

_____
_____

LESSON 39

DATE: _____

Fractures

A fracture is a broken/cracked bone in the body.

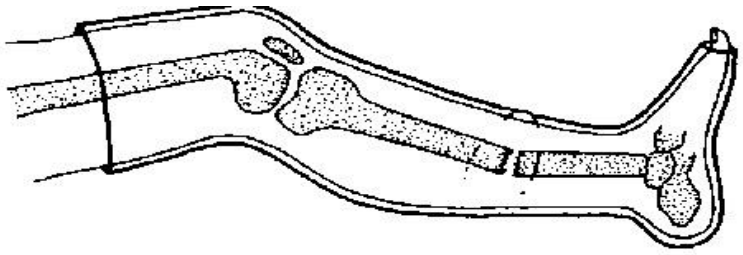
Types of fractures

a) Simple/closed fracture
b) Compound/open fracture
c) Green stick fracture
d) Comminuted fracture

A simple fracture

This is when the broken bone remains inside the skin.

Illustration

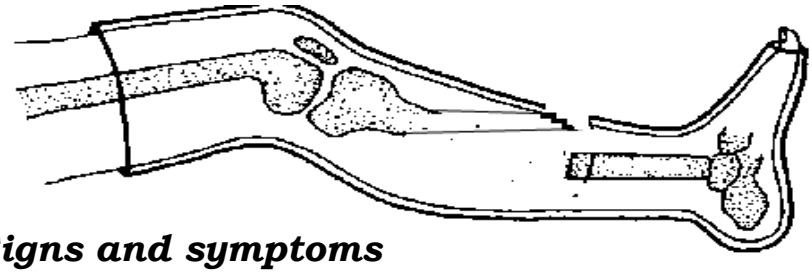


Signs and symptoms of a simple fracture.

1. The affected part swells.
2. Too much pain around the injured part.

Compound fracture

This is the type of fracture where the bone breaks and comes outside the skin



Signs and symptoms

1. Severe bleeding occurs.
Broken bone comes out of the skin

Activity

1. What is a fracture?

_____

*2. Mention any **two** types of fractures*

_____

_____

*3.State ant **two** signs and symptoms of*
Simple fracture *Compound fracture*

_____

_____

LESSON 40

DATE: _____

Green stick fracture

This is when a bone bends but remains inside the skin.
It is common in your children because they have soft bones

This is a type of fracture which break and remain attached.

NB: *Green stick fracture is common among young children*

Comminuted fracture

This is a fracture in which the bone beaks into many parts

Signs of a fracture

a) The casualty may have felt a snap of the bone/pain.
b) The site/area of the fracture swells.
c) The person feels pain in the limb while moving.
d) The casualty may fail to walk in case of an open fracture.
e) There may be signs of shock.

ACTIVITY

1. Give the difference between compound fracture and simple fracture.

_____

_____

2. Name any ***three*** *first aid you can give to a person who has got a fracture.*

_____

_____

_____

3. Why do we give first aid to the casualty?

_____

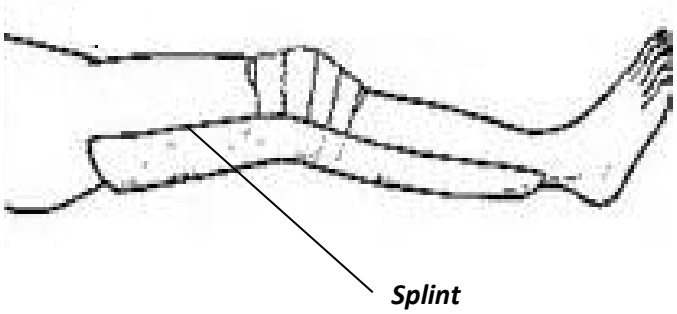
_____

LESSON 41

DATE: _____

First aid for a fracture

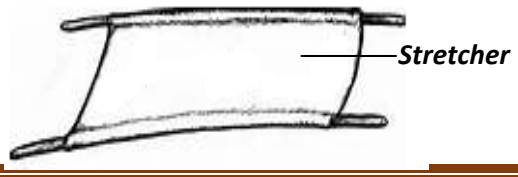
✓ *Use splints*



✓ *Tie splints around the injured part*

Splints can be made from pieces of wood.
Broken branches of trees.
NB: Splints are used to keep the broken bone in the same position so as to prevent further injury.

Structure of a stretcher



Stretcher is used to carry a casualty who can't walk
Note: *Don't attempt putting the fractured bone in their position because you can make the condition worse*
You don't know how to do it.

ACTIVITY

1. *Cite down **three** signs of a fracture.*

   _____
   _____
   _____

2. *In **three** step show the first aid for a fracture?*

   _____
   _____

3. *How are splints useful in the giving of first aid for a fracture?*

   _____
   _____

4. *State the use of the following.*
   a) *Stretcher* _____
   b) *Crutch* _____

LESSON 42

DATE: _____

Sprains

A sprain is a torn ligament.

Strains

A strain is an over stretched muscle.

Dislocations

Dislocation is when a bone slightly moves from its original position at a joint.
Dislocation is caused by a twist/ severe stretch of the bone

Signs and symptoms of a sprain/strain/dislocation.

a) *Swelling around the joint.*
b) *Pain at the point of injury.*
c) *Difficulty in the moving of the injured part/ limb.*
d) *First aid for sprains/ strains/ dislocations*
e) *In case of a sprain/ strain put a clean bandage in cold water and wrap it around the injured part*
   (R.I.C.E*-Rest, Ice, Compress and Elevate).*

Burn *is an injury caused by dry heat.*

Examples of burns

a) *Stepping on a hot stone/ metal.*
b) *Touching a hot flat iron.*
c) *Touching a hot saucepan/ kettle.*
d) *Touching fire.*

e) *Being burnt by acid.*

Activity

1. *What is sprain?*

   _____

   _____

2. *What is strain?*

   _____

   _____

3. *What is the difference between sprain and strain?*

   _____

4. *What is dislocation?*

   _____

   _____

5. *What causes dislocation?*

   _____

6. *Mention any **three** signs of dislocation.*

   _____

   _____

7. *Write **RICE** in sprain and strain management.*

   _____

   _____

8. *Define burn.*

   _____

   _____

LESSON 43

DATE: _____

Examples of things that burn.

1. *Hot metals*
2. *Flat iron.*
3. *Burning fire.*
4. *Electric heaters*
5. *Glowing charcoal.*

Scald

Scald is an injury caused by wet heat.

Examples

Hot water, porridge, soup or hot food been poured on the body

First aid for burns/scalds

Place the injured part in clean cold water for some time.

How to prevent burns and scalds

1. *Cook from a raised fire place.*
2. *Avoid playing near cooking places or open fires.*
3. *Keep young children out of fire reach.*
4. *Construct fire guards around fire places.*
5. *Teach children the dangers of fire*

Reasons why we treat burns and scalds

1. *To reduce changes of infections.*
2. *To save life*

Activity

1. *State the difference between burn and scald.*

   _____

   _____

2. *Mention any **three** things that can cause scald to people at home.*

   _____

   _____

3. *State **two** ways of preventing burn and scalds at home.*

   _____

   _____

4. *State **two** reasons why we treat burn and scales.*

   _____

   _____

LESSON 44

DATE: _____

Poisoning

Poisoning is a condition of having taken a harmful substance into the body.

