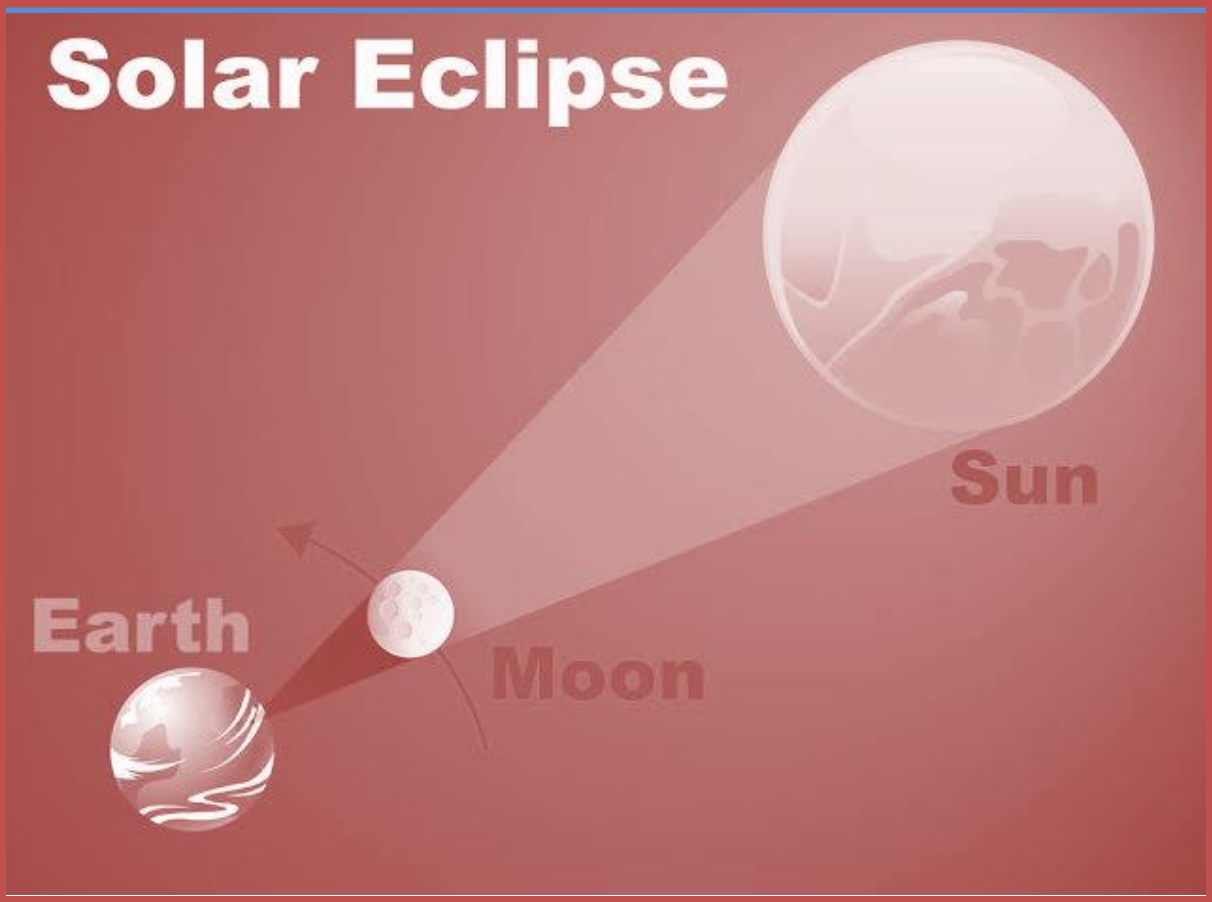
RATIONALISED SCIENCE AND TECHNOLOGY NOTES

GRADE 6



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LIVING THINGS AND THE ENVIRONMENT

FUNGI

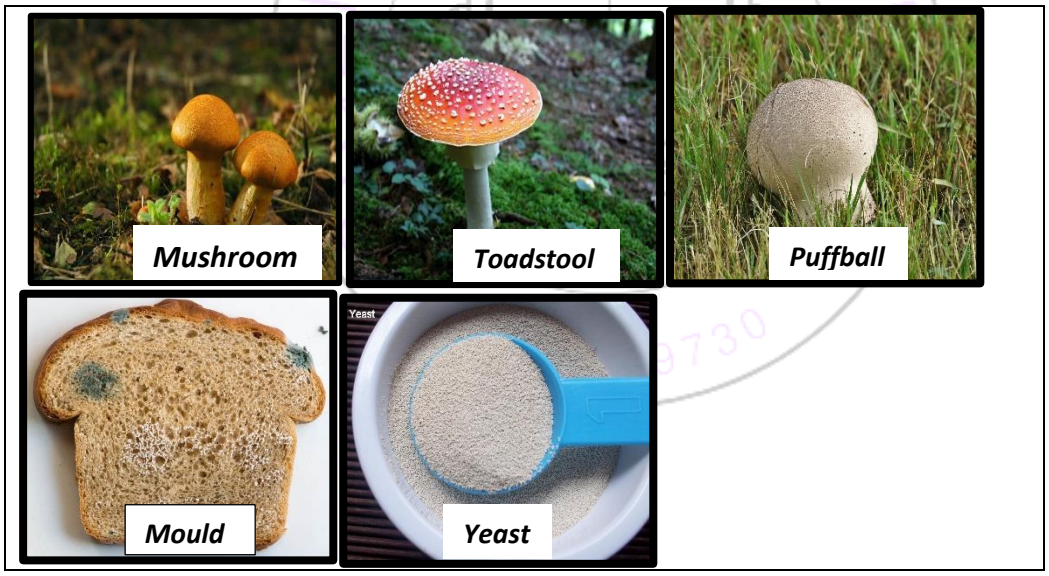
They are neither plants nor animals

They grow on dead and decaying plants and obtain their food from them

They include bread mould, yeast and mushroom

The black or green patches on the slice of bread are called **mould.**

Fungi grow on soil and water. They also grow on decaying food or rotting plants,



S*afety precautions when handling fungi.*

Precautions – these are measures taken in advance to prevent harm to the learners when carrying out different activities. They include;

- Wearing protective gears
- Washing hands after handling plants

- No eating or tasting or smelling poisonous plants

Importance of fungi
to human beings

Fungi are useful.

Some fungi are used as food e.g.

Mushrooms

Some fungi are used in the process of cooking e.g yeast. It is used in the baking industries.

Some fungi are used in making medicines

Some are use in the processing some beverages e.g in fermenting milk.

Economic importance of fungi to the environment.

