SEEDS OF GRACE PRI. SCHOOL

P.O BOX 72011 NTENJERU- MUKONO

PRIMARY THREE LITERACY BOOKLET

HOME STUDY MATERIAL FOR 2024

NAME:
SCHOOL:
CLASS:
CLASS TEACHER

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'Quality is Our Pride"

Theme 3:

OUR ENVIRONMENT

Lesson one

Reading descriptions of words

-Living organisms - weathering - earthquake -deforestation - afforestation - mineral salt

- earthworm - erosion-aerate -Bacteria -dissolve -Decay/rot

Soil

Definition of soil

Soil is the top layer that covers the earth's surface where plants grow

Components of soil

Soil is made of the following (components) or soil consists of the following

- rock particles
- humus/organic matter
- water
- air
- living organisms
- dissolved mineral salts

(a) Rock particles

These are pieces of rock that have broken away from the parent rock. The process by which particles break from the parent rock is called **weathering.**

(b) Humus

This is the part of soil is formed from plant and animal material when they decay.

Importance of humus in soil

Humus helps to hold the soil particles together

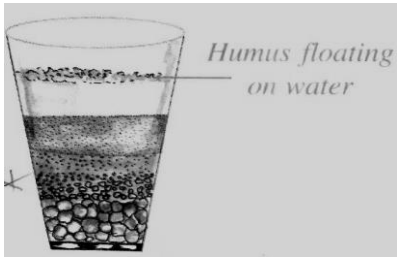
Humus helps the soil to hold more water and air.

Things to be used (Apparatus)

- Soil sample, empty glass, water

(c) Experiment/activity

- Get a big glass
- Pour in soil up to the level shown in the picture below
- Add water to the glass
- Now cover the glass and shake it and put it down.
- Observe the material in the glass at the top
- In your observation you might have seen some dark coloured material floating on the surface of the water. This organic matter is called**humus**.



Exercise/activity

1. What is soil?
2. Write down the components of soil.
3. What do we call the breaking up of rocks to make soil?
4. What is formed when plants and animals die?
5. Give three reasons why humus is important in the soil.

Lesson two

(a) Water

Water is found in small spaces between the soil particles, some water also exists as a thin layer of moisture on the surface of the soil particles

Importance of water in the soil

- It dissolves mineral salts in the soil so that they can be absorbed by plant roots.
- It is absorbed by plant roots and used during the process of photosynthesis
- It helps to keep the soil cool
- It prevents the soil from drying up.

(b) Air

Air is found in the large spaces between the soil particles.

Importance of air in soil

- It is used by the plant roots and other living organisms in the soil for breathing
- It is used by seeds during germination
- It also keeps the soil cool

Experiments/articles

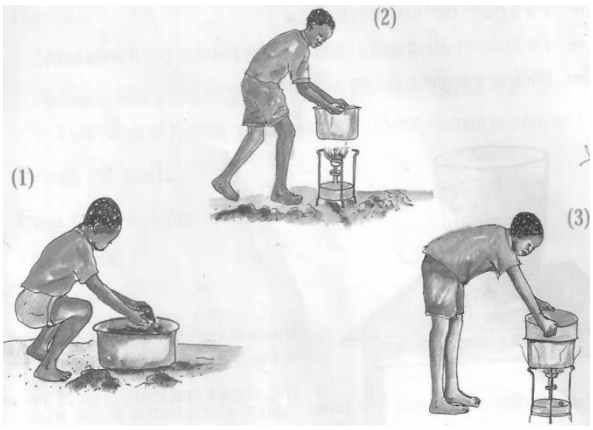
Finding out the presence of water in the soil

1. Get some garden soil and put it in a saucepan.
2. cover the saucepan with another saucepan
3. Put the sauce pan in fire

4. After sometimes removes the saucepan on top.
5. Look at the bottom of the saucepan

You might have some water droplets or moisture on the bottom surface

This shows that soil contains water.

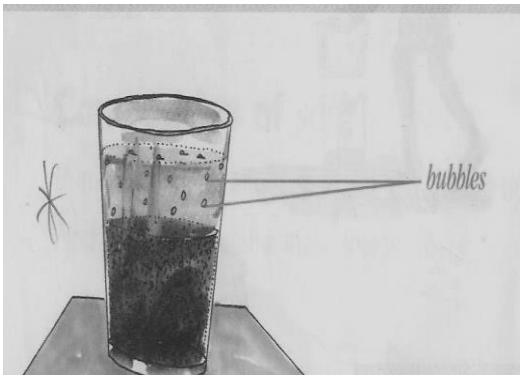


Experiment/activity

Finding out the presence of air in soil

- Get a lump of dry garden soil and put it in a container.
- Add water to these oil and observe what takes place
- You might have some bubbles coming from the mixture of soil and water

This shows that there is air in the soil



Observation

Bubbles are seen coming out of the soil.