Poison is any substance which affect health or cause death when taken.

Examples of poison common in our community (homes, schools)

1. *Rat poison*
2. *Insecticides, pesticides, herbicides.*
3. *Liquid cleaners e.g. jik.*
4. *Paraffin, diesel or petrol.*

Examples of poisoning

1. *Poisoning by insecticide and rat poisons*
2. *Poisoning by paraffin, petrol or bleach*
3. *Poisoning by snake bites*
4. *Poisoning by spoilt food products*
5. *Poisoning by breathing in poisonous chemicals*

Causes of poisoning

1. *Taking expired drugs*
2. *Eating expired foods*
3. *Ignorance*
4. *Taking over dose*
5. *Poor storage of drugs*

Activity

1. *How is poisoning different from poison?*

   _____

   _____

2. *Mention **two** examples of poison common in our homes.*

   _____

   _____

3. *State **three** examples of poisoning at home*

   _____

   _____

   _____

4. *Mention **three** causes of poisoning*

   _____

   _____

   _____

LESSON 45

DATE: _____

Signs and symptoms of poisoning

1. *Vomiting*
2. *Rapid breathing*
3. *Fever and sweating.*
4. *Loss of body balance*
5. *Mental confusion*
6. *Internal and external bleeding.*

Prevention of poisoning

1. *Keep all drugs and poisonous chemicals where children can't reach*
2. *People should avoid taking drugs without the advice of a health worker*
3. *People should avoid taking expired drugs.*
4. *People should avoid eating expired packed food*
5. *Avoid keeping insecticides or any other poisonous chemical in soda bottles*
6. *Children should avoid playing in bushes*
7. *Bushes near homes should be cleared*
8. *Long grass around the compound should be slashed*
9. *Containers holding drugs and chemical should be well labeled*
10. *When spraying insecticides and acaricides, one's nose and mouth should be covered.*

ACTIVITY

1. *Mention any **two** signs of poisoning.*

   _____

   _____

2. *State **three** symptoms of poisoning.*

   _____

   _____

   _____

3. *State **two** ways in which we can be poisoned.*

_____

_____

4. *Why is it risky to pack poisonous substances in soda bottles?*

_____

_____

5. *Outline **two** ways of preventing poisoning at home.*

_____

_____

6. *Why should one mask up while spraying insecticides?*

_____

_____

LESSON 46

DATE: _____

Effects of burns

1. *It leads to dehydration*
2. *It leads to severe pain*
3. *It leads to severe wounds*

A cut

A cut is any open skin injury caused by the sharp objects

Effects of cuts.

1. *They cause wounds.*
2. *Cuts cause bleeding.*

Types of cuts.

1. *Minor cuts.*
   These are cuts which do not go deep in the skin.
2. *Deep cuts*
   These are cuts which go deep in the skin.

Signs of cuts

1. *Severe bleeding.*
2. *There is a severe pain*

Activity

1. *State **three** effects of burn and scalds to us.*

_____

_____

2. *What is a cut?*

_____

_____

3. *Name **two** types of cuts you know.*

_____

_____

4. *Mention **two** signs of cuts.*

_____

_____

5. *State **three** things that can cut us.*

_____

_____

6. *Give **two** effects of cuts on ones body.*

_____

_____

LESSON 47

DATE: _____

Bruises

A bruise is a body swelling caused by internal bleeding.

Causes of bruise

Bruise is caused by accidental hitting of the body parts.

Wound

A wound is a tear of the body tissues.

Types of wounds

1. Incised wounds:

Are wounds caused by sharp objects that cause open bleeding. e.g. razor blade, knives.

2. Lacerated wounds

These are wounds caused by objects with irregular edges e.g. barbed wires, animal teeth; animal claws.

3. Contused wounds

These are wounds caused by direct blows by some objects.

4. Punctured wounds.

Are wounds which have a small opening but very deep.
They are caused by very sharp pointed objects e.g. needle, nails, arrows, spears etc.

Activity

1.what are bruises?

_____

_____

2. *what causes bruise?*

_____

_____

3. *Define wound.*

_____

_____

4. *mention **two** types of wounds.*

_____

_____

5. *state the type of wound caused by:*
   a) *Knives:* _____
   b) *Nails:* _____
6. *A dog bit Juma and caused some wounds on to his leg. What type of wound is it?*

_____

_____

LESSON 48

DATE: _____

First aid for wounds

a) *Apply direct pressure with part of a thumb or fingers over a pad if possible to the part of the wound from which blood is coming from (bleeding)*
b) *use a contrastive bandage then take the casualty to the health centers*
c) *Tie a tourniquet on the injured part.*

Snakes bites

The first aid for snake bites is to tie a cloth above the bitten part.

Why:

To prevent poison from moving to the heart.

First aid for snake bite

1. *Keep the person calm*
2. *Tie a piece of cloth slightly above the bitten part to prevent poison (venom) from reaching the heart.*
3. *Carry the casualty to the nearest health unit/centers*

A person bitten by a snake shouldn't be allowed to walk

One shouldn't be allowed to walk to prevent quick movement of poison to the heart

Activity

1. *Mention **two** first aid for wounds.*

_____

_____

2. *State the first aid for snake bites.*

_____

_____

3. *Why is a person bitten by a snake supposed to be tie with the cloth?*

_____

_____

4. *Why shouldn't a person bitten by a snake not supposed to walk?*

_____

_____

5. *Mention **two** places from where snakes can bite us*

_____

_____

THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATION

TOPIC 15: GROWING CROPS

LESSON 49

DATE: _____

Crops

A crop is a plant grown for a purpose.

Types of crops

1. *Cereal crops*
2. *Leguminous crops*
3. *Root crops*
4. *Fruit crops*
5. *Vegetables*

Cereals

Cereals are sometimes called grains or monocots.

Examples of cereals

1. *Maize*
2. *Millet*
3. *Sorghum*
4. *Rice*
5. *Wheat*
6. *Barley*

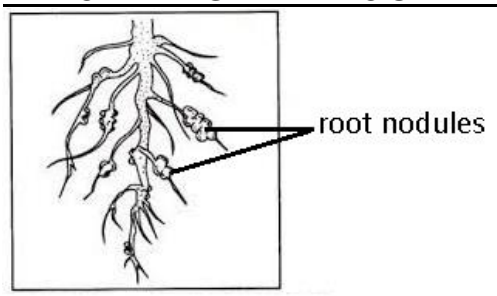
Leguminous crops (Legumes)

Leguminous crops are crops which have nodules on their roots.

Characteristics of leguminous plants

1. *They have nodules on their roots.*
2. *They have seeds in pods.*

DIAGRAM OF A LEGUME ROOT;



Examples of legumes

1. *Beans*
2. *Peas*
3. *Groundnuts*
4. *Soya beans*

Activity

1. *what is a crop?*

_____

2. *mention **two** types of crops*

_____

_____

3. *mention any **two** examples of grains.*

_____

_____

4. *Define leguminous crops.*

_____

_____

LESSON 50

DATE: _____

Root nodules:-

Root nodules are the swellings found on roots of leguminous plants.
They keep nitrogen fixing bacteria.
Nitrogen fixing bacteria trap nitrogen from air and change in to nitrates as plant food.

Fruit crops

These are crops grown purposely for the fruits.

