TOPIC 1 LIVING THINGS

PLANTS

Classification of plants

flowing and non-flowering plants.

- Plants are classified into two groups:
  - ↘ flowering plants.
  - ↘ Non-flowering plants.

- **Flowering plants** are plants that produce flowers.
  Example include maize, beans, pawpaw, tomato and Sodom apple.


- **Non -flowering plants** are plants that do not produce flower.
  Example include algae, mosses and ferns.



Safety precautions when handling harmful plants.

- Some plants are harmful. We should take precaution when handling such plants.
- When handling harmful plants, we should do the following:
  - ✓ Put on protective wear such as safety goggles, safety gloves, safety boots and dust masks.
  - ✓ We should use forceps to handle harmful plants.
  - ✓ We should not touch any plants that we do not know. Some plants are poisonous.
  - ✓ We should always wash our hands with soap and clean water after handling plants.

Importance of flowering plants.

- Flowering plants give us food, shade, timber, medicine and make the environment beautiful.
- They provide animal with food.
- Some flowering plants are home to some animals.
- Fungi
- Identifying fungi
- The plural of fungus is fungi.

Fungi.

- Fungi are living things.
- Fungi are neither plants nor the animals.
- Fungi grow on plants or on rotting things.
- Examples of fungi include mushrooms, yeast, bread mould and puffballs.
- The black or green patches on the slide of bread are called mould.
- Mould is a fungus that grow on decaying food, for examples decaying bread.
- Fungi are found in different places in the environments.
- They are found growing in the soil and on water.
- They also grow on decaying food or rotting plants.

Importance of fungi to human beings

Fungi are very importance to human beings in the following ways.

- Some fungi are used as food, for examples mushrooms.
- Some fungi are used in the cooking process, for examples yeast it is used in baking to make dough rise and make it lighter.
- Some fungi are used in making medicine.
- Some fungi are used in the processing of some beverages.

Economic importance of fungi in the environment.

- Fungi such as Mushrooms can be used as food.
- Mushrooms are also sold in local markets and in other countries.
- Yeast is used in baking bread and cakes that are sold in shops.

Mushroom

Cooked mushroom 

Safety precautions when handling fungi

We should be careful when handling fungi.
There are fungi that are poisonous. We should only collect mushrooms with the guidance of an adult.

- Always wear protective wear, such as safety gloves, safety boots, safety goggles and dust mask, when handling fungi.
- Always wash your hands with soap and clean water after handling fungi.

ANIMALS

Vertebrates.

- Vertebrates are animals that have backbone.

Examples of vertebrate include:

- Cat
- Cow.
- Lizard
- Duck.
- Fish.
- Frog.

Safety precautions when handling animals

The following are safety precautions observed when handling animals.

- Avoid dangerous animals.
- Handle animals using safety wear. Safety wear includes safety gloves, overcoats, safety goggles, helmets and dust masks.
- Approach animal with cautions.
- Be alert when a round animal
- Do not run when around animals.
- A void animal that have young one.

Identifying different vertebrates in the local area.

- Vertebrates are divided into five classes.
- These are:
  - Mammals.
  - Birds.
  - Fish.
  - Reptiles.
  - Amphibians.

Characteristics of mammals

- Mammals have a backbone.
- They give birth to young ones. Some mammals, however, lay eggs, for examples the **duck- billed platypus.**
- Mammals have glands that produce milk. They suckle their young ones.
- Most mammals live on land. Some live underground while others live in water.

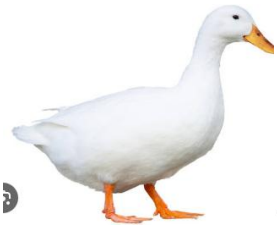
- The body of mammals is covered with fur or hair.
- Mammals are warm- blooded. These animals produce their own body heat even when it is cold outside. They also cool themselves when it is hot outside.
- Examples of mammals include lion, cattle, dog, rat, squirrel.




Characteristics of birds

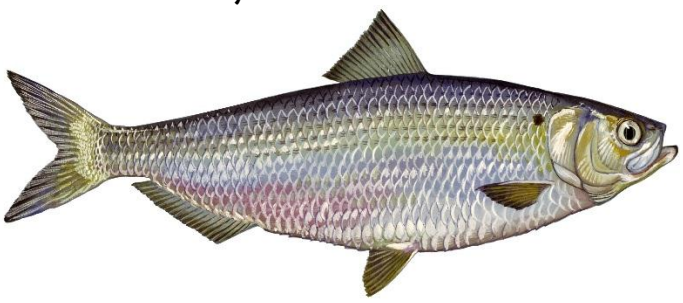
- Birds are warm blooded.
- Birds have beaks.
- Birds have a backbone.
- Birds have wings.
- The body of a bird is covered with feathers.
- Birds lay eggs that hatch into young ones.




Characteristics of fish.

- Fish have a backbone.
- Fish live in water.
- Fish are cold blooded.
- Fish have fins.
- Fish move by swimming.
- Fish breathe through gills.
- Fish lay eggs that hatch into young ones.
- The body of fish is covered with scales.




Characteristics of reptiles.

- ~ Reptiles have a backbone.
- ~ Reptiles are cold blooded animals. These animals take the temperature of their surroundings. For examples when the sun sets at night their bodies become cooler because it is less warm outside. When the sun is out their body absorb the heat of the sun and become warmer.
- ~ The body of reptiles is covered with scales.
- ~ Reptiles live on land and in water.
- ~ Reptiles breathe through the lungs.
- ~ Most reptiles lay eggs. The eggs hatch into young ones.
- ~ Examples of reptiles include crocodile, snake, tortoise and snakes.




Characteristics of amphibians.

- Amphibians have backbones.
- Amphibians have a moist skin.
- Amphibians live the first parts of their lives in water and later on land.
- Amphibians breathe through gills when they are still young and living in water. When amphibian's mature, they breathe through lungs.
- Amphibians are cold blooded animals.
- Most amphibians lay eggs.
- Examples of amphibians include frog, toad, salamanders,



HUMAN BODY

Sense organs.

Identifying various sense organs

- A human being has five sense organs namely:
  - Nose.
  - Ears.
  - Eyes.
  - Skin.
  - Tongue.





Function of sense organs.

Sense organs are very useful to human beings in the following ways:

- We see with our eyes.
- We hear with our ears.
- We smell with our nose.
- We taste things with our tongues.
- The skin tells us if it hot or cold or if something is smooth or rough. It also tells us when we are hurt or feeling pain.

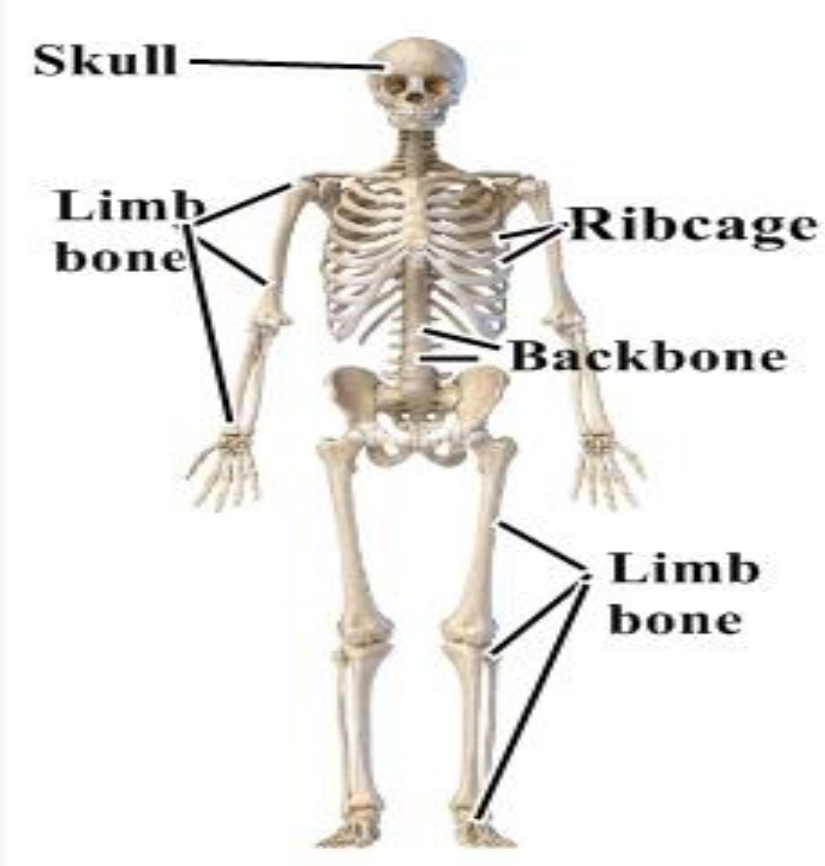
Care of various sense organs

→ Bath daily using soap and clean water.
→ Apply oil to the skin to keep it moist.
→ Brush the tongue and teeth when cleaning my mouth.
→ Keep the nose clean by using a clean handkerchief.
→ Clean the ears using cotton buds.
→ Avoid putting sharp objects in my nose and ears.