Conclusion

Bubbles show air escaping from the soil.

Exercise

1. Name two things found in soil
2. Write down three uses of water in soil.
3. Write down two use of air in soil.

Lesson three

(d) Living organisms.

There are two kinds of living organisms found in the soil, those which can be seen and those which cannot be seen with our naked eyes. Those which can be seen with our naked eyes include worms, such as earthworms and insects like termites, ants and crickets

Those which cannot be seen with our naked eyes include bacteria and fungi

Importance of living organisms in the soil

- Bacteria and fungi act on plant and animal matter, causing them to decay and form humus.
- Termites, ants and earthworms break down plant materials into smaller particles

Animals/insects such as termites, ants and earthworms create spaces and air is able to enter the soil. (Soil aeration)

Animals that live in soil:

- Moles
- Worms
- Termites
- Squirrels
- Bacteria

(e) Mineral salts (Dissolved)

- These are mineral salts found in the soil are good because they form plant food
- These mineral salts are sacked/absorbed by plant roots and make them healthy and strong.

Examples of mineral salts needed by plants

1. Magnesium
2. Iron
3. Potassium
4. Calcium
5. Phosphorous
6. Nitrates
7. Phosphates

Exercise

1. Give two kinds of living organisms found in soil
2. Give two examples of living organisms which cannot be seen with our naked eyes.
3. Draw and name two living organisms which live in soil.
4. Give two importance of living organism.
5. Write down two mineral salts needed by plants found in soil.

Lesson four

Soil formation

Soil is formed in two ways.

- Soil is formed by:
- **Weathering:** the breakdown of rocks to form soil.
- **Decomposition:** the rotting of plants and animals to form soil.

Soil erosion:

This is the removal of top soil by its agents

Agents of soil erosion

- Running water.
- Strong wind.
- Moving animals.

Causes of soil erosion

- Over grazing.
- Deforestation
- Bush burning.
- Mono cropping.
- Over stocking
- Over cultivation
- **Control of soil erosion**
- 1) By mulching –the covering of top soil with dry plant materials.
- 2) By terracing on hilly area
- 3) Contour ploughing
- 4) Planting trees.
- 5) Planting grass on bare land.
- 6) Crop rotation.
- 7) Re -afforestation – planting of trees where they were cut down.

Examples of mulches

- Dry grass
- Banana leaves

Coffee husks etc

Advantages of mulching:

- It keeps water in soil.
- It rots to form manure.
- Mulching prevents direct contact of top soil with strong winds / storms

Disadvantages of mulching

- It hides crop pests.
- Mulches are fire hazards.
- It is time consuming to lay mulches.

Effects of soil erosion:

- It leads to soil exhaustion.
- It creates unnecessary gulleys.

What is soil exhaustion?

Soil exhaustion is the loss of soil fertility.

Crop rotation

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

Advantages of crop rotation

- **C**ontrols soil erosion
- Improves on soil fertility
- Controls crop pests and disease

Exercise

1. What is soil erosion?
2. Mention three agents of soil erosion?
3. Write three causes of soil erosion
4. Give two ways of controlling soil erosion

Week Two

Lesson one

Types of soil

There are three different types of soil. These are

- Loam soil
- Sand soil
- Clay soil

Types of soil and their texture

Soil is made up of sand, clay and loam soil.

Type	Texture
Sand soil	- It's rough - Has the biggest particles
Clay soil	- Its smooth - Has the smallest particles
Loam soil	- It's a mixture of sand, clay and humus

Loam soil

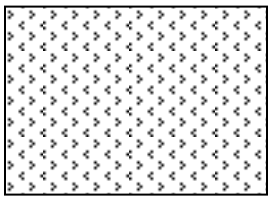
- It has a uniform mixture of sand, clay and humus
- It is dark in colour
- It contains a lot of humus. Humus makes it very fertile.

- It is the most fertile, and therefore suitable for crop growing

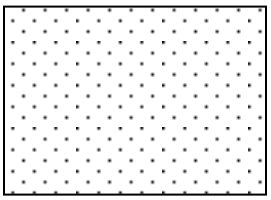
Clay soil

- Clay soil is made of very small, smooth particles of soil. They are as small as powder,.
- Clay particles are very close to each other
- It does not allow water and air to pass through.
- Clay soil becomes very sticky when it rains and hard when dry.
- This is the reason why it is not good for growing crops.