Examples of fruit crops

1. *Mangoes*
2. *Apples*
3. *Pumpkins*
4. *Pawpaw*
5. *Pine apples.*

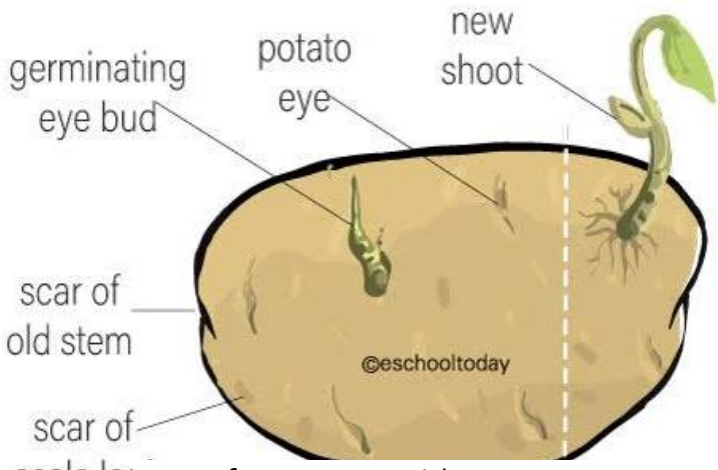
Root crops (Rood tubers)

These are crops which store their food in roots

Examples of root crops

1. *Sweet potatoes*
2. *Cassava*
3. *Carrots*
4. *Irish potatoes*

Parts of a root crops



Parts of a root crop: Irish potatoes

Activity

1. *what are root nodules?*

_____

_____

2. *Name the bacteria kept by the root nodules.*

_____

_____

3. *What are fruit crops?*

_____

_____

4. *Mention **two** examples of :*

(a) Root cross *(b) fruit crops*

_____ _____

_____ _____

LESSON 51

DATE: _____

Vegetables

Vegetables are parts of plants that are eaten by people or animals .

Examples of vegetables

1. *Cabbage*
2. *Spinach*
3. *Lettuce*
4. *Dodo*
5. *Nakati*
6. *Bbuga*

Types of vegetables

1. *Leaf vegetables e.g cabbages , spinach etc*
2. *Root vegetables e.g carrots*
3. *Fruity vegetables e.g tomatoes , eggs plants etc.*

Groups of crops

1. *Annual crops*
2. *Perennial crops*

Activity;

1. *Collecting different types of seed.*
2. *Grouping the seeds collected according to their types.*

EXERCISE;

1. *Give any one example of a leguminous crop.*

   _____

   _____

2. *Mention any **one** example of a vegetable crop.*

   _____

   _____

3. *Why are root nodules important in a leguminous plant?*

   _____

   _____

4. *Write down any **one** type of crop.*

   _____

   _____

Annual crops:

These crops grow, produce and die within a year.

Examples of annual crops

1. *Beans*
2. *Maize*
3. *Soya beans*
4. *Millet*
5. *Sorghum*
6. *Rice*

Perennial crops

These crops grow, produce and die in more than a year.

Examples of perennial crops

1. *Tea*
2. *Coffee*
3. *Cocoa*
4. *Mango*
5. *Banana*
6. *Cotton*

Activity;

1. *Collecting different plants from the environment.*
2. *Grouping the different plants according to the major groups.*

Exercise;

1. *Give any two examples of annual crops*

_____

_____

2. *Why do you classify tea as a perennial crop?*

_____

_____

3. *Give meaning of the following words.*

   i. Annual crops

_____

_____

   ii. Perennial crops.

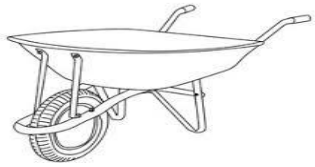
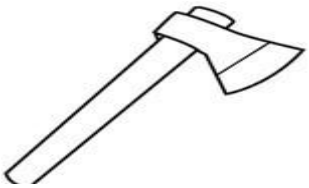
_____

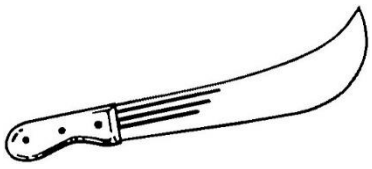
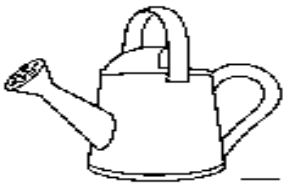
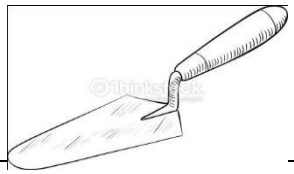
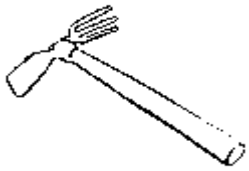
_____

LESSON 52, 53

DATE: _____

Garden tools and their uses

Hoe		*Digging* *Planting* *Weeding* *Harvesting*
Spade		*Mixing manure* *Lifting soil.* *For loading and offloading manure*
Rake		*Leveling soil* *Collecting weeds.*
Wheel barrow		*Carrying soil* *Carrying manure* *Carrying harvests*
Axe		*Cutting big trees* *Chopping wood*

Panga		*Cutting small branches* *Cutting trees.* *Harvesting sugar canes*
Forked hoe		*Digging hard ground* *Digging stony ground*
Watering can		*Watering crops* *Watering seedling*
Trowel		*Transplanting* *Carrying seedlings*
Pick axe		*Digging in rocky ground.* *Digging in stony soils.*
Secateur		*Pruning crops*
Pruner		*Pruning crops*
Tape measure		*Spacing crops in the garden*

Preventing garden tools from rusting

1. *Keeping in cool dry places.*
2. *Painting metallic tools.*
3. *Greasing metallic tools.*

Conditions needed for rusting:

1) Moisture (water)

2) Oxygen

Effects of rusting on garden tools

1) It weakens garden tools.
2) It makes cutting tools blunt.

Advantage of rusting to a farmer:

- *It increases mineral salts in the soil.*

Activity;

1. *Identifying and observing different examples of garden tools.*
2. *Describing ways of caring for the garden tools.*

Exercise;

1. *Why is it good to use a trowel for transplanting?*

   _____

   _____

2. *Name any **two** garden tools.*

   _____

   _____

3. *Why is it important to paint garden tools?*

   _____

   _____

LESSON 54

DATE: _____

Ways of caring for garden tools

1. *Washing after use and drying them.*
2. *Keep the tools in dry place.*
3. *Use a given tool for its specific function*
4. *Painting some of them.*
5. *By oiling them.*

Crop growing practices.

- ✓ *Land preparation*
- ✓ *It is done during dry season to:-*
- ✓ *Prevent the weeds from germinating again after digging and ploughing.*
- ✓ *Avoid the soil from sticking on to the hoe or plough.*

Ways of preparing land

1. *Digging*
2. *Ploughing*
3. *Slashing / clearing*
4. *Cutting big trees*
5. *Harrowing*
6. *De – trashing. (Removing tree stumps)*

Garden tools / implements used in preparing land

1. *Hoes*
2. *Ox ploughs*
3. *Tractors*
4. *Slashers*
5. *Rakes*
6. *Panga*
7. *Axe*

LESSON 55

DATE: _____

Importance of preparing land

1. *To soften the soil.*
2. *Digging and ploughing allows water into the soil.*
3. *It makes planting easy.*
4. *Allows air in to the soil.*
5. *Cutting away big trees opens space for crops to get enough sunlight.*
6. *To remove weeds*

Selecting viable planting materials

Viable planting materials are plant materials with ability to germinate.