The Skeleton and muscles.

Parts of the human skeleton.

- Every person has skeleton.
- The skeleton is made up of many bones.
- Human skeleton has different parts.
- These parts include:
  - ⇨ the skull.
  - ⇨ Backbone.
  - ⇨ Ribcage.
  - ⇨ The limb bones.



Functions of human skeleton.

The different parts of the human skeleton perform the following functions.

- ↳ The human skull protects the brain from injury.
- ↳ The backbone provides the support to the body and help the body to remain upright.
- ↳ It also makes a person flexible so that he or she can move, bend and do other activities.
- ↳ The ribcage protects the hearts and the lungs.
- ↳ The limb bones support the weight of the human body.
- ↳ They also help a person to move.

Types of muscles

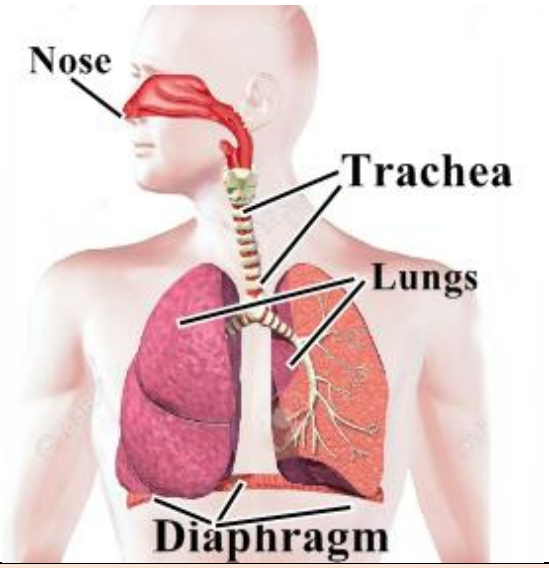
- There are three types of muscles in the human body.
- These are:
  - ❍ Cardiac muscles.
  - ❍ Smooth muscles.
  - ❍ Skeletal muscles.

Functions of skeletal muscles.

- Skeletal muscles are also called **voluntary muscles**.
- Most skeletal muscles are attached to the bones of human skeleton.
- The following are the functions of skeletal muscles in human beings;

  ☆ Support and help the body.
  ☆ Control our body temperature.
  ☆ Keep the body upright.
  ☆ Protect other organs in the body.

The breathing system.



Parts of the human breathing systems

☆ The human breathing system is made up of different parts;
  ↘ Nose.
  ↘ Trachea.
  ↘ Lungs.
  ↘ Diaphragm.

Functions of parts of the breathing systems

🡅 Air enters the breathing system through the **nose**.
The nose has tiny hairs that clean the air by trapping dust.
At the back of the nose is thin membrane that produces mucus which makes the air moist, warm and clean.

- The **trachea** is also called the **wind pipe**. It receives air from the nose. It has C-shaped ring that keeps it strong and open. The walls of the windpipe have mucus and tiny hairs that filter the air and keep it clean. The trachea act as a passage for air from the nose into the lungs.

- A human being has two **lungs** located inside the chest. The lungs are a pair of air-filled organs. The lungs take in oxygen in the air and take out carbon dioxide that the body does not need.

- The **diaphragm** is located under the lungs. It controls breathing. it separates the chest from abdomen. It helps to fills the lungs with air when breathing in., it also helps in take-out air when breathing out.

Diseases that affects the human breathing system.

Tuberculosis (TB)

→ TB is a disease that affect the breathing system.
→ It normally affects the lungs.
→ TB is caused by bacteria.
→ It spreads from one person to another through sneezing, coughing or spitting.

Signs and symptoms of Tuberculosis.

~ Night sweats.
~ Fever.
~ Coughing up blood.
~ Fatigue.
~ Unintentional weight loss.
~ Coughing that last for three or more weeks.
~ Chest pain or pain when breathing or coughing.

✓ **Prevention of Tuberculosis**
✓ Staying in dust free well-ventilated rooms
✓ Vaccinating infants (small children).
✓ Covering the mouth when sneezing
✓ Wearing a mask in public if you are already infected with TB
✓ An infected person should finish his or her entire course of medications.

Pneumonia.

- **Pneumonia** is caused by germs such as bacteria and virus.
- It can also be caused by fungi.

Signs and symptoms of pneumonia

- Chest pains when breathing or coughing.
- Fatigue (Feeling tired).
- Coughs that may produce mucus.
- Sweating and shaking.
- Shortness of breath.
- Nausea, vomiting or diarrhea.
- Fever.

Prevention of pneumonia

- Vaccination against pneumonia.
- Practising good hygiene.
- Keeping the immune system strong.
- Not smoking.

Colds

- Cold are caused by virus.
- The virus affects the nose and the throat.
- Children under the age of six years are at risks of getting it.

Signs and symptoms of colds.

- Running or stuffy nose.
- Sore throat and cough,
- Congestion in the nose.
- Mild headache.
- Mild fever and generally feeling unwell.

Prevention of colds.

- Washing your Hands thoroughly with soap and clean water.
- Disinfecting items.
- Covering the mouth when coughing or sneezing.
- A voiding sharing of utensils.

Asthma.

- **Asthma** is a disease that narrows and swell the airways in the lungs producing extra mucus.
- This makes breathing difficult.
- Being exposed to a substance such as pollen, dust mites, infections such as common cold, cold air, pollutants such as smoke, strong emotions and some kind of medications can cause asthma.

Signs and symptoms of asthma.

- ✈ Shortness breath.
- ✈ A whistling sound when breathing out.
- ✈ Chest pain.
- ✈ Coughing.

Prevention of asthma

- → Getting vaccinated for influenza and pneumonia.
- → Identifying and avoiding asthma triggers.
- → Monitoring your breathing.
- → Treating early attacks.
- → Taking medication as prescribed by the doctor
- → Carefully following your medication plans.

Coughs.

- Coughs can be caused by:
  - ~ Smoke exposure.
  - ~ Infections.
  - ~ Asthma.
  - ~ The presence of mucus in the throat.

Signs and symptoms of coughs.

- 🖒 Frequent throat clearing and sore throats.
- 🖒 Running nose.
- 🖒 Wheezing and shortness of breath.
- 🖒 Persistent coughing.
- 🖒 Hoarse voice.

Preventions of coughs.

- ☞ A voiding smoke particles and dusty places.
- ☞ A voiding smoking
- ☞ Drinking a lot of water.
- ☞ Avoiding unhealthy surroundings and crowded place.

Influenza.

- Influenza is common called the flu.
- It is caused by a virus.
- The flu virus is transmitted through the air in droplets when someone with the infection coughs, sneezes or talk.

Signs and symptoms of influenza.

- ❖ A higher fever.
- ❖ A Ching muscles.
- ❖ Chills and sweats.
- ❖ Headache.
- ❖ Dry and persistent cough.
- ❖ Nose congestions.
- ❖ Fatigue and weakness.
- ❖ Sore throats.

Preventions of influenza.

- → Yearly flu vaccination for any person is six months old and above.
- → Thorough and frequent hand -washing.
- → Covering your mouth and nose when sneezing or coughing.
- → Avoiding crowds during peaks flu seasons.

Coronavirus diseases 2019 (COVID-19)

- COVID-19 is a disease of the breathing systems.
- It is caused by a virus, known as coronavirus.
- The virus looks like round ball with a spiky crown.
- When an infected person sneeze or cough, tiny droplets are spread into the air.
- These droplets contain the virus.
- The virus can then infect other people.
- The people breathe the virus in that air and gets infected.
- One can also get infected if he or she touches surface with the virus. The virus enters a person system if one touches their nose, eyes or mouth.

Signs and symptoms of COVID -19

- ↳ Fever.
- ↳ Dry cough
- ↳ Tiredness
- ↳ Sore throats
- ↳ Headache.
- ↳ Loss of taste or smell.

Preventions of COVID -19.

- ✓ Wash your hands well frequently for at least 20 seconds with soap and running water. If soap and water are not available, use an alcohol-based hand sanitizer.
- ✓ Use handkerchief or tissue when sneezing or coughing. if you do not have one, sneezy or cough, into your elbow.
- ✓ A void touching your eyes, nose and mouth.
- ✓ Clean and disinfect surface and objects.
- ✓ During an outbreak stay at home if you need to go out put on the right face mask.
- ✓ During an outbreak, keep a social distance of about 2 meters from other people.
- ✓ If you feel sick, tell your parents or guardians, you will be taken to see a doctor. You will then be put on treatment.

TOPIC REVISION ANSWERED QUESTIONS.

What are flowering plants?

This are plants that produce flowers.

What are non-flowering plants?

They are plants that do not produce flowers.

Name five examples of flowering plants.

Maize.
Beans.
Pawpaw.
Tomato.
Ground nuts.

What are some of the safety precautions to observe when handling plants?

- ✓ Put on protective wear such as safety goggles, safety gloves, safety boots and dust masks.
- ✓ We should use forceps to handle harmful plants.
- ✓ We should not touch any plants that we do not know. Some plants are poisonous.
- ✓ We should always wash our hands with soap and clean water after handling plants.