- It's a source of food
- Yeast used in baking
- Pesticides used in controlling insect and pest

Mushrooms farming is both for food and for export

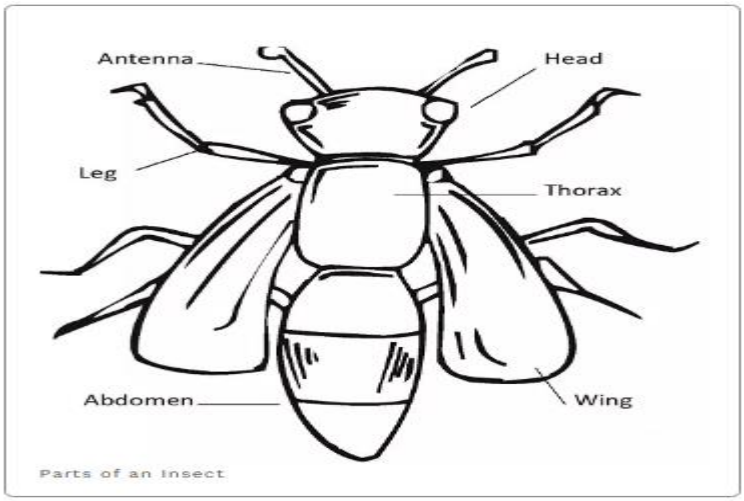
Invertebrates

- **Invertebrates** are animals without backbone.
- Animals with backbones are called **vertebrates**.
- Examples of invertebrates include insects such as a housefly, arachnids such as a spider, millipedes, and centipedes.

COMMON IVERTEBRATES

Insects

Observe the picture below of an insect:



Characteristics of Insects

Insects have six legs (three pairs)

Insects have three body parts (head, thorax and abdomen).

Insects have compound eyes.

Some insects like housefly have wings while others like ants have none.

Insects have a pair of antennae on their head.

Insects lay eggs.

Insects include: ants, housefly, locusts, and butterfly.

Arachnids

- Examples are ticks and spiders

Characteristics of Arachnids

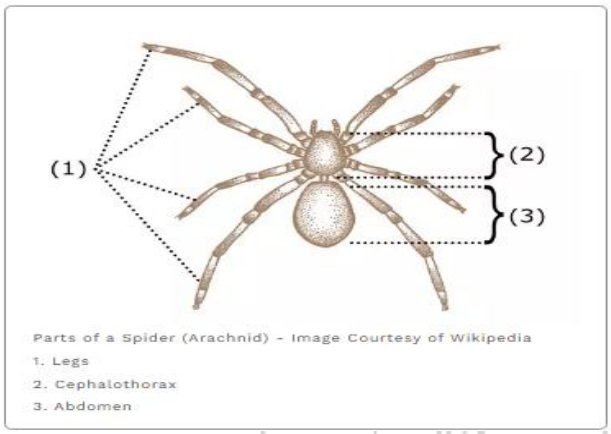
They have 8 legs, four pairs.

They have a soft body.

They do not have wings.

They do not have antennae.

They have their body divided into two: (Cephalothorax and Abdomen)



Parts of a Spider (Arachnid) - Image Courtesy of Wikipedia
1. Legs
2. Cephalothorax
3. Abdomen

Millipedes and centipedes

Characteristics of Millipedes and centipedes

- The following are some characteristics of millipedes and centipedes.

They have many legs.

They have segmented bodies.

They have antennae.

They have hard outer cover.

Millipedes have two pair of legs per segment.

Centipedes have one pair of legs in a segment.

A Millipede

A Centipede - Image Courtesy of Texas A&M University

Note: Centipedes can bite and sting which can cause the skin to turn red due to their venom.

Importance of invertebrates to human beings

Insects are used to pass pollen grains from one flower to another.

Some insects such as bees provide honey which is food for human beings.

Millipede and centipede are important in soil formation. They also help to aerate the soil.

Insects such as silkworm produce silk used in making clothes

HUMAN CIRCULATORY SYSTEM

Parts of the human circulatory system

- The circulatory system is composed of the main parts namely:

The heart

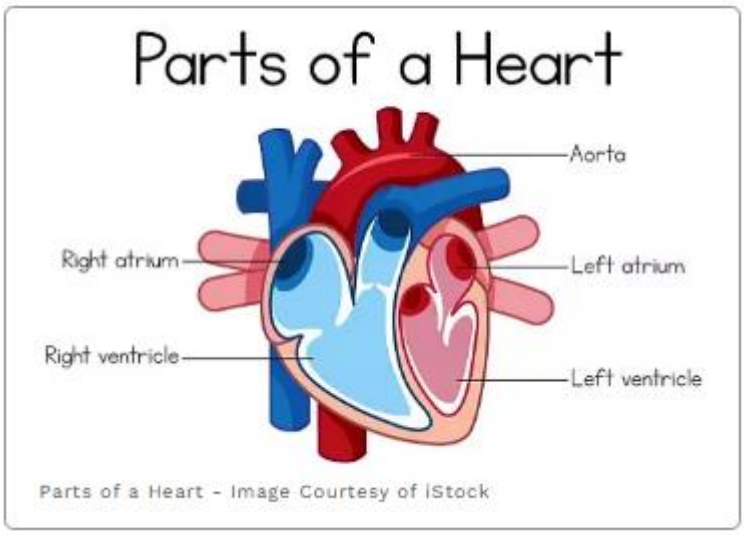
The blood

The blood vessels

- The heart acts as a pump. It pumps blood to all parts of the body.
- The blood is used to transport various substances within the body.
- The blood vessels are tubes or channels that the blood flows through. The blood vessels include: **arteries, veins** and **capillaries.**

1. The Heart

Study the parts of the heart shown below:



- The heart has two chambers: the upper and lower chambers.
- The upper chamber is called **auricle** while the lower chamber is

called **ventricle.**
- Each chamber is divided into two parts.
(i) **Right auricle/atrium**
(ii)**Left auricle/atrium**
(iii)**Right ventricle**
(iv)**Left ventricle**

Functions Of Parts Of The Heart

Auricles / Atria

- These are the upper chambers.
- Auricles receive blood from different parts.
- Right auricle receives blood without oxygen from all parts of the body.
- Left auricle receives blood with oxygen from the lungs.
- Auricles have thin muscles.