Examples of planting materials

1) *Bulbs e.g. onions and garlic*
2) *Crown e.g. pineapple*
3) *Leaves e.g. bryophylum*
4) *Rhizomes e.g. ginger*
5) *Seeds*
6) *Slips e.g. pineapple*
7) *Stem cuttings e.g. cassava sugar cane*
8) *Suckers e.g. bananas, sisal, pineapple*

Qualities of good planting materials

1. *They should be mature*
2. *They should not be damaged*
3. *They should be free from pests.*
4. *They should be free from diseases.*
5. *They should not be too old.*
6. *They should be of the same variety.*

Importance of selecting planting materials

1. *It prevents wastage of land.*
2. *It ensures quality plants.*
3. *It prevents wastage of time.*
4. *It prevents wastage of labour.*

Activity

1. *State **two** importance of preparing land before planting seeds.*

   _____

   _____

2. *Mention **two** examples of planting materials.*

   _____

   _____

3. *State **two** qualities of good planting materials*

_____

_____

4. *Give **one** importance of selecting planting materials*

_____

_____

LESSON 56

DATE: _____

Seed viability

Seed viability is the ability of a seed to germinate

Planting and sowing

This is putting of planting materials in the soil to germinate.

NB: Planting is done during wet / rainy season.

Reasons for planting crops in wet season.

There is enough water for seed germination.

The soil is soft for easy growth of roots.

Methods of planting

1. Planting in rows *2. Broadcasting method.*

Row planting

This is when planting materials are put in the soil in lines.

Advantages of row planting

1. It makes weeding easy.
2. It makes harvesting easy.
3. It controls easy spread of pests and diseases.
4. It avoids wastage of seeds and other planting materials.
5. It allows proper spacing of crops.

Disadvantages of row planting

1. It needs a lot of labour.
2. It is time consuming.
3. It requires large piece of land

Example of plants planted by row planting

1. Maize *3. Beans* *5. Potatoes.*
2. Cassava *4. Pineapple*

Activity

1. *What is seed viability?*

_____

2. *Name the best season for planting crops.*

_____

3. *State the reason to support your answer above.*

_____

4. *State **two** methods of planting crops.*

_____

_____

5. *Define row planting.*

_____

_____

6. *Mention **two** importance of planting cross in rows.*

_____

_____

7. *State **three** plants planted in rows.*

_____

_____

8. *Give any **two** disadvantages of row planting.*

_____

_____

LESSON 57

DATE: _____

Broad casting method

This is the putting of seeds in the soil while scattering them.

Advantages of broadcasting methods

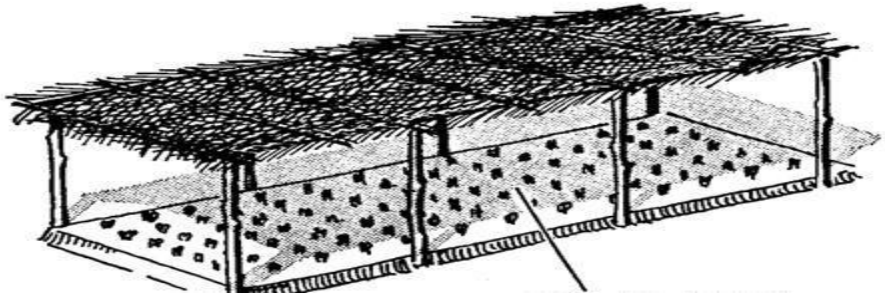
1. *It saves time.*
2. *It does not need a lot of labour.*
3. *It does not waste nutrients in soil.*

Disadvantages of broadcasting methods

1. *It makes weeding difficult.*
2. *It makes harvesting difficult.*
3. *Pests and diseases can easily spread.*
4. *Competition for nutrients and sunlight*

Nursery bed.

A nursery bed is a small garden where seedlings are grown before they are transplanted.



Importance of a nursery bed

- *It gives a farmer time to prepare the main garden.*
- *It protects seedlings from heavy rain drops.*
- *It protects seedlings from strong sunshine.*
- *It helps farmers to select healthy seedlings.*
- *It helps water to sink deeply in to the soil.*

Examples of plants grown in a nursery bed.

1. *Tomatoes*
2. *Onions*
3. *Coffee*
4. *Cabbages*
5. *Passion fruits.*
6. *Cucumber*
7. *Watermelon*
8. *Pawpaw*

Reasons why some plants are planted in nursery bed first

1. *Some seeds are very small*
2. *Some seedlings do not resist strong environmental conditions*
3. *Some seeds are very delicate*
4. *Some seeds can't be well spaced before germination*
5. *Some seedlings needs special care*

Activity

1. *What is broadcasting?*

   _____

   _____

2. *State **three** advantages of broadcasting methods*

   _____

   _____

3. *Mention **two** disadvantages of broadcasting methods*

   _____

   _____

4. *What do you understand by the **nursery bed**?*

   _____

   _____

5. *State **two** examples of plants grown in a nursery bed.*

   _____

   _____

6. *What name is given to the young plants growing in the nursery bed?*

   _____

   _____

LESSON 58

DATE: _____

Transplanting

This is the transfer of seedlings from a nursery bed to the main garden.
NB: Trowel is the main garden tool used for transplanting.
Transplanting is best done in the evening.

Why transplanting is done in the evening

- ✓ *It prevents wilting of the seedlings.*
- ✓ *There is little loss of water from the soil through evaporation.*

Garden tools used during transplanting.

1. *Trowels*
2. *Wheel barrows*
3. *Watering cans*
4. *Hoes*
5. *Tape measures*

Activity

1. _____*is the transfer of seedlings from a nursery bed to the main garden.*
2. *State **two** reasons why transplanting is done in the evening*

   _____

   _____
3. *Name **two** garden tools used during transplanting.*

   _____

   _____
4. *State **three** importance of a nursery bed to farmers.*

   _____

   _____

   _____
5. *Mention **two** reasons why some seeds are planted in the nursery bed*

   _____

   _____

LESSON 59

DATE: _____

Advantages of early planting

1. *Crops make full use of rainfall for the season.*
2. *Cereals mature early therefore get good market.*
3. *Crops grow fast enough and compete with weeds for light nutrients.*
4.

Gap filling

Gap filling is the planting of seeds or seedlings where they did not germinate in the garden.

Staking

Staking is the provision of extra support for plants with weak stems using sticks.

Caring for crops.

Ways in which farmers care for their crops in the garden

1. *Thinning*
2. *Watering*
3. *Weeding*
4. *Manuring*
5. *Applying fertilizers.*
6. *Staking*
7. *Mulching*
8. *Providing shade.*
9. *Pruning.*

Activity

1. *What do you understand by gap filling?*

   _____

   _____
2. *Mention **two** reasons for gap filling.*

   _____

   _____
3. *What is staking?*

_____

_____

4. *Mention **two** plants that can be cared for by staking.*

_____

_____

5. *In which ways can farmers care for their crops in the garden?*

_____

_____

Weeding

This is removal of unwanted plants from the garden.

A weed

A weed is unwanted plant in a garden.