Name various safety tools that can be used to safely handle harmful plants in the environment.

- ✓ Safety boots.
- ✓ Safety gloves.
- ✓ Safety googles.
- ✓ A dust mask.
- ✓ Forceps.

Write down the difference between flowering and non-flowering plants.

- ✓ Flowering plants produce flowers while non-flowering plants do not produce flowers.
- ✓ Flowering plants produce seeds while non-flowering plants do not produce seeds.

Name five ways in which flowering plants are helpful to human beings.

- ✓ Flowering plants give us food, shade, timber, medicine and make the environment beautiful.
- ✓ They provide animal with food.
- ✓ Some flowering plants are home to some animals.
- ✓ Fungi can be sold to earn income such as mushroom farming.
- ✓ Fungus are used to make pesticides.

Identify the plant below.

cactus

Name the fungus used in baking bread.

- ✓ Yeast.

Name three examples of fungus.

- ✓ Mould.
- ✓ Mushroom.
- ✓ Yeast.

Write down uses of fungus.

Used as food.
Used in baking.
Used to make pesticides.
Can be sold to earn income or money.

How can people make money from fungus?

Fungus such as mushroom can be farmed and sold to hotels as food to make money.

What covers the skin of vertebrate animals?

Fur or hair.

List down the five vertebrate classes.

- ☆ Mammals.
- ☆ Birds.
- ☆ Fish.
- ☆ Reptiles.
- ☆ Amphibians.

Some vertebrates are warm blooded. What does that mean?

They produce their own heat when is cold and they cool their body when it is hot outside.

What is the difference between mammals and birds?

The body of mammals is covered by fur or hair while the body of birds is covered by feathers.

List down the five sense organs.

- → The nose.
- → The eyes.
- → The ears.
- → The skin.
- → The tongue.

Name the three types of muscles in the human body.

- ↳ Skeletal muscles.
- ↳ Cardiac muscles.
- ↳ Smooth muscles.

Name the parts of the human skeleton that protects the following

a.) **Lungs-**ribcage
b.) **Brain-**skull.
c.) **Heart-**ribcage

Name the diseases that affects the breathing system in human beings.

- ✧ Tuberculosis.
- ✧ Pneumonia.
- ✧ Colds.
- ✧ Asthma.
- ✧ Coughs.
- ✧ Influenza.
- ✧ Corona virus disease-2019

Identify the parts of the human breathing system.

The nose.
The trachea.
The lungs.
The diaphragm.

Which features are found on the following parts of the breathing system that enables them to do their work well?

a.) **Nose-**has tiny hairs to clean air by trapping dust.
b.) **Windpipe-**it has C-shaped rings that keeps it strong and open. Has tiny hairs to filter dust from air. Has mucus to trap dust from air.
c.) **Lungs-**has structures that take and release oxygen and release carbon dioxide.

Explain measures we take to prevent diseases of the breathing system.

- ✓ Vaccination.
- ✓ Practice good hygiene.
- ✓ Avoid sharing some personal items.
- ✓ Follow the medical plan fully.
- ✓ Avoid smoking and dugs.
- ✓ Avoid overcrowded and poorly ventilated areas.
- ✓ Thorough and frequent hand washing.
- ✓ Keeping social distances with victims.
- ✓ Cover mouth when sneezing and coughing

Topic 2 HEALTH AND EDUCATION.

Diseases.

Waterborne diseases.

- Waterborne diseases are infections that are caused and spread through drinking or coming into contact with contaminated water.
- They can also be caused and spread through eating contaminated food.
- Examples of such diseases are:
  - ↘ **Typhoid.**
  - ↘ **Bilharzia.**
  - ↘ **Cholera.**
  - ↘ **Dysentery.**

❍ Typhoid

- Typhoid is caused by bacteria that are spread through eating contaminated food and drinking contaminated water.

Signs and symptoms of typhoid.

- Body weakness,
- Headache
- Rash on Knick and abdomen.
- Vomiting and diarrhea
- Fever.

Preventions of typhoid.

- ↘ Washing hands and utensils before handling or eating food.
- ↘ Washing fruits before eating and washing vegetable before cooking.
- ↘ Cooking food well before eating. always cover food.
- ↘ Boiling water before drinking.
- ↘ Spraying the house and the toilets with an insecticide to kill flies.

❍ Bilharzia

Bilharzia also known as snail fever is diseases caused by parasite worm.
A person becomes infected when he or she comes into direct contact with fresh water that has snails carrying the parasites worm.

Signs and symptoms of bilharzia.

- ☞ Body rashes.
- ☞ General body weakness
- ☞ Headache
- ☞ Vomiting.
- ☞ Fever.

Prevention of bilharzia

- ☞ Cleaning and disinfecting swimming pool water.
- ☞ Draining stagnant water. avoid walking in stagnant water.
- ☞ Drinking safe and clean water.
- ☞ Bathing or showering using clean water.
- ☞ Wearing gloves and gumboots when working in waterlogged areas.

❍ Cholera.

- **Cholera** is a disease caused by bacteria that are spread through eating contaminated food and drinking contaminated water.

Signs and symptoms of cholera

- ▹ Body weakness
- ▹ Headache
- ▹ Fever
- ▹ Vomiting and watery diarrhea
- ▹ Loss of fluids and severe dehydration.

Prevention of cholera

~ Washing hands before handling or eating food.
~ Washing fruits and vegetable before eating or cooking
~ Cooking food well before eating. always cover food
~ Boiling water before drinking it.
~ Spraying the house and the toilets witan insecticides to kill flies.

❍ Dysentery.

- **Dysentery** is caused by bacteria that are spread through food and drinking water that is contaminated.

Signs and symptoms of dysentery.

- ↘ High fever and chills.
- ↘ Abdominal pains.
- ↘ Loss of appetite.
- ↘ Weight loss.
- ↘ Headache.
- ↘ Vomiting.
- ↘ Fatigue.
- ↘ Severe diarrhea.
- ↘ Dehydration.

Prevention and symptoms of dysentery.

- ☞ Washing fruits and vegetable before eating or cooking.
- ☞ Boiling water before drinking.
- ☞ Cooking food well before eating it. always cover food.
- ☞ Spraying the house and the toilets with an insecticide to kill flies.
- ☞ Washing hands before handling or eating food.

External body parasites

Soil -transmitted diseases.

Lice.

- Lice are tiny parasitic insect that live in the clothing and bedding of an infected person.
- Lice travel to skin of the infected person several times a day to feed on blood.
- The most common places for bites are around the neck, shoulder, armpits, waist and groin.
- These are places where clothing seams are most likely to touch the skin.

Signs and symptoms of lice.

- ▹ Intense itching.
- ▹ Rash caused by an allergic reaction to body lice bites.
- ▹ Red bumps on the skin.
- ▹ Thickened or darkened skin, usually near the waist or groin, if the lice have been there for a long time.
- ▹ Itching of the head or scalp caused by lice found on the head.
- ▹ Tiny red sores from scratching the scalp caused by lice found on the head.

Prevention and managements of lice.

- ⮑ Improved personal hygiene and regular changing into clean, washed clothing.
- ⮑ All clothing bed, linen and towel used by the infected person should be washed with hot water and then dried.
- ⮑ Medicine that kills the lice may be used to get rid of body lice.
- ⮑ Head lice treatment require thorough combing of the hair to remove lice eggs.
- ⮑ Avoid sharing brushes or combs.
- ⮑ Shave hair.

❍ Scabies.

- **Scabies** is skin disease caused by a mite.
- The mite causes an itchy red rash to form on the skin.
- The mite can be transmitted through infected clothing or bedding.

Signs and symptoms of scabies.

→ Severe and intense itching that gets worse at night.
→ Continuous scratching of the infected area.
→ Rashes and blisters on the skin.
→ Sores in areas where a person has scratched the skin.

Prevention and managements of scabies.

- Wash or dry -cell all clothes, towels and red linens, when washing, use hot, soapy water, dry the washed clothes.
- Clean and vacuum carpets and rugs.
- Treat scabies with medications.

❍ Jiggers.

- A jigger is small pinhead- sized parasitic insects.
- Jigger larvae live on soil and feed on organic matter.
- Jiggers usually attack the feet and toes.
- sometimes they attack the hands and fingers.

Jigger

foot attacked by jiggers.

Signs and symptoms of jiggers.

- The affected part itches.
- The infected person feels a lot of pain in the feet, making it difficult to walk.
- The parasite may cause ulcer on the feet.
- The feet of infected person may swell.
- The toenails of the infected person may fall off.
- The parasite can cause deformed toes and fingers.

Prevention and management of jiggers.

- Observe general cleanliness.
- Smear the floor and walls of mud houses with cow dung.
- Avoid close and frequents interaction with animals that host the flies, for examples dogs.
- Wear shoes whenever possible.
- Use antiseptic and petroleum jelly to treat jiggers. Use gloves when treating jiggers and then wash hands when done.

Internal body parasites.

Common internal parasites.

❍ Roundworms.