Ventricles

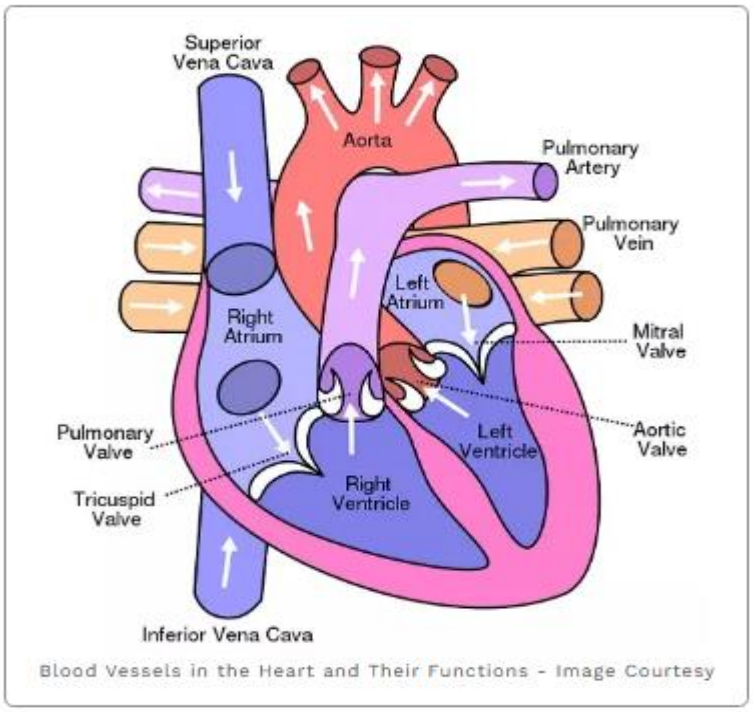
- These are the lower chambers.
- They receive blood from the auricles and pump it outside the heart.
- Right ventricle receives deoxygenated blood from right auricle and pumps it into the lungs for oxygenation through pulmonary artery.
- Left ventricle receives oxygenated blood from the left auricle and pumps it to all parts of the body through the aorta.
- The heart is connected to other body parts through the blood vessels.

Note:

The left ventricle has stronger muscles than right ventricle.

The heart has valves to prevent backflow of blood.

The left auricle is also called the left atrium while the right auricle is also called the right atrium



Blood Vessels in the Heart and Their Functions - Image Courtesy

Examples Of Blood Vessels In The Heart And Their Functions

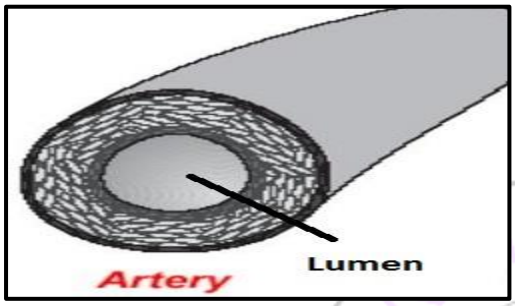
Pulmonary artery: - Carries blood without oxygen (deoxygenated) from the heart to the lungs.
Aorta: - It is the main artery. It carries blood with oxygen (oxygenated) to the rest of the body.
Vena cava: - It is the main vein that receives blood that has no oxygen (deoxygenated blood) from the rest of the body and carries it to the heart.
Pulmonary vein: - It carries blood with oxygen from the lungs to the heart.

2. Blood vessels

Types of blood vessels and their functions

- The blood vessels are used to transport blood in the body.
- There are three main types of blood vessels.
- They include: **arteries, veins** and **capillaries.**

Arteries



They carry blood away from the heart.

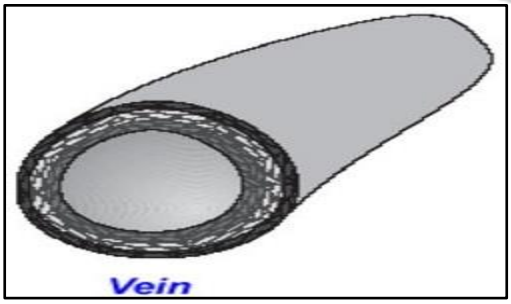
They are located deep in the skin.

They have thick walls and narrow lumen where the blood flows under very high pressure.

All arteries carry oxygenated blood except **pulmonary artery.**

They have no valves.

Veins



They carry blood to the heart.

They are located near the skin.

They have thin walls and wide lumen where blood flows under low pressure.

All veins carry deoxygenated blood except the **pulmonary vein** that carries blood with oxygen.

Capillaries

They are spread all over the body.

They have thin walls and have no valves.

3. The Blood

- The blood is made up of four components:

Plasma

White Blood Cells

Red Blood Cells

Platelets

Functions of Plasma

- It is the liquid part of blood.
- It is used in transportation of:

Other blood cells.

Waste materials.

Digested food.

Heat and hormones.

Functions of White blood cells

- They protect the body from diseases.

Functions of Red blood cells

- They contain haemoglobin which is a red colouring matter.
- Haemoglobin combines with oxygen for transportation.

Functions of Platelets

- They help in clotting of blood.
- Clotting of blood prevents excess loss of blood after an injury.

Importance Of Blood Circulation In The Body

- The movement of the blood from the heart to the other parts and back to the heart is called **blood circulation.**
- The blood circulation is important since it helps in transportation of:

Digested food from the ileum to other body parts.

Oxygen from the lungs to other body parts.

Carbon dioxide from the body parts to the lungs for removal.

Excretory wastes from the body cells to the excretory organs.

Heart from the body cells to all body parts.

Common health conditions of the human circulatory system

1. High Blood Pressure (Hypertension)

Symptoms:

You might not feel anything, but some people get headaches, feel dizzy, or have nosebleeds.

Prevention:

a) Eat healthy foods like fruits and vegetables.
b) Exercise, like walking or playing sports.
c) Avoid smoking and drinking too much alcohol.
d) Relax and don't get too stressed.
e) Check your blood pressure regularly.

2. Hardening of the Arteries (Atherosclerosis)

Symptoms:

Pain in the chest, legs, or difficulty breathing.

Can lead to heart attacks or strokes.

Prevention:

a) Eat foods that are low in fat and sugar.
b) Get moving and exercise.
c) Stay away from smoking.
d) Keep your blood pressure and cholesterol healthy.

3. **Heart Disease (Coronary Artery Disease**)

Symptoms:

Chest pain, shortness of breath, or feeling tired easily.

Prevention:

a) Exercise to keep your heart strong.
b) Eat healthy foods.
c) Don't smoke or drink too much alcohol.
d) Keep your weight healthy.

4. Heart Attack

Symptoms:

Chest pain, pain in your arm or jaw, feeling out of breath, or nausea.

Prevention:

a) Eat healthy, like fruits and fish.
b) Stay active by playing sports.
c) Don't smoke.
d) Take care of other health problems like diabetes or high blood pressure.

5. Stroke

Symptoms:

Weakness on one side of your body, trouble speaking, or a really bad headache.

Prevention:

a) Keep your blood pressure healthy.
b) Stay active and eat healthy foods.
c) Avoid smoking and drinking too much alcohol.

6. Leg Pain from Poor Circulation (Peripheral Artery Disease)

Symptoms:

Pain or cramps in your legs, especially when you walk or run.