Examples of weeds

1. *Spear grass.*
2. *Elephant grass.*
3. *Black jack*
4. *Star grass*
5. *Wandering Jew*
6. *Guinea grass*
7. *Thorn apples*

Garden tools for weeding

1. *Hand fork*
2. *Slashers*
3. *Hoes*

Importance of weeds

1. *Some can be eaten as food for both livestock and man*
2. *Some are a good source of herbs used in making medicine*
3. *They decompose and form organic matter in the soil*
4. *Reduce evaporation rate of water from the soil*
5. *Protect soil from erosion*
6. *Can be used in mulching crop gardens*

Exercise;

1. *Give meaning of the term weed?*

   _____

   _____

2. *How are weeds important to people?*

   _____

   _____

3. *Give any **two** advantages of weeding crops.*

   _____

   _____

LESSON 60

DATE: _____

Dangers of weeds in the garden

1. *They compete for light, water, nutrients and space with crops.*
2. *They encourage easy spread of pests.*
3. *They reduce the quality and quantity of crop yields.*
4. *They encourage easy spread of diseases.*
5. *They make harvesting difficult.*
6. *Some are poisonous to livestock and can cause death*
7. *They reduce human efficiency during farm operation*
8. *They increase production costs on the farm.*

Ways of controlling weeds.

1. *Slashing*
2. *Spraying / using herbicides.*
3. *Uprooting*
4. *Crop rotation*
5. *Mulching*
6. *Digging.*

Advantages of weeding a garden

1. *It reduces the competition for light, nutrients, water and space in the garden.*
2. *It makes harvesting easy.*
3. *It controls the easy spread of diseases.*
4. *It prevents the easy spread of crop pests.*

Activity

1. *Mention **two** dangers of weeds in the garden.*

   _____

   _____

2. *State **two** ways of controlling weeds.*

   _____

   _____

3. *State **two** ways in which weeds are useful in the garden.*

   _____

   _____

4. *Name **two** ways of controlling weeds in the maize garden.*

   _____

   _____

LESSON 61

DATE: _____

Manuring

Manuring is the putting of manure in the soil to make it more fertile.

Sources of manure

- ✓ *Animal dung and urine*
- ✓ *Plant remains*
- ✓ *Green plants.*

Types of manure (natural fertilizers)

1. ***Compost manure:***
   Compost manure is got from plant materials and animal wastes.
2. ***Green manure:***
   This is manure got from ploughed, buried and rotten green materials like legumes.
3. ***Farm yard manure (F.Y.M):***

Farm yard manure is got from farm animal wastes, urine and decayed material.

Mulching

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

***Mulches** are plant materials used for mulching.*

Examples of mulches

1. *Elephant grass*
2. *Coffee husks*
3. *Banana leaves*
4. *Chopped stems of bananas.*
5. *Spear grass.*

Activity

1. *……is the putting of manure in the soil to make it more fertile.*

*State any **three** sources of manure*

_____

_____

2. *Mention **two** types of manure you know.*

_____

_____

3. *……is got from farm animal wastes, urine and decayed material.*
4. *What is mulching?*

_____

_____

5. *Define mulches*

_____

_____

6. *Write down **three** examples of mulches*

_____

_____

_____

LESSON 62

DATE: _____

Advantages of mulching

1. *It keeps water (moisture) in the soil.*
2. *It controls soil erosion.*
3. *It makes the soil fertile.*
4. *It controls the rapid growth of weeds.*

Disadvantages of mulching

1. *Mulching keeps pests.*
2. *Some mulches can grow into weeds.*
3. *Mulching is a fire hazard*
4. *It is tiresome.*

Garden tools used for mulching

1. *Slasher*
2. *Panga*
3. *Sickles*
4. *Forked hoes*
5. *Wheel barrow*
6. *Rakes*

			
Forked hoe	*Sickle*	*Wheel barrow*	

Pruning

Pruning is the cutting of excess leaves or branches from a plant

Advantages of pruning

1. *It reduces the easy spread of crop diseases.*
2. *It reduces competition for sunlight, water, nutrients and air.*
3. *It improves on crop yields.*

Garden tools used for pruning

1. *Panga*
2. *Axes*
3. *Knives*
4. *Pruners*
5. *Secateurs*

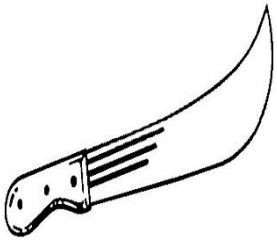
Thinning

It is the removal of excess plants in the garden / nursery bed.

Advantages of thinning

1. *It reduces competition for crop nutrients.*
2. *It reduces the easy spread of pests.*
3. *It reduces the spread of crop diseases.*
4. *It improves on crop yields.*
5. *It reduce on the weight of a plant*

Garden tools used for thinning

			
Pangas	***Axes***	***Hoes***	***Slashers***

Activity

1. *State any **two** advantages of mulching.*

   _____

   _____

2. *State any **two** disadvantages of mulching.*

   _____

   _____

3. *Mention **two** garden tools used for mulching.*

   _____

   _____

4. *What is pruning?*

   _____

   _____

5. *State any **two** advantages of pruning.*

   _____

   _____

6. *Define thinning.*

   _____

   _____

7. *Give **two** advantages of thinning*

_____

_____

LESSON 63

DATE: _____

PESTS

A pest is any living organism that destroys crops.

Examples of crop pests

1. *Army worms*
2. *Birds*
3. *Rats*
4. *Termites*
5. *Maize stalk borer*
6. *Locusts*
7. *Squirrels*
8. *Aphids*
9. *Cotton Stainer*
10. *Snails*
11. *Banana weevil*
12. *Maize weevil*

Some storage pests

Storage pests refers to the living organisms which destroy stored crops.

Examples of storage pests

1. *Rats*
2. *Maize weevil*
3. *Bean weevil*
4. *A storage beetle.*

Harvest mites

Dangers of crop pests.

1. *They weaken plants.*
2. *They lead to low produce.*
3. *They lead to poor growth of crops.*
4. *They destroy crops*

Ways of controlling crop pests

1. *By spraying pesticides.*
2. *By using scare crows*
3. *By crop rotation.*
4. *Planting pest free materials.*
5. *Regular weeding.*
6. *Uprooting and burning infected crops*
7. *Proper spacing.*
8. *Early planting.*
9. *By trapping*
10. *By fencing*
11. *By poisoning*
12. *Early harvesting*

Activity

1. *A pest is any living organism that*_____
2. *Mention any **two** examples of stored pests.*

_____

_____

3. *Give **two** dangers of crop pests.*

_____

_____

4. *Mention any **three** ways of controlling crop pests.*

_____

_____

LESSON 64

DATE: _____

Crop diseases

Some crop diseases.

Disease	***Plant attacked***
Cassava mosaic, Leaf rot	*Cassava plant*
Tomato blight	*Tomatoes*
Ground nut Rosette	*Groundnuts*
Leaf spot, Maize streak	*Maize*
Powderly mildew	*Mangoes, paw paws, turnips*
Smuts	*Sugarcane, maize, sorghum*
Rust	*Cereals (millet, maize, barley, wheat)*
Panama	*Banana*

Ways of controlling crop diseases

1. *By crop rotation.*
2. *Spraying chemicals.*
3. *Uprooting and burning of infected crops.*
4. *Planting healthy materials.*
5. *Proper spacing*
6. *Early planting.*

Activity

1. *Give **two** diseases that can affect cassava plants.*

_____

_____

2. *Mention any **one** disease that can affect sugarcane and sorghum.*

_____

_____

3. *Which plants is affected by Panama?*

_____

4. *Name the part of the plant affected by the leaf spot.*

_____

_____

5. *Mention **three** ways of controlling crop diseases.*

_____

_____

6. *State any **three** diseases that can affect maize plants.*

_____

_____

LESSON 65

DATE: _____

Crop rotation

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

Advantages of crop rotation

1. *It keeps the soil fertile.*
2. *It controls soil erosion.*
3. *It controls crop pests.*
4. *It controls crop diseases.*

NB: when carrying out crop rotation,

Legumes are alternated with non – leguminous plants.