- A roundworm is an internal body parasite that infects the small intestine of human beings.
- It gets nutrients from small intestine of infected person.
- it is a soil transmitted parasite.
- Human faeces can cause contamination if an infected person passes faeces on soil or near a source of water.
- A person gets infected if he or she eats or drink contaminated food or water.

Signs and symptoms of roundworms infection

- Abdominal pain.
- Loss of appetite.
- Worms visible in faeces.
- Slow growth in children vomiting.
- Diarrhea.
- Weight loss.

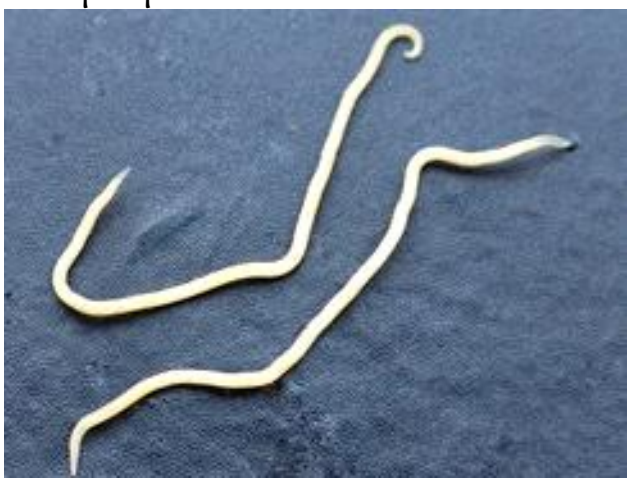
Prevention and managements of roundworms infections.

- Wash food properly before cooking.
- Also wash hands after using the toilets.

- Wash any utensils and cooking surface after using them.
- Filter and boil water before drinking it.
- Wash hands with soap and warm water before handling or eating food.
- A void common bathing area, especially if they are dirty.
- Clean hands with soaps and water after playing outside.
- Roundworm's are treated with medicine.

Pinworms.

- Swallowing pinworms eggs causes a pinworm infection.
- The eggs are found in contaminated food and drinks.
- if you do wash hands well, your fingers can carry pinworms.
- The eggs then hatch in the intestine.
- Female pinworms move to the anal area to lay eggs, which often results in anal itching.
- When you scratch the itchy area the eggs cling to your finger and get under your fingernails.
- The eggs then get transferred to other surface such as toys, bed linen or toilets seats.
- The eggs can also be transferred from contaminated fingers to food, liquid, clothes or other people.



Signs and symptoms of pinworms infection.

- ⇨ Disturbed sleep.
- ⇨ Itching of anal area, especially at night.
- ⇨ Loss of appetite.
- ⇨ Severe irritability.
- ⇨ Abdominal pain.
- ⇨ Weight loss.

Prevention and management of pinworms infection.

⇉ Take a birth in the morning and wash the anal area.
⇉ Change underwear and bedsheets daily.

⇉ Wash bed sheets, nightclothes, underwear and towels in hot water to kill pinworm eggs.
⇉ A void scratching the anal area. Trim your fingernails so eggs do not collect and avoid biting your nails.
⇉ Thoroughly wash your hand after visiting the toilets and before eating.
⇉ Visits the doctor for treatments.

Tapeworms.

- Tapeworms are intestinal parasites that are shaped like a tape measure.
- Tapeworm eggs normally enter the human body from animals through food, especially raw or undercooked meat.
- People can also become infected if there is contact with the animal faeces or contaminated water.

Signs and symptoms of tapeworms

→ Abdominal pain.
→ Vomiting.
→ General weakness.
→ Inflammation of the intestine.
→ Diarrhea and weight loss.
→ Lack of appetite and feeling dizzy.
→ Eggs, larvae or segments from the tapeworms in stool.

Prevention and managements of tapeworm's infections.

↳ Visit a doctor for treatment.
↳ Thoroughly wash your hands with soap and water after visiting the toilets and before eating.
↳ Always wash all vegetables with clean water.
↳ Always wash all fruits with clean water.

- Properly dispose of animals and human faeces.
- Cook meat properly. This will kill larvae or eggs of tapeworms.
- Do not eat raw or undercooked meat.
- Treat pets such as dogs for tapeworms.
- Make sure all work surfaces, especially in the kitchen are regularly cleaned and disinfected.

Hookworms.

- Hookworms are soil transmitted parasites.
- Human faeces can cause contamination if an infected person can pass faeces on soil.
- When a person comes into contacts with this soil, hookworm's larvae can pass through the skin of person.
- This can happen if the person walks barefoot on soil that contains the larvae or swallow contaminated soil particles for examples on unwashed vegetables leaves.

Signs and symptoms of hookworm's infection

- A skin rash that is red and itchy.
- Fever.
- Stomach pain and diarrhea.
- Tiredness and weakness.
- Anaemia
- Stunted growth.
- Loss of appetite and weight loss.
- Malnutrition.

Prevention and management of hookworm's infection.

- Visit a doctor for treatments.
- Wear shoes, especially in area with soil.
- A void eating unwashed food that may be contaminated with hookworms.
- Pass faeces in toilets and latrines.
- Do not use fertilizer made from raw human faeces.
- Wear gloves and gumboots when gardening.
- Treat pets for hookworms.

Topical revision answered questions.

Write down five things you can do to avoid cholera and other water borne diseases.

- ⮑ Washing hands before handling or eating food.
- ⮑ Washing fruits and vegetable before eating or cooking
- ⮑ Cooking food well before eating. Always cover food
- ⮑ Boiling water before drinking it.
- ⮑ Spraying the house and the toilets with insecticides to kill flies.

Why should people observe high standards of water and food hygiene?

To prevent spread of diseases from dirt water and dirty food.

Which methods can we use to control external parasites?

- Observe general cleanliness like Taking bath.
- Smear the floor and walls of mud houses with cow dung.
- Avoid close and frequents interaction with animals that host the flies, for examples dogs.
- Wear shoes whenever possible.
- Improved personal hygiene and regular changing into clean, washed clothing.
- All clothing bed, linen and towel used by the infected person should be washed with hot water and then dried.
- Avoid sharing brushes or combs.
- Shave hair.

Which methods can we use to control internal parasites?

- ✓ Proper cooking of food.
- ✓ Washing of fresh foods we eat such as fruits and vegetables well.
- ✓ Boiling water before drinking.
- ✓ Wash hands thoroughly before handling food.
- ✓ Proper cleaning of utensils we use to handle food.

Name any five external parasites.

- ✓ Lice.
- ✓ Jiggers.
- ✓ Fleas
- ✓ Mites.
- ✓ Ticks.

Name any five internal parasites.

- ✓ Roundworms.
- ✓ Pinworms.
- ✓ Hookworms.
- ✓ Tapeworms.

Solid waste managements.

Identifying solid waste.

- **Solid waste** is type of waste that consist of everyday items that are thrown away by people.
- Solid waste is also known as **rubbish**, **garbage** or **trash**.
- Solid waste comes from our homes, offices, schools, industries and hospital, among other places.

Classifying waste.

- Waste is classified into two as follows:

✓ Those that can rot.
✓ Those that cannot rot.

For example

- The tomato fruits when disposed breaks down and rot, eventually it becomes part of the soil. This is called decomposition. (rotting)
- The plastic bottle does not easily rot. Therefore, some wastes such as plastics do not rot as it cannot decompose.
- **Examples of solid waste that decompose easily include:**
  - Plants.
  - Parts plants.
  - Paper.
  - Food waste.
  - Food waste from the kitchens.
  - Animals waste.

- **Examples of solid waste that does not decompose include:**
- Objects made from plastics such as bottles and cups.
- Objects made from metals such as spoons.
- Objects made from glass such as jars.
- Electronic waste such as compact discs.

Ways of managing solid waste.

- To effectively manage solid waste, it is important to use the 3Rs which means:
  - ↔ **Reuse.**
  - ↔ **Recycle.**
  - ↔ **Reduce.**
- The 3Rs teach us how we can manage solid waste in ways that helps us to conserve the environments.

Reusing.

- **Reusing** means that you or someone else can use an item over and over again instead of throwing it away.
- Examples of waste that can be reused include:
  - Bottles.
  - Old clothes.
  - Timbers.
  - Books.

Recycling.

- **Recycling** means that something old is made into something new again for examples when you have finished drinking a soda the plastic bottles can go to factory where it is remade into aplastic cup.
- Waste items that are usually recycled include the following:
  - ✈ **Paper waste** such as Books, newspaper, magazines, cardboard boxes and envelopes.
  - ✈ **Plastic waste** such as plastic bags, plastic bottles, rubbers bags and plastic wrappers.
  - ✈ **Glass waste** such as broken bottles, soda and other beverage bottles.
  - ✈ **Aluminum waste** such as soda cans, tomato and fruits cans.

Reducing.

- **Reducing** means coming up with ways to stop producing waste solid waste can be reduced through the following ways;
  - ✓ Avoid using plastic bags to carry items, instead use baskets.
  - ✓ Using reusable (canvas) bags for buying items.
  - ✓ Borrowing, renting or sharing items that are not regular used.