Prevention:

a) Get regular exercise like walking.
b) Don't smoke.
c) Eat healthy foods to keep your blood sugar and weight in control.

7. Swollen Veins (Varicose Veins)

Symptoms:

Big, twisted veins, leg pain, or feeling heavy in your legs.

Prevention:

a) Don’t stand still for too long.
b) Raise your legs when you can.
c) Wear special socks if your doctor says so.
d) Stay active and healthy.

8. **Blood Clots in Legs (Deep Vein Thrombosis)**

Symptoms:

Swollen, painful legs that feel warm.

Prevention:

a) Keep moving, especially if you’ve been sitting for a long time, like on a plane.
b) Drink enough water and stay active.
c) Don’t smoke.

By eating healthy, exercising, and avoiding bad habits like smoking, we can keep our hearts and blood vessels healthy!

Importance of a healthy circulatory system

A healthy circulatory system is very important because it helps the body work properly. Here’s why it’s so important:

1. **Carries Oxygen and Nutrients:**

The circulatory system, which includes the heart and blood vessels, carries oxygen and important nutrients to all parts of your body. This helps your organs, muscles, and tissues stay healthy and function well.

2. **Removes Waste:**

It helps remove waste products, like carbon dioxide and other toxins, from your body. This keeps your body clean and free of harmful substances.

3. **Regulates Body Temperature:**

Blood helps control your body temperature. It moves heat around so you can stay warm or cool down when needed.

4. **Fights Infections**:

The circulatory system carries white blood cells, which help protect your body from infections and diseases.

5. **Keeps Heart Healthy**:

A healthy circulatory system keeps your heart strong and working well, making sure it pumps blood properly to all parts of the body.

6. **Helps You Feel Good**:

When your circulatory system is healthy, you feel energetic, your muscles work better, and your body can perform all activities like walking, playing sports, and thinking clearly.

MATTER

Matter - everything around us. All materials and substances that exist and occupy space.

States of matter - different forms of substances, that is solids, liquids and gases.

Change of state of matter

Change of state - to turn from one form to another, for example from solid to liquid. It occurs when matter absorbs or loses energy.

Effects of heating matter.

When solids are heated, they change their states of matter. Some solids such as candle wax and cooking fat, melt into liquid, while ice cubes melt into water (liquid)

The process in which a solid changes to a liquid is called **melting.**

There are some solids that change to gases when heated, for example mothballs. The process in which a solid changes directly to a gas is called **sublimation. Heating Liquids.**

Some liquids change their state of matter through heating.

Water (liquid) changes to water vapor (gas) when heated. The process in which a liquid boils and changes to a gas is called **evaporation. Effects of cooling matter. Cooling water vapour**

When vapour is cooled it changes to liquids. This means that it has changed its state from gaseous state to liquid state.

The process in which a gas changes to a liquid is called **condensation.**
Cooling Liquids

When liquids such as water, melted fat and melted candle wax are cooled, they harden and become solids. ● They change from liquid state to solid state.

The process in which a liquid changes to a solid is called **freezing.**

When gases such as mothball vapour are cooled, they become solids without forming liquids first. A mothball is called **sublimation**

made up of a substance known as

naphthalene whose vapour changes from gaseous state to solid state on cooling.

The process in which a gas changes directly to a solid without going through the liquid state is known as **deposition.**

Application of change of state of matter.

Heating is used to dry grains, fish and other foods to preserve them. It also dries clothes and salt through evaporation.

Heating of water bodies causes evaporation and cooling of air forms rain through condensation.

Cooling preserves food and also makes ice through freezing. Solid metal melts into liquid on heating. **Water cycle**

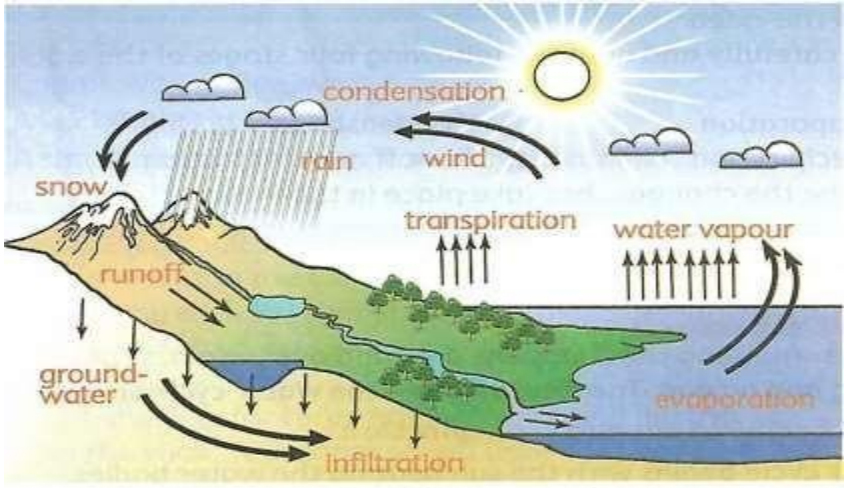


Fig. 2 Water cycle

Naphthalene whose vapor changes from gaseous state to solid state on cooling.

★ The process in which a gas changes directly to a solid without going through the liquid state is known as deposition.

Application of change of state of matter.

a) Heating is used to dry grains, fish and other foods to preserve them. It also dries clothes and salt through evaporation.
b) Heating of water bodies causes evaporation and cooling of air forms rain through condensation.
c) Cooling preserves food and also makes ice through freezing. Solid metal melts into liquid on heating.

Composition of Air

- Air is a mixture of gases.
- The major gases that are found in the air are:

Nitrogen - 785%

Oxygen - 21%

Carbon dioxide - 0.03%

Inert gases - 0.97%

Uses of oxygen

- Oxygen is used in burning.
- Oxygen is used in germination.

- Oxygen is used in breathing.

Uses of carbon dioxide

1. Photosynthesis.

-This is the process by which green plants make their own food.
- Green plants use carbon dioxide to make food during the day and release oxygen to the atmosphere.
- Therefore, they clean air.

2. Preservation of soft drinks

- Carbon dioxide is added in soft drinks to preserve them.
- Therefore they can last for longer time.

3. Making fire extinguishers

- Carbon dioxide does not support burning.
Therefore, it is used to put out fire.

Uses of nitrogen

1. In leguminous plants

- Leguminous plants such as beans, peas and clovers use nitrogen from air in the soil to make proteins.

2. In food preservation/packaging

- Nitrogen is used in food packaging containers to keep off oxygen in order to make the food last longer.

3. In light bulbs

- To prevent the filament from burning.

4. In making fertilisers

- Nitrogen is one of the materials used in making fertilisers that are used by plants.