***Reason**: They make soil more fertile since legumes add nutrients to the soil.*

Shallow rooters are alternated with deep rooters.

***Reason**: This balances the use of nutrients from soil at different levels.*

Watering

Watering is the supply of water to crops

Uses of water in the soil.

1. *It makes the soil soft for roots to grow easily.*
2. *It is used for seed germination.*
3. *Plants use water to make food.*
4. *It softens the ground for easy weeding.*
5. *It cools the plants during transpiration.*

Activity

1. *What is crop rotation.*

_____

_____

2. *State any **two** advantages of crop rotation.*

_____

_____

3. *Define watering.*

_____

_____

4. *State **two** reasons for water in soil.*

_____

_____

5. *Give **three** sources of water for irrigation.*

_____

_____

_____

LESSON 66

DATE: _____

Harvesting

This is collecting of ready (mature) crops from the garden.

Some garden tools for harvesting

Tool	***Purpose***
Sickle	*Harvesting cereal crops*
Hoe	*Harvesting root crops.*
Panga	*Harvesting sugarcane, banana.*

Methods of harvesting

1. *Hand picking (e.g coffee, oranges, cotton etc)*
2. *Cutting stems (e.g. sugarcane, banana)*
3. *Uprooting (e.g. groundnuts, cassava)*
4. *Digging (e.g. potatoes).*

Harvesting is done during the dry season.

Reasons why farmers harvest crops in a dry season

1. *The crops contain no moisture*
2. *There is plenty of sunshine*
3. *There is little or no rainfall*

Activity

1. *Harvesting is the*_____
2. *Write down three tools used for harvesting crops*

   _____

   _____
3. *Name any **one** crop harvested by use of:*

   a) Panga: _____

   b) An hoe: _____
4. *Mention **three** methods of harvesting crops.*

   _____

   _____
5. *Give **two** reasons why farmers harvest crops in a dry season.*

   _____

   _____

LESSON 67

DATE: _____

Storing of food

Storing of food is the keeping of food safely for future use.

Reasons why farmers store food.

1. *To be eaten in dry season.*
2. *For planting in next season.*
3. *To be sold when market prices are better.*

Places where food can be stored

1. *In granaries*
2. *Silos*
3. *In refrigerators / freezers*

Types of stores

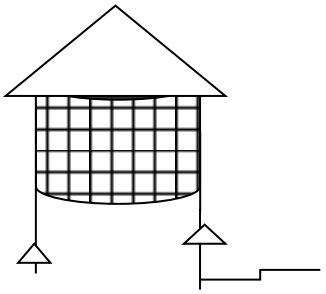
1. *Traditional stores eg granaries*
2. *Modern stores eg. silos*

Qualities of a good store

1. *It should be well ventilated.*

2. *It should have strong walls*
3. *It should be safe against thieves*
4. *The roof should be leak proof.*
5. *It should have rat guards.*
6. *It should be clean and dry.*
7. *It should be raise above the ground to avoid direct moisture.*

A diagram showing a granary.



Rat guard

Rat guard prevents rats from entering the store.
Leak proof roof prevents damping and rotting of the seeds.

Activity

1. *Define storing of food*

   _____

   _____

2. *Mention **two** reasons why farmers store food.*

   _____

   _____

3. *State **two** places where food can be stored*

   _____

   _____

4. *State **two** types of stores*

   _____

   _____

5. *Mention any **two** qualities of a good store*

   _____

   _____

LESSON 68

DATE: _____

Food preservation

Is the preventing food from going bad.

Methods of preserving food (modern / local)

Method	***Example of food***
Sun drying	*Cassava, sweet potatoes, maize, Irish potatoes, Onions, millet, rice, sun flower, wheat, beans, soya beans, peas, mushroom*

Freezing	*Oranges, mangoes, avocados, sweet banana, Irish potatoes, cucumber, cabbage, water melon.*
Tinning / canning	*Beans, Tomatoes*
Salting	*Meat / fish*
Smoking	*Meat + fish*
Refrigeration	*All fruits / vegetation / meat / fish*
Roasting	*Meat / fish*

Reasons why we preserve food

1. *To save money*
2. *To avoid wastage of resources*
3. *For future use*
4. *To strengthen food security*
5. *To avoid food contamination*
6. *To facilitate easy storing of food*

Activity

1. *What is food preservation*

   _____

   _____

2. *State the reasons why we preserve food*

   _____

   _____

3. *Mention **two** methods of preserving food.*

   _____

   _____

4. *Name **two** crops preserved by sun drying.*

   _____

   _____

5. *State **three** ways of preserving meat.*

   _____

   _____

LESSON 69

DATE: _____

Food path

Food path are different stages in food production.

Type of food path

1. *Village food path*
2. *Town food path*
3. *Earning food path*

Village food path:

This is the food path where farmers grow crops for home consumption

Stages of village food path

1. *Land preparation*

2. *Planting*
3. *Caring for crops*
4. *Harvesting*

Town food path

Town food path is the food path where farmers good or produce food for sale.

Stages in town food path.

1. *Clearing the land*
2. *Planting*
3. *Caring for crops*
4. *Harvesting*
5. *Drying seeds*
6. *Marketing*
7. *Buying and cooking food*
8. *Eating*

Activity

1. *Define food path?*

   _____

   _____

2. *Name **two** type of food path.*

   _____

   _____

3. *What is village food path?*

   _____

   _____

4. *Mention **three** stages of village food path*

   _____

   _____

5. *What is town food path?*

   _____

   _____

6. *Mention **two** stages in town food path*

   _____

   _____

LESSON 70

DATE: _____

Earning food path

This is the food path where people who work and get salary use it to buy food in markets

Stages of earning food path

1. *Getting salary*
2. *Budgeting*
3. *Buying food*

Blocks of food path

Blocks of food path are problems faced in food production and may lead to little yield when harvested.

Examples of blocks of food path

1. *Crop pests*

2. *Crops diseases*
3. *Poor farming methods*
4. *Poor health (elnino , drought)*
5. *Earth quake*

Activity

1. *What is earning food path?*

   _____

   _____

2. *State **three** stages of earning food path.*

   _____

   _____

   _____

3. *Define blocks of food path.*

   _____

   _____

4. *Give **two** examples of blocks of food path.*

   _____

   _____

THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATION
TOPIC 16: KEEPING RABBITS

LESSON 71

DATE: _____

Rabbitry is a farm of rabbits.
It is a place where rabbits are kept.

Terms used in keeping of rabbits.