- ✓ Using sponges or dish cloths instead of paper towel.
- ✓ Using plug in appliances instead of battery-operated gadgets.
- ✓ Buying durable and repairable products.

TOPIC REVISION ANSWERED QUESTIONS.

How can you ensure safety when handling wastes?

- ✓ Put on protective clothing like overalls.
- ✓ Wear gumboots.
- ✓ Use of cloves.
- ✓ Wear face masks when necessary.
- ✓ Use safety tins to collect trash.

Why is burning waste not a good method of managing waste?

- ✓ Burning of waste pollutes air or causes air pollution and forms ashes.

Give an example of solid wastes that can be recycled many times.

- ✓ Papers.

What are the things that make up e-wastes?

Damaged electronics such as:

- ✓ Microwaves.
- ✓ Televisions.
- ✓ Radios.
- ✓ Computer hardware.
- ✓ Heaters.
- ✓ Cookers
- ✓ Fans.

Name the solid wastes in your locality that can be managed through recycling.

Plastics.

- ✓ Glass.
- ✓ Aluminium wastes.

Give the two types of solid wastes in the environment.

- ✓ Plastics.
- ✓ Glass
- ✓ Paper

Topic 4 COMPUTING DEVICES.

Handling data -word processing.

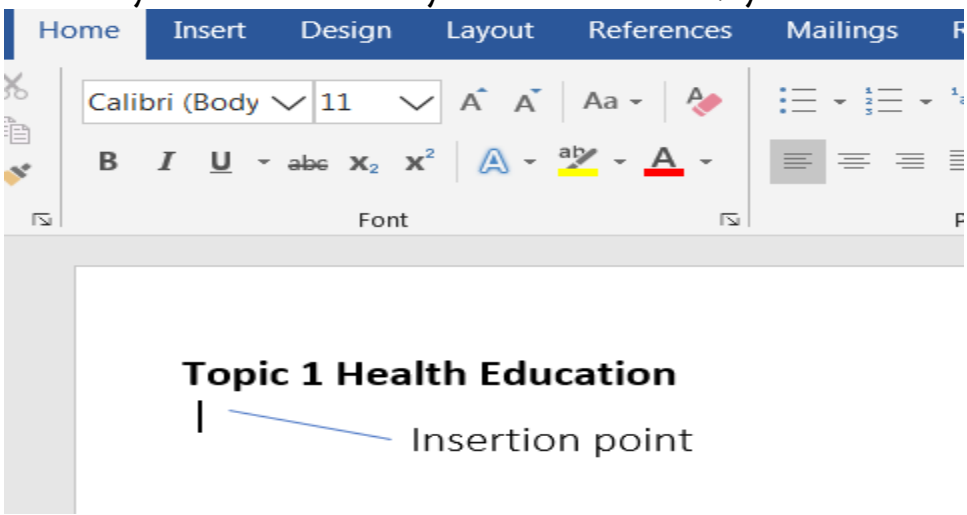
- A word processor is computer software used to compose, format, edit and print documents.
- Examples of word processor software include:
  - ☞ Microsoft word.
  - ☞ OpenOffice.
  - ☞ org Writer.
  - ☞ WordPad among others.
- We use the Microsoft word processor 2010 version for learning.

Creating a word document.

Components of a word document.

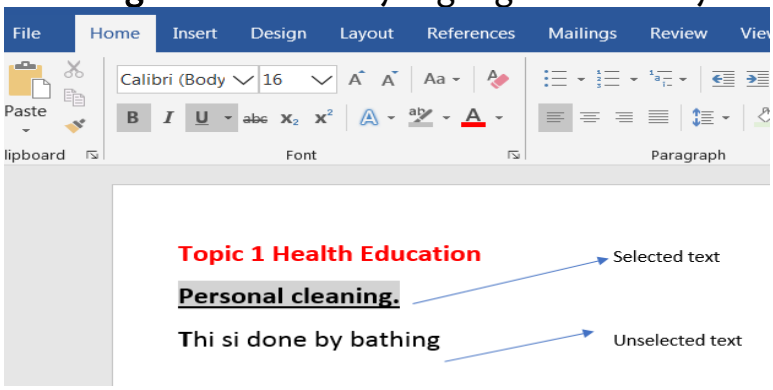
Keying in information.

- When using Word processor such as Microsoft word the blinking vertical line is known as the **insertion point**.
- It usually indicates where you can enter or key in a text on the page.



Editing a word document.

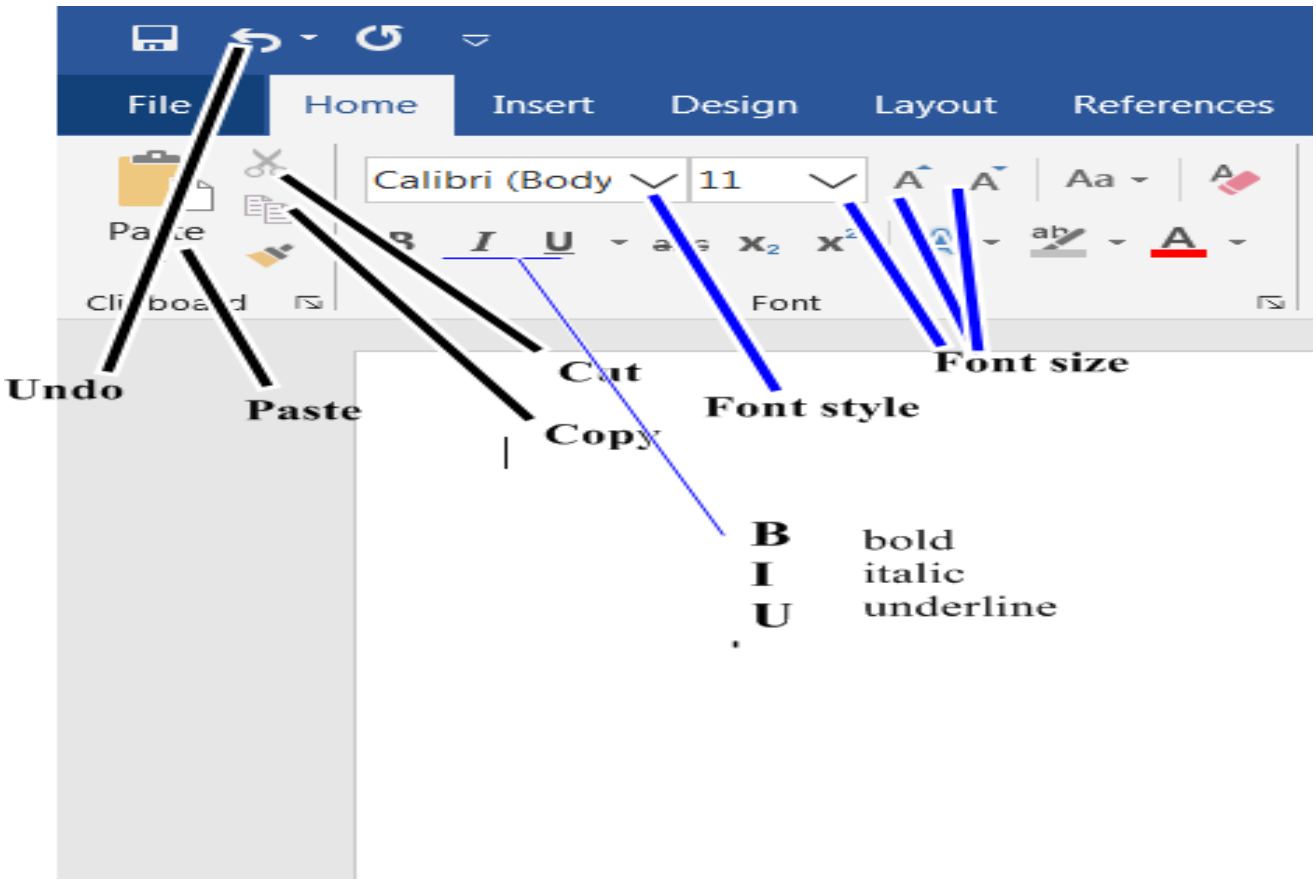
- **Selecting text** is done by highlight the text you need to edit as shown below.



- **Undo** is to correct a mistake done when typing by moving back a step or few steps. The icon below is used to undo.

- **Cut copy and paste** are used when moving text to another area. To cut is to completely move the text without leaving behind any it while to copy is to create a similar text same as the original one. When cutting and copying, we use paste in both cases to move the text to the location we want.

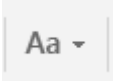
- **Formatting text** involves changing appearance of words by using font style or changing the size of letters by using font size icons as shown below.



Font colour

It is done using this icon  in Microsoft word.