Uses of inert gases

1. Making electric tubes and bulbs.
2. Making advertisement lights.

Air pollution

To pollute is to contaminate, make dirty or impure.

AIR POLLUTION is the act of contaminating the air with toxic substances.

Air pollutants in our environment

1. Smoking cigarettes

2. Gases from vehicle exhausts.

3. Burning tyres and plastic materials

4. Spraying farm chemicals

5. Aerosol sprays

6. Industrial waste gases e.g. sulphur dioxide

Effects of air pollution in the environment

Effects of air pollution on plants

--- Dust particles, soot and smoke block stomata.

--- It affects photosynthesis

--- It interferes with transpiration and gases exchange.

--- Acid rain damages the leaves and roots of the plants.

--- Acid rain interferes with living organisms in the soil.

--- Decomposition of animals and plant materials is affected.

Effects of air pollution on animals

--- It affects the respiratory system resulting in sneezing, coughing and bronchitis. --- Acid rain may kill aquatic animals --- Polluted air may lead to lung cancer.

Effects of air pollution on non-living things

Acid rains eat away (corrode) some metals e.g. iron sheets and limestone (marble) Smoke and smog cause poor visibility, increasing accidents on the roads.

Dust contaminates our environment

Ways of reducing air pollution in the environment

Not burning tyres and plastic materials that emit toxic substances.

Vehicles should have well-maintained engines.

Reducing the use of farm chemicals e.g. pesticides and use biological and mechanical methods of control.

Avoid the use of harmful aerosol sprays which deplete the ozone layer. Use ozone friendly chemicals.

On-site treatment e.g. industrial gases

Ban cigarette smoking in public.

➢ Using ventilation improved pit latrines, sprinkling water on dusty wastes, sprinkling water on dusty grounds, properly disposing wastes, sprinkling ash in pit are some of the practices that can reduce air pollution.

FORCE AND ENERGY

Light Energy

Movement of light through materials

Transparent, translucent and opaque materials

Some materials allow light to pass through them and one can see through them clearly. Other materials allow only some light to pass through them. Other materials do not allow any light to pass through them and one cannot see through them.

Activity: Investigating transparent, translucent and opaque materials

In the following activity, we shall find out which materials fall into each group.

Collect the following materials:

· A sheet of clear glass

· Clear water

· Pieces of wood

· Stones

· A sheet of white paper

·Light and heavy pieces of cloth

·A clear polythene bag

· A dark-colored polythene bag

·A piece of clear plastic

·A piece of dark-colored plastic

· A sheet of paper that has been dipped in oil

·A piece of stained glass

A piece of brown paper

Procedure

i. Light a torch behind each of the materials you have collected. Find out which materials allow light to pass through them and which ones do not. Record your findings in your exercise book.

ii. Look through each of the materials.

- Which objects can you see through clearly?
- Which ones allow only some light to pass through them?

- Which objects do not allow any light to pass through them?

(iii) Record your findings in your exercise book.

Materials which do not allow any light to pass through them are said to be opaque. One cannot see through opaque materials.

Materials which allow light to pass through them are said to be transparent. One can see through transparent materials clearly.

Materials which allow some light to pass through them are said to be translucent. One cannot see through translucent materials clearly.

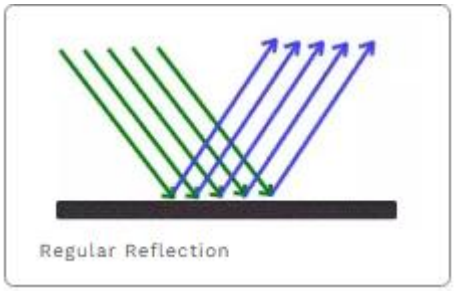
Uses of transparent, translucent and opaque materials

- Transparent materials are used to make vehicle windscreens, window panes, lamps and spectacles. State other uses of transparent materials.
- Frosted glass is translucent. One cannot see through it clearly. It is used to make sky lights. A sky light is a glass-covered opening in a roof of a building to let in light. Frosted glass is also used to make toilet and bathroom window panes. State other uses of translucent materials.
- Opaque materials include stone walls of a house and most clothes that we wear. People cannot see through opaque materials. These materials therefore give privacy. State other uses of opaque materials.

Reflection of light

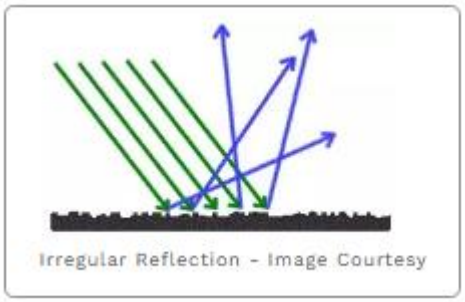
- Reflection of light is when light falls on a surface and the light rays bounce back.
- Reflection of light when it falls on different materials.

- Reflection of light takes place when light falls on a shiny smooth opaque surface.
- Examples of opaque materials that cause reflection are mirror and smooth shiny surfaces.
- When light is reflected in one direction on smooth surface the type of reflection is called ***regular reflection.***



Regular Reflection

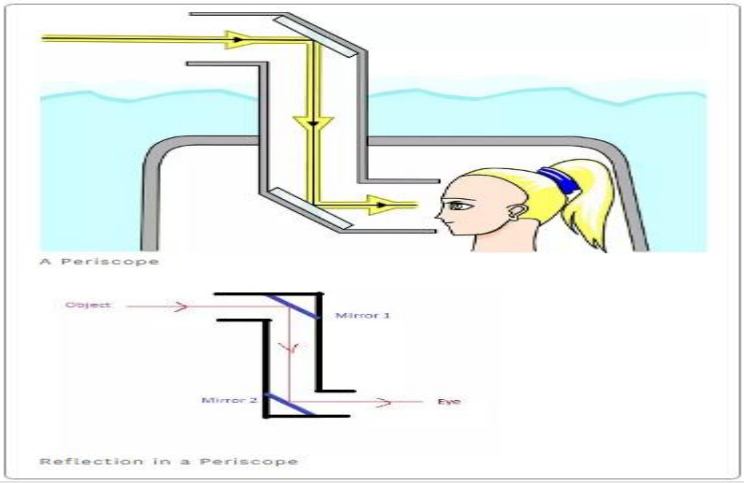
- If a lay of light falls on a rough shiny opaque surface, the reflection will be to different directions.
- The type of reflection is called ***irregular reflection.***



Application of reflection of light in daily life

1. A microscope uses a mirror to reflect light to the specimen under the microscope.
2. Car mirrors enable the driver to see things behind the cars.
3. Reflection enables one to check how they look.
4. Reflection facilitates the dentist checking in your mouth.
5. Reflection is used when making a periscope. A periscope is

used to observe objects round corners. It is also used by sub-marines to observe vessels in the sea.