1. *Rabbit keeping is the rearing of rabbits.*
2. *Hutch / pen is the home / housing structure of a domestic rabbit.*
3. *Burrow is a hole dug by a rabbit.*
4. *Buck is a mature male rabbit.*
5. *Doe is a mature female rabbit.*
6. *Kindling is the act of giving birth to young rabbits by a doe.*
7. *Reveret / kit/ kitten :This is a young rabbit.*
8. *Litter is a group of young rabbits born together at the same time by a doe.*
9. *A kitten is a young rabbit*
10. *Rabbit pie: Rabbit pie is a meat got from rabbits*
11. *Pellets : These are manufactured feeds used for feeding rabbits*

Reasons why people keep rabbits / uses of rabbits

1. *Rabbits provide us with meat which is a source of proteins.*
2. *Rabbits are sources of income / money when sold.*
3. *The dung of rabbits can be used as manure in our gardens.*
4. *Some rabbits are kept for their fur.*
5. *Rabbit skins are used to make articles like bags, shoes, etc.*
6. *Rabbits can be kept as pets (for pleasure)*

ACTIVITY

1. *Define rabbit keeping.*

_____

_____

2. *Explain the following terms as used in rabbit rearing?*

a) *Buck*_____

b) *Rabbi try*_____

c) *Rabbit pie*_____

d) *Pellet* _____

e) *Kitten*_____

f) *Kindling*_____

3. *Suggest any **three** reasons why people keep rabbits.*

_____

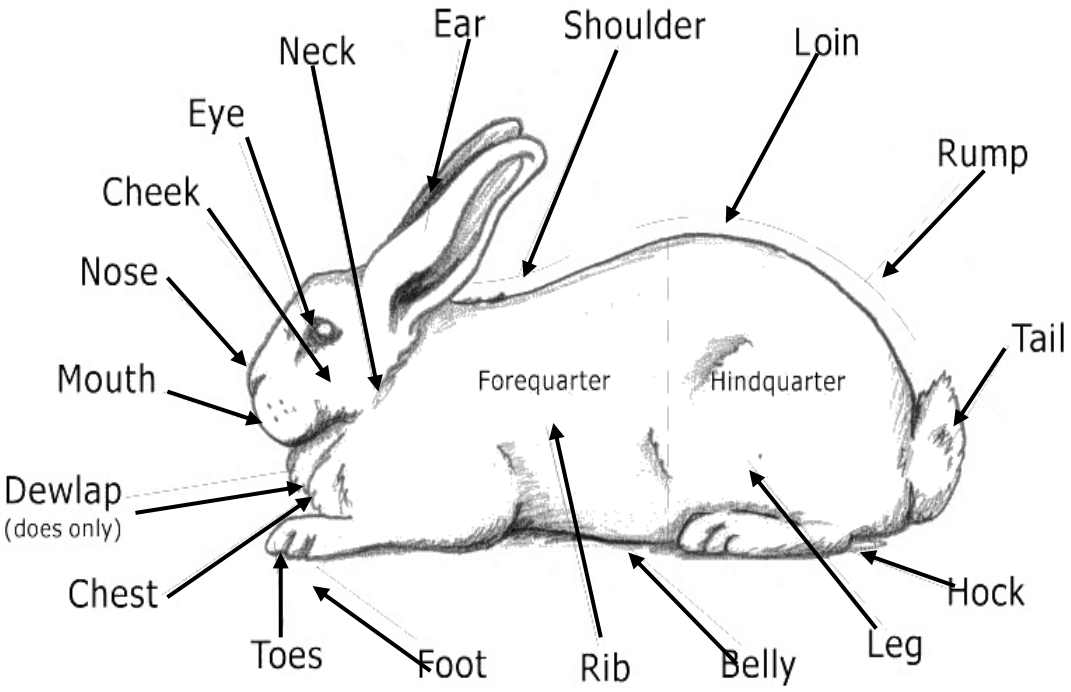
_____

_____

LESSON 72

DATE: _____

External parts of a rabbit



Advantages of keeping rabbits over other animals.

1. *Rabbits need less food than other animals like goats.*
2. *They do not need a lot of land.*
3. *Management practices like feeding and housing are easily carried out.*
4. *Rabbits multiply quicker than other animals.*
5. *They mature quickly.*
6. *They are cheaper to buy.*

Activity

1. Name the part of the rabbit used for seeing.

_____

_____

2. Which part of the rabbit enables it to breathe?

_____

_____

3. Mention three reasons why very many farmers keep rabbits instead of other animals.

_____

_____

_____

LESSON 73

DATE: _____

Breeds of rabbits

There are two types of breeds of rabbits namely;

1. *Local/indigenous breeds*
2. *Exotic/foreign breeds*

Local breeds of rabbits

These have been kept in Uganda for a long time.

Characteristics of local rabbits

1. They are resistant to most diseases.
2. They take long to mature.
3. They are hard in resisting harsh weather conditions.
4. They have many different colours.
5. They are smaller than exotic breeds.
6. They can live in the bush.
7. They dig holes in the ground where they live.

Exotic breeds of rabbits

These are breeds which were imported from other countries.

Characteristics of exotic breeds

1. They have the same colour.
2. They produce bigger quantities of meat.
3. They have the same weight and size.
4. Their young ones carry parents habits.
5. They take short period to mature.
6. They are bigger than local breeds
7. They are unresistant to most diseases

Activity

*1. Mention **two** types of breeds of rabbits*

_____

_____

2. *State **three** characteristics of local rabbits*

_____

_____

_____

3. *What is exotic breeds of rabbit?*

_____

_____

4. *Outline **three** characteristics of exotic breeds*

_____

_____

LESSON 74

DATE: _____

Differences between local and exotic breeds of rabbits.

Local breeds	***Exotic breeds***
1. *They have different colours* 2. *They grow slowly* 3. *They are small in size.* 4. *They are resistant to diseases.* **5.** *They take long to mature*	1. *They produce young ones with the same colour.* 2. *They grow fast.* 3. *They are big in size.* 4. *They can easily get sick.* 5. *They take shorter period of time to mature*

Examples of exotic breeds of rabbits.

1. Angora rabbit.
2. Californian rabbit
3. Chinchilla rabbit.
4. Ear – lops
5. New Zealand white

Characteristics of exotic breeds of rabbits

1. The Angora rabbit

- *They are white in colour.*
- *They produce fine silky hair which has ready market in Europe.*
- *They produce good quality meat.*

2. California a rabbit

- *The body is white with the nose; tail and feet are black or dark brown.*
- *Grow faster than other breeds of rabbits.*
- *They weigh up to 5kg when mature.*

3. Chinchilla rabbit

- *They are grey in colour.*
- *Lighter compared to New Zealand and California.*
- *They weigh 3½ kg when mature.*
- *They are kept for meat.*
- *Their skins have ready market in Europe.*

LESSON 75

DATE: _____

4. The ear – lops

They are bigger compared to others (6kg when mature)
Their ears drop on the sides of the head.
They grow slowly compared to other breeds.

5. New Zealand white

- ✓ *They are white in colour.*
- ✓ *Have short legs and produce a lot of meat.*
- ✓ *Have pink eyes.*
- ✓ *The doe produces 25 – 30 rabbits per year.*
- ✓ *They can reach 5kg when mature.*

Qualities of good rabbits to rear

1. *The following factors should be considered when selecting good rabbits to rear.*
2. *Select healthy rabbits with a shiny coat, bright eyes, dry clean nose, without any discharge from the eyes.*
3. *Select rabbits that have plenty of hair and are well shaped.*
4. *Select rabbits that produce a lot of meat.*

LESSON 76

DATE: _____

Housing of rabbits

A house of a rabbit is called hutch.