Changing font case

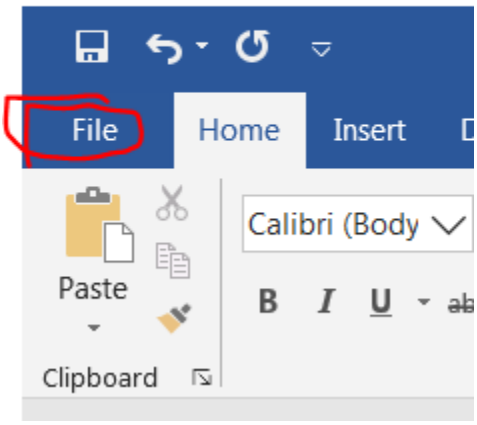
It is done using this icon  in Microsoft word.

Save

- When saving file, the first name it does not matter if you chose to save it using save or save as.
- Both commands open the save as dialog box, after you save your work for the first time you must continue to save so that you do not lose work.

Save as.

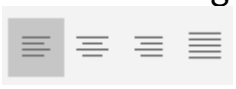
- Save as lets you save an existing file under a new name, allowing you to create a new file.
- Both save and save as are used by first clicking the file menu.

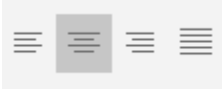


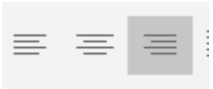
Saving can also be done by clicking this icon circled. 

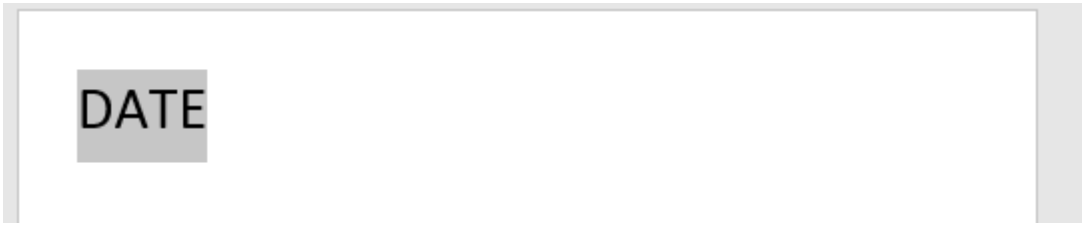
Changing alignment.

This is the position of a page you want your text to occupy.
On a page text can be on the left, or centre or right side.
The following icon in Microsoft word is used to change alignment.

 means aligning text to the left of the page.

 means aligning text at the centre of the page

 means aligning text to the right of the page.



Left alignment.

centre alignment.

right alignment

Safety when using computing devices.

- There are various safety rules we should observe when working on computers devices. They include the following;

↳ Turn on the computer correctly by following the right process.
↳ Respect yourself by not giving out your name and password.
↳ Prepare early for each task, using time wisely.
↳ Respect other by sharing computer devices.
↳ Report problems with the computer device. It saves time and energy.
↳ Take responsibility for your actions.
↳ Log off and leave the computer station ready for the next person to use.
↳ If the computer is not in used switch off and cover it well.

Coding.

Patterns and games.

Simple programing using Scratch.

- Scratch language has similarities to kids building brick toys.
- It uses simple structures of graphical bricks or blocks of computer codes.
- They snap and interlock together to build and control sounds, music and images.
- Therefore, children enjoy and learn through creating different shapes, games and stories within a new and existing interactive digital means.

Main parts of Scratch.

Menus-this part contains the File menu used to save or load your projects.
Main tabs- helps a user switch between different activities, such as coding, drawing or adding sound.
Blocks categories (Block palette)-contains coloured set of code blocks that are used to program the sprite and give actions to it.
Code blocks-these are blocks that are shaped differently and are used to create code in scratch. They connect to each other vertically like a jigsaw.
Coding area-a place where you create a code (script) for a sprite to do a specific action.
Start and stop-click the green flag to start your code or the stop sign to stop the code.
The stage-it is the main working area where the sprite moves and performs as per given code and instructions.
Sprite-it is a small graphic character that performs actions, such as moving around in the stage.
Sprite info-it is part of scratch that shows information about each sprite, such as how big it is.
Sprite list-this part displays all the sprites in your project. Selected sprite has a blue border around it.
Choose a backdrop-this part is used for adding a new background to your project.
Choose a sprite-this part is used for adding a new sprite to your project.
Tutorials-this is apart that contains some help videos to guide scratch user.

Topical questions.

Name any four computer devices you know.

- ✓ Monitor.
- ✓ System unit.
- ✓ Keyboard.
- ✓ Mouse.

Name the computer programs that are used for typing.

- ✓ Microsoft word.
- ✓ Open Office.
- ✓ Org Writer.
- ✓ WordPad.

List down the rules to observe when you are in the computer room.

↳ Turn on the computer correctly by following the right process.
↳ Respect yourself by not giving out your name and password.
↳ Prepare early for each task, using time wisely.
↳ Respect other by sharing computer devices.
↳ Report problems with the computer device. It saves time and energy.
↳ Take responsibility for your actions.
↳ Log off and leave the computer station ready for the next person to use.
↳ If the computer is not in used switch off and cover it well.

Why should computers be covered when not in use?

✓ Covering computes prevents dust.

What is the meaning of saving a file on a computer?

✓ Keeping the file to use later.

When do we use save and save as?

✓ We use save when we want to keep or store a file in the computer for the first time.
✓ We use save us when we want to store a file edited and different from the original file.

Which steps are followed when saving a file on a computer using save as option?

- ✓ Click file menu.
- ✓ Click save as option.
- ✓ Change the file name by typing the one you need.
- ✓ Choose a file location you want to save you file in.
- ✓ Chose the file format you want your files to be stored in.
- ✓ Click save.

Why is it important for people to save files when using a computer?

- ✓ To use later as reference.
- ✓ To complete it later.
- ✓ To prevent loss of information

_____is the little storage components in which files are saved in a computer.

- ✓ A folder.

Topic 5 MATTERS

Changes of state.

Matter exists in three form as follows:

- ↔ Solids.
- ↔ Liquids.
- ↔ Gases.

Effects of heating matter.

Heating solids.

- Change of state of matter is physical change.
- it occurs when matter absorbs or lose energy.
- When some solid are heated they change their state of matter.
- Some solid such as candle wax and cooking fat melts into liquid while ice cubes melt into water.
- The process in which a solid change into a liquid is called **melting**.
- There are some solid that changes to gases when heated for examples mothballs.
- The process in which a solid change directly to gas is called **sublimation**.

Heating liquids

- Some liquid changes their state of matter through heating.
- Water changes to vapour when heated.
- The process in which a liquid boils and changes to gas is called **evaporation**.

Effects of cooling matter.

Cooling water vapour.

- When water vapour is cooled it changes to liquid water. This means that is has changed its state from gaseous state to liquid state.
- The process in which a gas changes to liquid is called **condensation**.

Cooling liquids

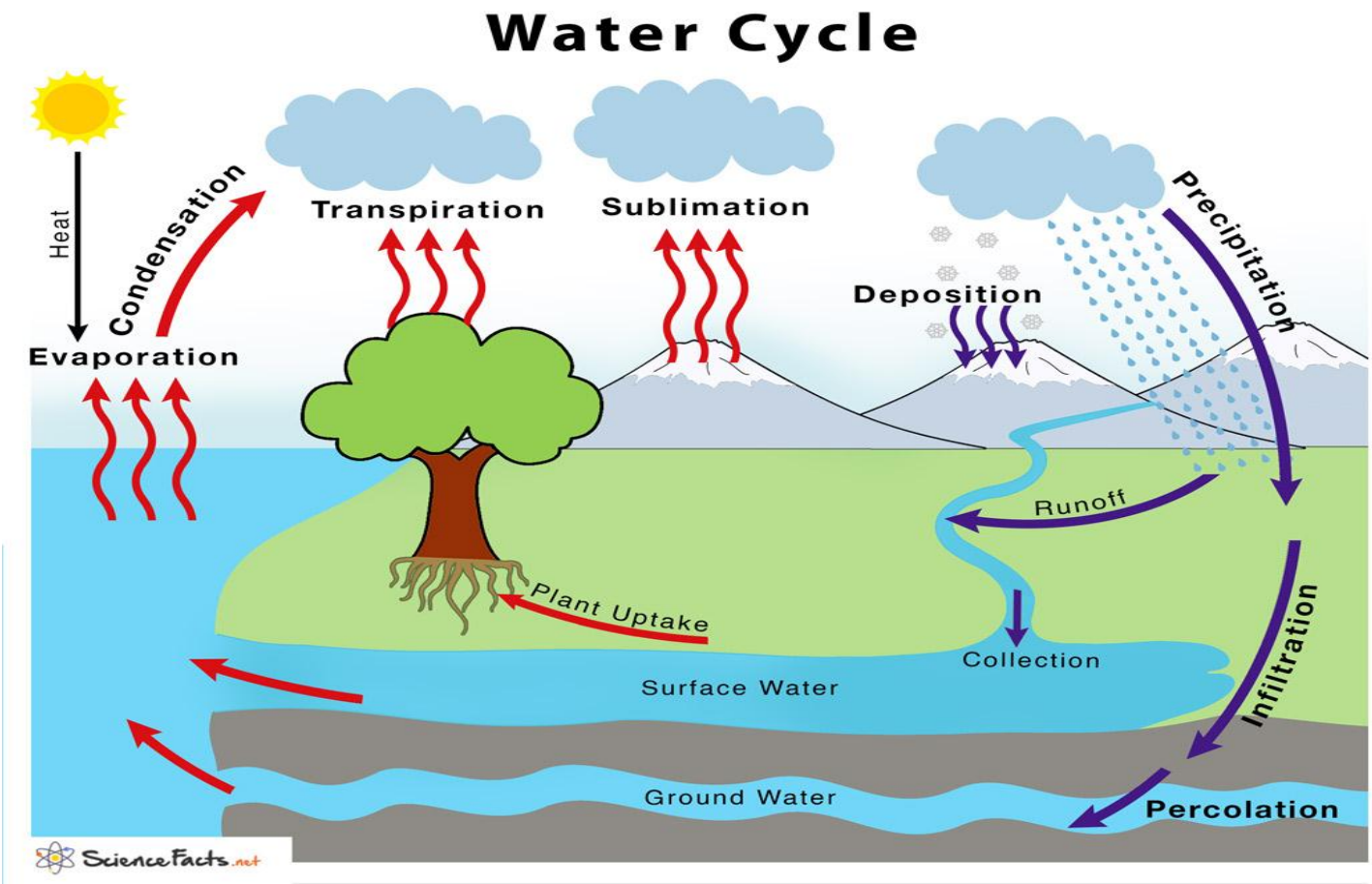
- When some liquids such as water, melted fat and melted candle wax are cooled they harden and becomes solid.
- They change from liquid state to solid state happens where a candle which is made of solid wax melts to liquid wax on heating.
- When a heated candle is turned horizontal the liquid wax drips down.
- The liquid wax quickly turns back into solid wax as it cools.
- The solid cooking fat changes into liquid fats on heating. When heating is stopped, the liquid cooking fat changes back to solid.
- The process in which a liquid change to a solid called **freezing**.