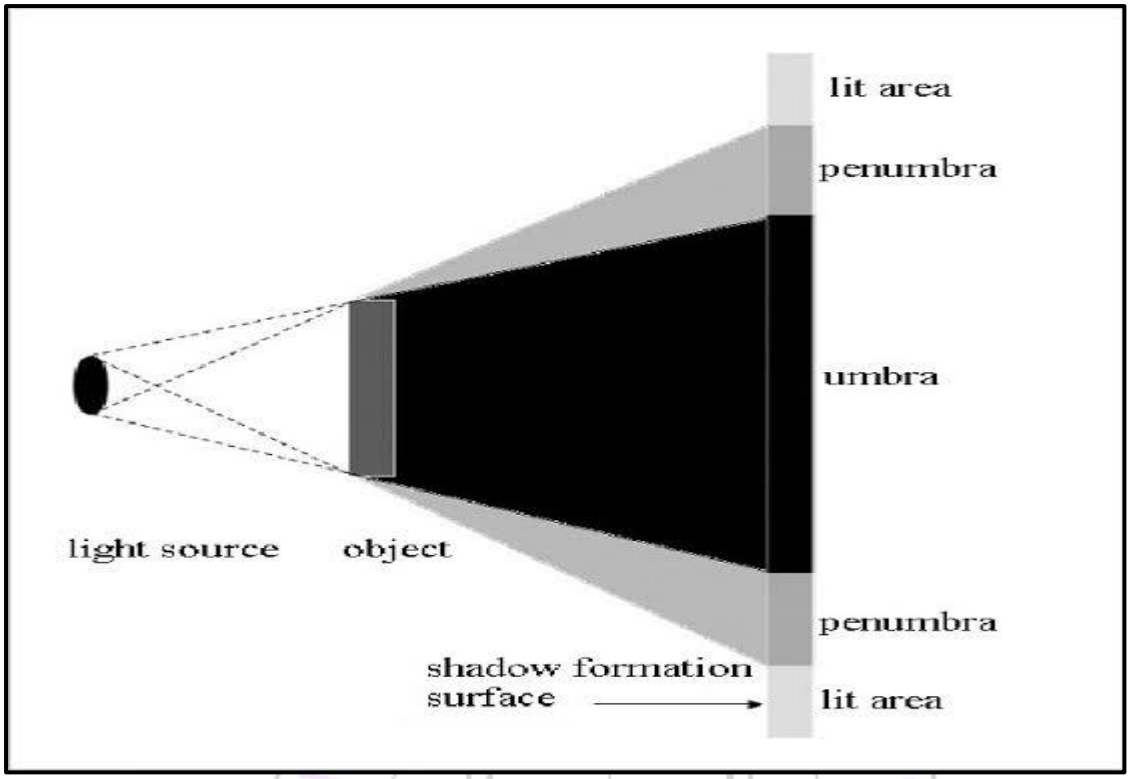


Formation of shadows and eclipses

1. Shadows:

Shadows form when an object blocks the light from a source like the Sun or a flashlight. Because the light can't go through the object, a dark area, called a shadow, appears behind it.

Parts of a Shadow:



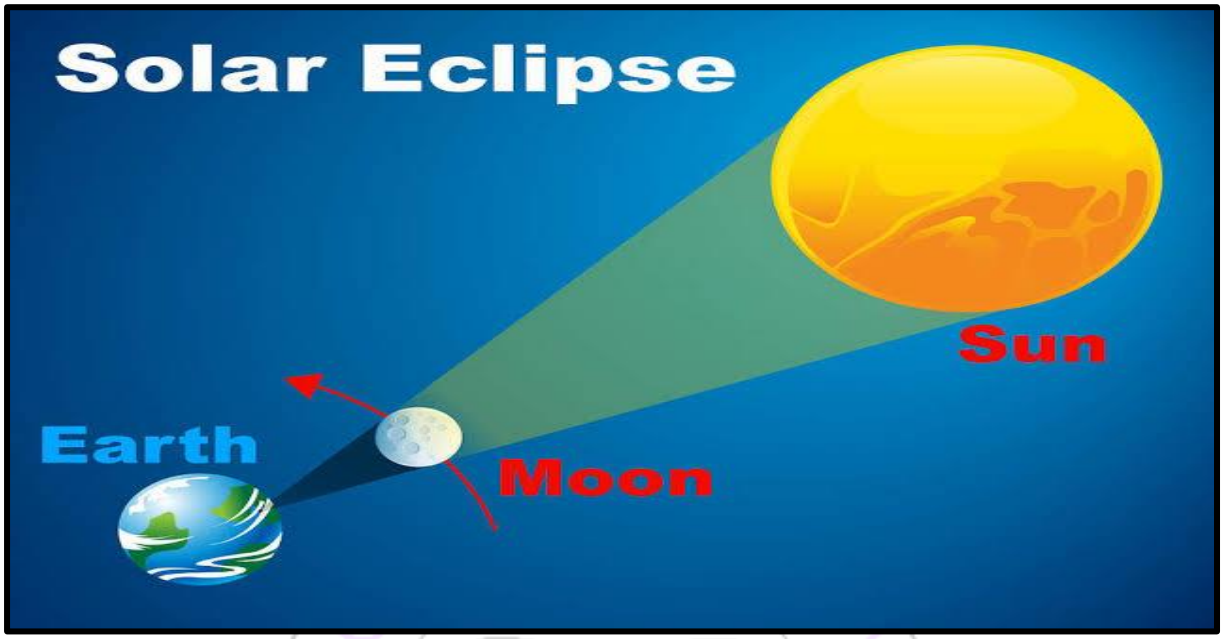
Umbra: The darkest part of the shadow, where no light reaches.

Penumbra: The lighter part around the edge, where some light still reaches.

Examples: You can see shadows when you stand in sunlight, or when you hold your hand in front of a flashlight.

2. Eclipses:

(a) Solar Eclipse:



How It Happens: A solar eclipse happens when the Moon moves between the Earth and the Sun. The Moon blocks the Sun's light and creates a shadow on Earth.