Qualities of a good rabbit house (hutch):

1. *It should be strong enough to keep off predators.*
2. *It should be raised from the ground to protect rabbits from dogs and other wild animals.*
3. *It should always be kept clean.*
4. *It should be kept dry to minimize breeding of germs.*
5. *It should allow enough air entering it.*
6. *It should not leak on rainy days.*

Materials used to construct a hutch

Wood, nails, wire mesh, iron sheets, etc.

Types of hutches (with diagrams)

1. *Morant hutch*
2. *Caged modern hutch*
3. *Traditional hutch*

LESSON 67

DATE: _____

A morant hutch

A morant hutch can easily be moved from one place to another

The rabbits eat the grass that is passed through the wire mesh of the morant hutch

Picture of a modern hutch

Picture of a caged modern

c) Caged wire mesh hutch

Management practices in rabbit keeping

(a) Feeding:

Rabbits can be fed on the following

1. *Green vegetables*
2. *Carrots*
3. *Sweet potatoes leaves.*
4. *Green grass.*

- ❖ Pellets
- ❖ Banana peelings
- ❖ Potato peelings
- ❖ Cabbage leaves.

Activity

1. Identify the habitants of the following

*a) Wild rabbit*_____

*b) Domestic rabbit*_____

*2. Cite down **two** rabbit feeds you know.*

_____

_____

3. Why should a hatch be raised off the ground during construction?

_____

_____

4. How can you care for a rabbit house?

_____

_____

*5. Name **three** types of hutches.*

_____

_____

LESSON 77

DATE: _____

Points to note:

Pellets are manufactured animal feeds.
Rabbits should be given a block of salt to lick, to provide them with mineral salts.
They should be given salt dissolved in water.
Does with young ones need more water in order to make milk for their litter.

Breeding of rabbits

Breeding *is the process by which animals multiply through giving birth to young ones.*
The act of producing young ones in rabbits is called ***Kindling****.*

When a doe is on heat, it should be given a buck to mate with
Being on heat means being in need of a male for mating

Signs of a doe on heat

1. It is restless
2. It rubs its body against the walls of the hutch
3. It is excited when it sees other rabbits
4. It moves up and down a lot
5. It lies on one side of its body.

Gestation period

The buck mates with the doe.
The doe then becomes pregnant.
The doe takes 30 days to produce young ones.
This period of pregnancy is called Gestation period.
The doe prepares a soft bed made of soft hair from its body when it is about to produce.
It produces between 7 – 11 young ones.
If more are produced, they should be killed as the doe's milk may not be enough for all of them.
The buck should not be kept together with the doe as it may kill the young ones.

Activity

1. *What is breeding in rabbit keeping?*

   _____
   _____

2. *Define kindling.*

   _____
   _____

3. *Mention any* ***three*** *signs of a doe on heat.*

   _____
   _____

4. *What is the gestation period of a rabbit?*

_____

_____

5. *The period of pregnancy in an animal is …….*

LESSON 78

DATE: _____

Common Diseases of Rabbits

1.Coccidiosis

Coccidiosis affects the liver and the intestines

Signs and symptoms

1. Diarrhoea with blood (dysentery)
2. Rabbits have swollen stomach.
3. Rabbits lose weight (become small and thin)
4. They have rough hair.

Control of coccidiosis

Keep the hutch clean.
Feed rabbits on clean food and water.
Put drugs in clean drinking water.

2. Scours

Signs and symptoms

- *Rabbits stop feeding.*
- *Pain in the stomach.*
- *Rabbits develop diarrhea*

Control of scours

- *Do not give rabbits wet and muddy grass.*
- *Do not give rabbits young grass.*
- *Clean the hutches and spray regularly.*

Activity

1.Define the term breeding.

_____

_____

2. Identify any two signs of a doe on heat.

_____

_____

*3. Cite down any **three** diseases of rabbits.*

_____

_____

4. What causes coccidiosis?

_____

_____

*5. Give any **two** signs of coccidiosis.*

_____

_____

6. *Mention any **three** controls of scours.*

_____

_____

_____

LESSON 79

DATE: _____

3. Ear canker

Signs and symptoms.

1. Itching ears.
2. The ears bend downwards
3. Ears develop wounds with a discharge and become painful.

Control of ear cancer.

1. Clean the ears using paraffin on cotton.
2. Do not overcrowd the rabbits in one hutch.

4. Pneumonia

Pneumonia in rabbit is caused by coldness.

Signs and symptoms

1. Rabbits begins shivering.
2. Difficulty in breathing
3. Rabbits lose appetite.
4. They have high temperature

Control of Pneumonia

✓ *Keep hutches dry and clean.*
✓ *Keep rabbits away from rain.*
✓ *Treat rabbits with drugs.*

5. Colds

Signs and symptoms

The rabbit sneezes a lot.
Rabbit has a runny nose.

Signs of a healthy rabbit

1. It is bright and observant
2. It is alert and has quick movement
3. Its droppings is in form of firm pallets
It has a clean nose if the nose is wet then it is suffering from a cold

Activity

1. *Which part of the rabbit is affected by ear canker?*

_____

_____

2. *Which rabbit disease is caused by the coldness?*

_____

_____

3. *Mention **three** signs and symptoms of pneumonia.*

_____

_____

_____

4. *Mention any **three** features of a healthy rabbit*

_____

_____

_____

5. *Name the disease that causes over sneezing in a rabbit.*

_____

_____

LESSON 80

DATE: _____

Ways of preventing diseases in rabbits

1. Always keep rabbit hutches clean and dry.
2. Avoid rain into hutches.
3. Keep sick rabbits away from others.
4. Feed rabbits well.
5. Avoid overcrowding rabbits in one hutch.
6. Always call a veterinary officer to check on the health of rabbits.

Keeping records on a rabbit farm

Records means the written information about a particular activity on a farm

Examples of farm records

1. Feeds records.
2. Health records.
3. Production records
4. Breeding records
5. Financial records.

Importance of keeping records of rabbits

1. To know the number of rabbits kept
2. To know the amounts of money spent on feeds or treatment
3. To know the number of rabbits produced
4. To be able to plan for the farm.
5. To know the number of rabbits lost/dead
6. To know whether the form is making profits or losses

Activity

1. *State any **three** ways of preventing diseases in rabbit.*

_____

_____

_____

2. *What is record keeping as used in rabbitry?*

_____

_____

3. *Mention any **three** examples of farm records*

_____

_____

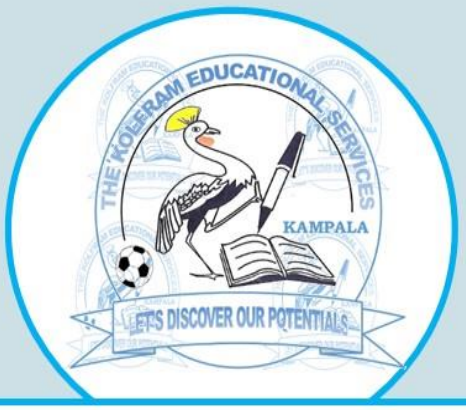
_____

4. *Mention any **three** importance of keeping records*

_____

_____

_____



STANDARD KOLFRAM IN USE

This book is designed for both the learners and the teachers in accordance to the bridged curriculum. Each specific child in a class at a particular school deserves a copy of this book.