- When some gases such as mothball, vapour are cooled they becomes solids without forming liquids first.
- A mothball is made up of substance known as naphthalene whose vapour changes from gaseous state to solid state on cooling.
- The process in which gas changes directly to a solid without going through the liquid state is known as **deposition.**

Application of changes of state of matter.

- ✓ Heating is used to dry fish and other food to preserve them.
- ✓ It also dries clothes and salts through evaporation.
- ✓ Heating of water bodies causes evaporation and cooling of air forms rain through **condensation**.
- ✓ Cooling perverse food and also makes ice through freezing.
- ✓ Solid metals melt into liquid on heating. The liquid metal can then be cooled and made into other forms or different shapes.

Water cycle.



- A cycle is something that happens over and over again.
- It has no beginning and no end.

- **The following are the water cycle stages.**
  - ❍ **Evaporation and transpiration.**

- The water cycle begins with the sun heating the water bodies as the water heats up it evaporates.
- In addition to that green plants also release water vapour into the air in a process called transpiration.
- The water vapour rises high up the sky.

  ❍ **Condensation.**

- In the sky the temperature is cool, water vapour in the cloud cools down and become liquid water again. This liquid water is stored in cloud.
- This process of water vapour turning back into liquid is called condensation.
- With time the clouds become heavy with water.

  ❍ **Precipitation.**

- The water falls from the sky in the form of rain, snow or hails through **precipitation**.

  ❍ **Runoff and infiltration.**

- As the water falls from the ground the water forms streams and rivers and collects in the lakes and ocean.
- This is known as runoff.
- Water is also absorbed into soil. This is called infiltration.
- The water gets stored as groundwater. The cycle then continues.

Acids and bases.

Identifying acids and bases.

- Most substances are either acids or bases in nature.
- However, we cannot taste each and every substance to tell whether it is acid or bases, so we use **litmus paper** to find out whether a substance is acidic or basic in nature.
- The litmus paper is known as an indicator.
- Indicator change their color when they are dipped in a solution containing an acidic or basic substance.
- There are two types of litmus papers: Red litmus paper and blue litmus paper.
- A blue litmus paper changes or turn red when it is dipped in an acidic substance.
- A blue litmus paper remains blue when it is put in a basic substance.
- A red litmus paper changes to blue when it is put in a basic substance and it remains red when it is put in an acidic substance.
- Lemon juice turns the blue litmus paper red, this means that lemons juice is an acid.
- Wood ash solution turns the red litmus paper blue. This means that wood ash solution is a base.

Common substance used as acids and bases.

Blue litmus paper turns red when dipped into.
Lemon juice.
Orange juice.
Grape juice.
Sour milk.
Therefore, lemons, orange, grapes and sour milk are **acids**.

Red litmus paper turns blue when dipped into
A solution of soap.
A solution of antacid tablets
A solution of baking soda.
A solution of wood ash.
Therefore, soap, antacids, baking soda and wood ash are **bases**.

Physical properties of acids and bases.

- Acids have a sour taste.
- Acids turns blue litmus paper red.
- Bases have a bitters taste.
- They are slippery when touched.
- bases turn red litmus paper blue.

Uses of acids and bases.

Acids.

- Acid in fruits such as lemon and oranges is used to enhance taste in drink and to flavor food.
- Lemon acid is used in some cultures to make milk sour.
- Vinegar contains an acid that is used for cooking purpose and it can also use to give salads a delicious taste.
- Vehicles have battery that have an acid which is used to produce electricity.

Bases

There are various items that we use every day that contains bases.

- Baking powder is used to bake bread, buns and doughnuts.
- Antacids tablets are used to relieve heartburns.
- Soap is used for bathing. We use detergents to wash our clothes.
- We clean our teeth using toothpaste.

Topical revision answered questions.

What is

Freezing

The process in which a liquid change to a solid at a certain temperature.

Melting

The process in which solids change to liquids at a certain temperature.

Condensation

This is a process where vapour change to into liquid at a certain temperature.

Deposition

The process in which gas changes directly to a solid without going through the liquid state.

Why is water cycle important?

✓ It ensure water is available for use at the required time.

To change from gas to solid is called_____

When boiling water, it changes to a gas called_____

Water vapour.

How can you know if a substance is either acid or base?

- ✓ A litmus paper is used.
- ✓ It is inserted in the substance and observed its colour change.
- ✓ If red litmus change to blue the substance is basic.
- ✓ If blue litmus changes to red litmus the substance is acidic.

Write down uses of acids in daily life?

- Vehicles have battery that have an acid which is used to produce electricity.
- Acid in fruits such as lemon and oranges is used to enhance taste in drink and to flavor food.
- Lemon acid is used in some cultures to make milk sour.
- Vinegar contains an acid that is used for cooking purpose and it can also use to give salads a delicious taste.

Which substances can we classify as acids and bases?

An acid substance have a sour taste and turns blue litmus paper red while a basic substance is slippery when touched and turn red litmus paper blue.

Topic 6 FORCE AND ENERGY.

Gravity.

Meaning of gravity.

- Fruits and leaves fell to the ground due to force acting on them.
- Objects when thrown in the air usually drops to the ground due to a force acting on them.
- This force is known as **gravity**.
- **Gravity is defined as the force acting on objects by pulling them down towards the earth.**

Effect of gravity on an object.

- This force that pulls down things is called force of gravity.
- When you throw a ball into the air, gravity pulls it back down.
- When you release stone suspended in the air gravity pulls it down to the ground.
- When books are tipped at edge of the desk, they fall down due to gravity.
- Gravity causes fruits and leaves to fall from tree.
- Gravity is a force that pulls things down. it is also called normal force.

Application of gravity.

- The force of gravity enables the following activities in our lives.
  - ✓ Gravity causes a ball you throw in the air to come down again.
  - ✓ Gravity cause a glass to drops and fall onto the floor.
  - ✓ Gravity causes you to move down a slide.
  - ✓ Gravity causes an apple to fall down from an apple tree.
  - ✓ Gravity keeps you firmly on the earth otherwise you would float away into space.
  - ✓ Gravity causes a pen that rolls off your desk to fall onto the floor.
  - ✓ Gravity causes water to move down a river and waterfall.
  - ✓ Gravity causes a rock to roll downhill.

Sound energy.

Producing sounds.

- Sound is energy that things produce when they vibrate.
- Sounds is produced by clapping hands stamping feet, whistling, ringing a bell, plucking ruler, playing the guitar and beating drum, among other.

Loud and soft sounds.

- Volume is amount of sound something produces.
- It is how loudness of sound is measured.
- loud sound is produced by big vibration while low sound is produced by small vibration.
- The energy of sound determines its loudness.
- The greater the energy the louder the sound is.
- It is noticed that whispering makes a soft sound but shouting to friend across a playground makes a loud sound.
- A fire alarm and car horns are examples of loud sound while whispering to a friend and the sound of blowing wind are examples soft sounds.

Identifying areas with loud sound.

- Areas that produce loud sounds in the environments include;
  - ~ Industries.
  - ~ Music shop.
  - ~ Markets.
  - ~ Stadia or stadium among other areas.

Sound pollution.