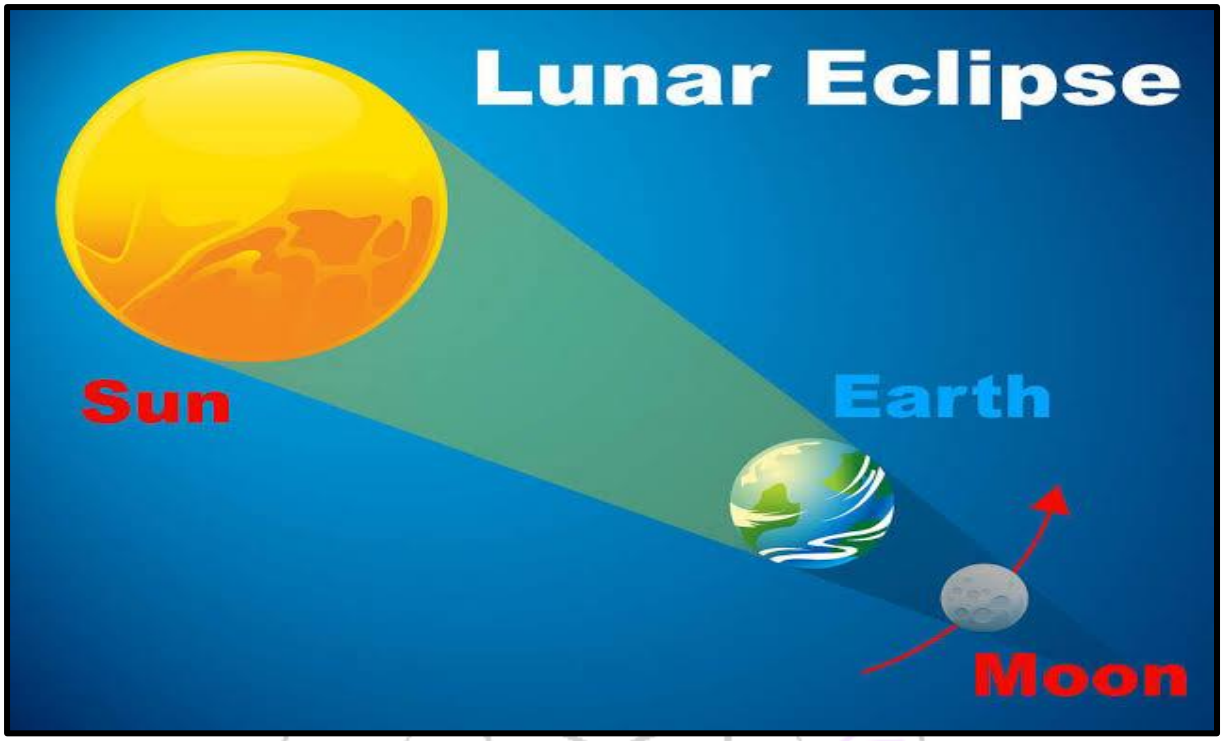
Types of Solar Eclipses:

Total Solar Eclipse: The Moon completely covers the Sun, making it very dark for a short time.

Partial Solar Eclipse: The Moon only covers part of the Sun, so it gets a bit darker but not totally.

Annular Solar Eclipse: The Moon covers most of the Sun, leaving a bright ring around it.

(b) Lunar Eclipse:



A lunar eclipse happens when the Earth moves between the Sun and the Moon. Earth blocks the Sun's light, creating a shadow on the Moon.

Types of Lunar Eclipses:

1. **Total Lunar Eclipse**: The Earth's shadow completely covers the Moon, making it look red or dark.
2. **Partial Lunar Eclipse**: Only part of the Moon is covered by Earth's shadow.
3. **Penumbral Lunar Eclipse**: The Moon moves through the edge of Earth's shadow, so it only looks a little darker.

So, shadows happen when light is blocked, and eclipses are special types of shadows in space!

Image Formation in Plane Mirrors

1. **How it Works:**

When you stand in front of a mirror, light from you bounces off the mirror and comes back to your eyes.

This makes you see yourself in the mirror, but it looks like the image is behind the mirror.

2. **What the Image Looks Like:**

Same Size: The image in the mirror is the same size as you.

Upright: The image is right-side up, just like you are standing.

Flipped: The image is reversed left to right. For example, if you lift your right hand, the image in the mirror lifts its left hand.

Virtual Image: The image isn't really behind the mirror; it just looks like it is. We call this a "virtual image."

3. **Distance from the Mirror**:

The image appears as far behind the mirror as you are in front of it. So, if you are 1 meter in front of the mirror, the image looks like it is 1 meter behind the mirror.

So, when you look in a mirror, you see a reflection that looks just like you, as if it's standing the same distance behind the mirror.

Rainbow formation

A rainbow is formed by the refraction of sunlight as it passes through droplets of water. Rainbows are normally seen in the sky when it is raining and the sun is also shining at the same time.

A rainbow is made up of seven colours which result from the splitting of white light. This splitting of white light into colours is called dispersion. The band of colours produced is known as spectrum.

Activity: Making a rainbow

To make a rainbow, you need the following materials:

· A mirror

A basin

· Clear water

A clear drinking glass

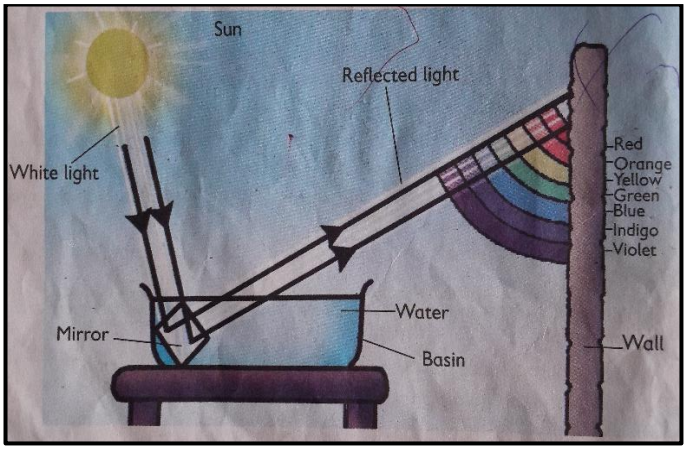
· A white sheet of paper

A spraying device

Procedure

Take a basin and half-fill it with clear water.

i. Place the mirror at the bottom of the basin in a tilted position with the reflecting side of the mirror facing upwards.
ii. Place the basin on a stool near a window or a door that allows the sunlight in.
iii. Tilt the mirror under the water to reflect light on the wall as shown in figure.



Activity: Making a rainbow

For this activity, you will need the following materials:

· A clear drinking glass

· Clear water

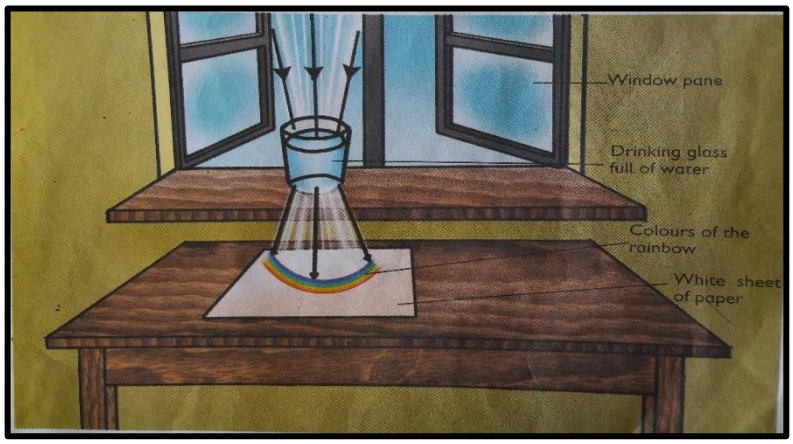
·White manila paper

· Sunlight coming through a window

Procedure

i. Fill a drinking glass with clear water. Put it near a window that allows in sunlight as shown in figure below.

ii. Place a white sheet of paper on a table near the window. Allow the light that passes through the glass with water to fall on the sheet of paper. What do you observe?