↳ Sound pollution is defined as sounds or noises that are loud, annoying and harmful to the ears.

Effect of sound pollution.

- **Effects of sound pollution on harmful health pollution and behavior include the following:**

✓ Loss of hearing; the immediate effects of noise pollution to a person over a period of time is reduced hearing ability. Over time a person may completely lose his or her hearing.
✓ Poor concentration; loud and continues noise makers a person lose concentration on any activity that they are carrying out.
✓ Irritability; loud and continuous noise at home and at school may results in irritability which may lead to aggressive behavior.
✓ Sleep disturbances; loud noise disturbs your sleep and keep you awake.
✓ Interference with communication; loud noise makes people unable to communicate freely.it becomes difficult to understand each other or even hear what someone is saying.

Ways of Protecting yourself from loud sound.

We can protect our self from loud sound through the following ways:

- ✓ Turning down devices producing loud sound.
- ✓ Using hearing protection when in a place with aloud sound.
- ✓ A voiding area with loud sound.
- ✓ Staying in houses with soundproofs walls.

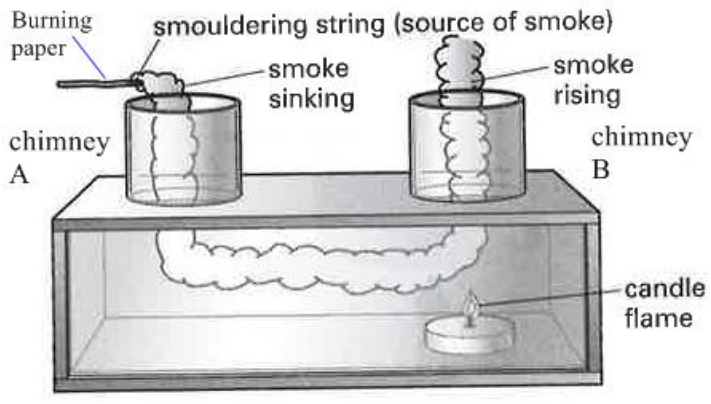
Heat transfer.

Transfer of heat in liquids.

- In an experiment, water with saw dust inside was heated as shown.
- It was noticed that as heating continued saw dust which had settled started moving by rising up.
- This is because the water at bottom of glass container gets hotter expands and rise.
- The cold water at top then moves downwards and takes the places of risen hot water. The cycle repeats itself.

- The sawdust particle shows a movement in water. This movement is called **convection current**.
- Therefore, heat is transferred in liquid through **convection**.

Transfer of heat in gases.



↳ The burning paper produces smoke that moves from chamber A to chamber B through opening.

↳ The candle in chamber B heats the smoke coming from chamber A which becomes lighter and rises.

↳ As the smoke rises up it moves up through chimney B as cooler air enter chamber A through chimney A creating a circular motion known as **convection currents**.
↳ These currents can be viewed through the transparent glass.
↳ Transfer of heat in gases is known as **convention**.

Application of convention in everyday life.

Convention of heat is used in everyday life in the following ways:

- ✓ Ventilating buildings.
- ✓ Inflation of hot air balloons.
- ✓ Heating food in a microwave.
- ✓ Formation of land and sea breezes.
- ✓ Boiling water in a sufuria or kettle.
- ✓ In vehicle engines among other uses.

Transfer of heat by radiation.

↳ When you stand in the sunlight you can feel the warmth of the sun.
↳ Heat energy from the sun is transferred to your skin through **radiation**.
↳ When you sit beside a fire point you feel warm. The warmth of the heat from the fire is transferred from the fire point to you through **radiation**.

Application of radiation in everyday life.

Radiation is used in everyday life in the following way:

↔ Warming ourselves using electric heaters.
↔ Using solar heater in the house.
↔ Drying clothes.
↔ Drying grains and cereals.
↔ Using greenhouses to help the growth of plants among other uses.

Topical questions

What is gravity?

- ✓ It is a force that pulls objects towards centre of the earth,

Give three ways gravity is important.

- ✓ Gravity causes a ball you throw in the air to come down again.
- ✓ Gravity cause a glass to drops and fall onto the floor.
- ✓ Gravity causes you to move down a slide.
- ✓ Gravity causes an apple to fall down from an apple tree.
- ✓ Gravity keeps you firmly on the earth otherwise you would float away into space.

- ✓ Gravity causes a pen that rolls off your desk to fall onto the floor.
- ✓ Gravity causes water to move down a river and waterfall.
- ✓ Gravity causes a rock to roll downhill.

Why do objects throw up in the air fall back down?

- ✓ They are pull back to the earth surface by a force of gravity.

What is sound pollution?

↳ Sounds or noises that are loud, annoying and harmful to the ears.

What is soft sound?

- ✓ A quite sound with very low loudness.

How does sound pollution affect communication?

- ✓ Loud noise makes people unable to communicate freely.it becomes difficult to understand each other or even hear what someone is saying.

What are the effects of noise pollution to a person?

- ✓ Loss of hearing; the immediate effects of noise pollution to a person over a period of time is reduced hearing ability. Over time a person may completely lose his or her hearing.
- ✓ Poor concentration; loud and continues noise makers a person lose concentration on any activity that they are carrying out.
- ✓ Irritability; loud and continuous noise at home and at school may results in irritability which may lead to aggressive behavior.
- ✓ Sleep disturbances; loud noise disturbs your sleep and keep you awake.
- ✓ Interference with communication; loud noise makes people unable to communicate freely.it becomes difficult to understand each other or even hear what someone is saying.

What is the main source of heat on earth?

The sun.

Name two models of heat transfer.

- ✓ Radiation.
- ✓ Convection.

Heat from the sun reaches us through the process of_____

- ✓ Radiation.

How can convection and radiation applied in real life?

Convection is applied in;

- ✓ Ventilating buildings.
- ✓ Inflation of hot air balloons.
- ✓ Heating food in a microwave.
- ✓ Formation of land and sea breezes.
- ✓ Boiling water in a sufuria or kettle.
- ✓ In vehicle engines among other uses.

Radiation is applied in;

- ✓ Warming ourselves using electric heaters.
- ✓ Using solar heater in the house.
- ✓ Drying clothes.
- ✓ Drying grains and cereals.
- ✓ Using greenhouses to help the growth of plants among other uses.

Topic 7 # EARTH AND SPACE.

Moon.

Observing different phases of the moon.

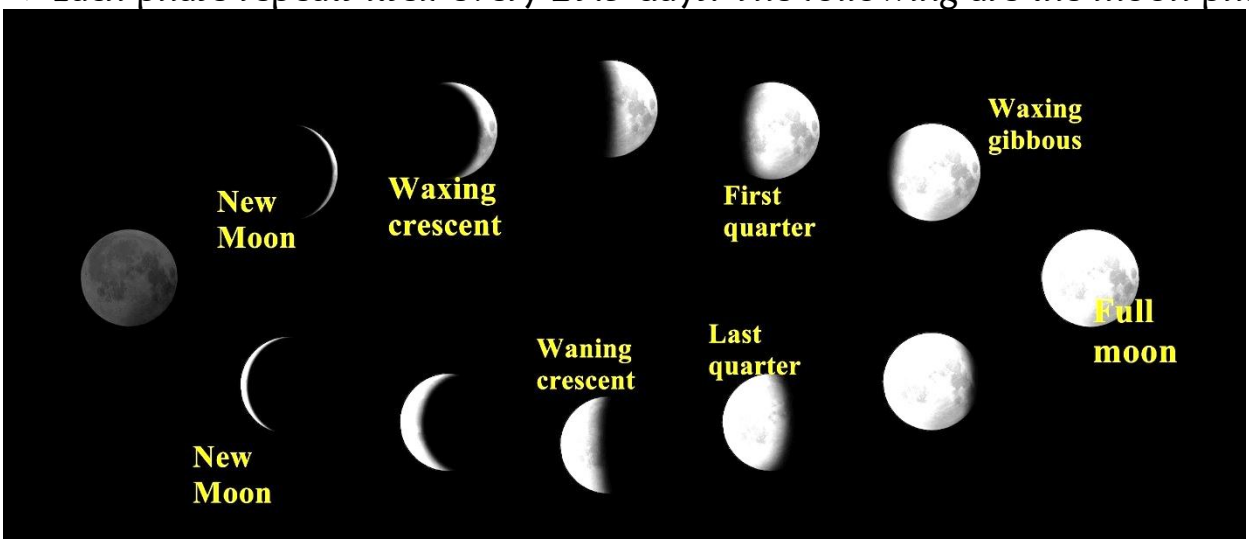
- The phases of moon are the different shapes of the moon we can see from earth over a month.

Identifying different phases of the moon.

Recording different phases of the moon.

↳ There are eight phases that the moon goes through.

↳ Each phase repeats itself every 29.5 days. The following are the moon phases.



Name the different phases of the moon.

- ✓ New moon.
- ✓ First quarter.
- ✓ Fool moon

Arrange the phases of the moon in order.

New moon—waxing crescent-first quarter-waxing gibbons=full moon-last quarter-warning crescent-new moon.