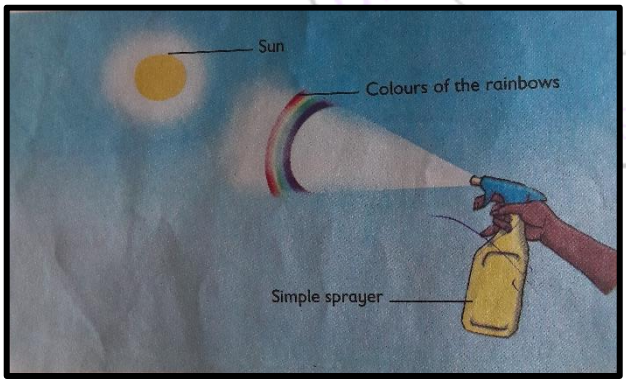


You may have observed that the white light splits into the colours of the rainbow.

Activity: Making a rainbow

Use a simple sprayer to spray water on the rays of the sun as shown in figure below.

You can also use your mouth to spray some water into the air on a sunny day. As the water droplets fall down, do you see a rainbow?



Observation

You observe that a rainbow is formed when the water is sprayed into the air on sunny day. Distinct colours are formed. These colours are: Red, Orange, Yellow, Green, Blue, Indigo and Violet (ROYGBIV) To assist you in remembering the

pattern of the colors' of the rainbow you could recite this sentence: Richard Of York Gave Battle In Vain).

Suggest other ways of making a rainbow.

Levers as simple machines

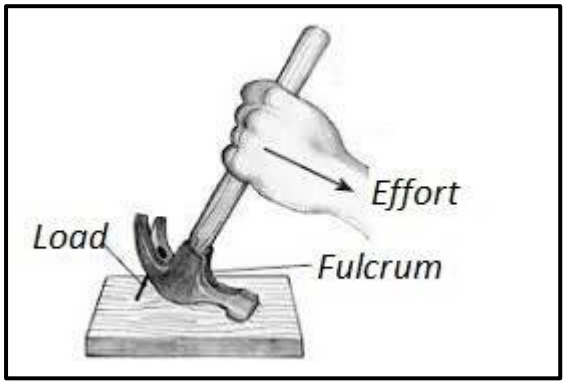
Machines are devices that simplify work.

Examples of simple machines that make work easier include:

a) A bottle opener
b) A crowbar
c) A ladder
d) A spade
e) A fishing rod
f) An axe
g) A hammer
h) A wheelbarrow
i) A pair of scissors

Parts of a lever

The parts of a lever are the load, the effort and the fulcrum.



Classes of levers

Levers are divided into three classes based on the position of three parts: the fulcrum (pivot point), the effort (force applied), and the load (object to move). Here's a simple explanation of each class:

1. **First-Class Levers:**

Fulcrum is in the middle, with the effort on one side and the load on the other.

Example: A seesaw or scissors. The fulcrum is in the center, and when you push down on one side (effort), the other side goes up (load).

2. **Second-Class Levers:**

Load is in the middle, with the fulcrum on one side and the effort on the other.

Example: A wheelbarrow. The wheel (fulcrum) is at the front, the load (what's in the barrow) is in the middle, and you lift (apply effort) at the handles.

3. **Third-Class Levers:**

Effort is in the middle, with the fulcrum on one side and the load on the other.

Example: A broom. Your hand at the top is the fulcrum, your other hand applies effort in the middle, and the load is at the brush end sweeping the floor.

Uses of levers in day to day life

Levers are used in everyday life to make work easier by reducing the effort needed to move or lift objects. Some common uses include:

1. Scissors – to cut materials.
2. Seesaw – for balance and play.
3. Hammer – to pull out nails.
4. Wheelbarrow – to transport heavy loads.
5. Bottle Opener – to remove caps from bottles.
6. Stapler – to bind papers together.
7. Broom – for sweeping.
8. Tongs – to grip and lift objects.

Slopes as simple machines

Slopes, or inclined planes, are one of the six types of simple machines. They make it easier to move heavy objects over a distance by reducing the amount of force needed to lift or move them. Instead of lifting something straight up, a slope allows you to push or pull an object up gradually with less effort.

Examples of slopes

1. Staircase as an inclined plane

- Staircase makes it easier for a person to move to another part of a building or a room.

2. Ladder as an incline plane

- Ladders are used in construction sites to move to a higher level.
- They make work easier by reducing the effort when climbing.

3. Ramp as an inclined plane

- Ramp is a flat plane. It is used when moving from the low point to an upper part.
- Ramps are necessary in most building because they are easier

for physically challenged people to move to the upper part of the building easily.

Uses of slopes

Important tips

- Machine makes work easier.
- A ladder is a simple machine that makes work easier.
- A ladder belongs to a group of machines called slopes.

ABOUT THE AUTHOR

Gilbert Kipkirui Sigei is an experienced educator and content creator with a passion for improving learning experiences in Kenyan schools. A graduate of Nakuru Teachers Training College with a P1 Certificate, Gilbert's teaching journey began after completing his education at Barsiele Secondary School (KCSE) and Segetet Primary School (KCPE).

With over 11 years of professional teaching experience in Kenyan private schools, Gilbert has established himself as a knowledgeable and reliable teacher of Science and Social Studies. He has authored several Competency-Based Curriculum (CBC) guides, including Science and Technology for Grades 4, 5, and 6, and continues to develop resources to support teachers and learners.

Driven by the shortage of quality learning materials in schools, Gilbert is inspired to create accessible educational content. His work has earned him recognition from teachers and parents alike, who frequently reach out for CBC guidance and support.

When he isn't working on schemes of work and lesson plans, Gilbert enjoys reading and traveling to explore new adventures. A proud introvert, he prefers quiet moments and meaningful conversations, speaking only when necessary and staying reserved until asked to contribute again.

Gilbert is happily married and the proud father of two boys. To connect with him, find him on Facebook at Gilbert Sigei or WhatsApp him at 0711299730.

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