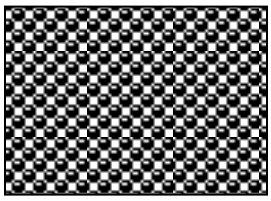
Pictures to show types of and soil texture



Loam



clay



sand

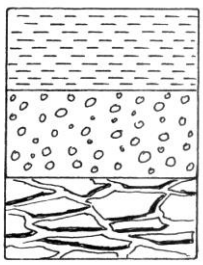
Exercise

1. Give the three types of soil
2. What type of soil are pots made from?
3. What is the best soil for growing crops?
4. Name the soil, which has very fine particles.
5. Name the type of soil, which has the biggest particles.
6. Give a reason why loam soil is the best for growing crops.

Lesson Two

Layers of soil

A **soil profile** is the natural vertical arrangements of soil layers.



- This is the natural vertical arrangement of soil layers.
- The different layers of soil profile are easily seen where a pit has been dug on the side of road or railway line which was cut between two walls.

  A soil profile is made up of three main layers mainly

The top soil

The sub soil

The parent rocks made off gravel and stones

The top soil

This is the most important layer of the soil

It contains most of the humus and mineral salt needed by the plant

Top soil is dark in colour because it contains humus

Top soil is important for plant growth because it is made up small soil particles

The sub soil

This is a thicker light brown layer of rock pieces, gravel and clay.

- There are no organism or creature found in the sub – soil
- It is a poor layer and infertile

The parent rocks

This is the layer from which soil is being formed by the process of weathering or breaking up of rock particles.

- This rock is made up of rock particles
- This rock prevents water from passing through it instead water collects above it making a water table from which boreholes water is sunk.

Exercise

1. Name the layers of soil found on the soil profile.
2. What do we call the natural vertical arrangement of soil layers?
3. Why is top soil good for plant growth?

Lesson

Uses of soil

- We grow crops in the soil
- We use sand soil in making of glass
- Building, or construction
- Some soil is used to paint houses, cups, flower vessels and models

Uses of sand soil

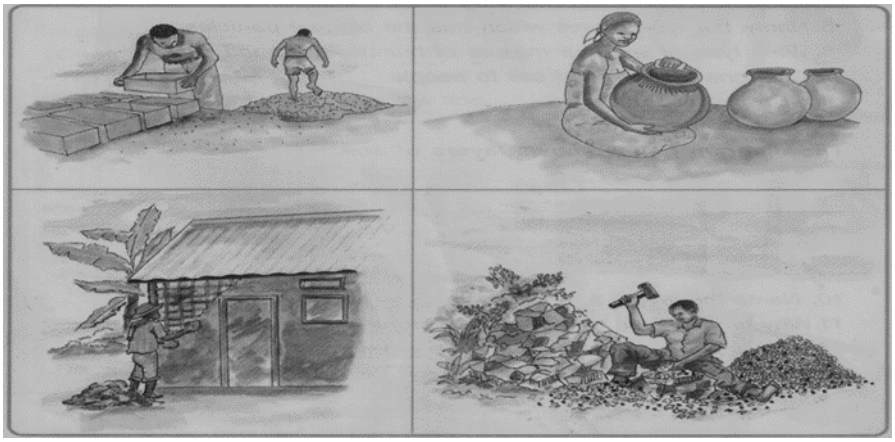
- For building houses
- For making blocks
- For making glasses

- For making sand paper

Uses of clay soil

- For pottery
- For making bricks
- For making tiles

1. Give three uses of sand soil
2. Mention two uses of clay soil
3. Draw and name two uses of soil



Lesson

Changes in our environment

Types of changes in our surroundings

There are two types of changes

1. Human activities /man-made changes
2. Natural changes

Natural changes

Definition

Changes which are brought about by nature or determined by God, are called **natural changes**

Man has little or no control over them

1. **Changes in plants and animals**
    - People, plants and animals grow from young to old. this is a natural change
    - When you plant a seed in the soil, to changes into a seedling and then into a very big tree.
    - A small bush growing in an area can become a very big forest it is left for a long time.
2. **Changes in season**.

A season is the same period for a long time

- Seasons take place because the earth moves around the sun.

3. Changes in weather

Weather is the daily condition of the atmosphere

Weather is made up of the following factors

- Sunshine
- Humidity
- Clouds
- Temperature
- Wind
- Rainfall

These factors cause many changes in the environment e.g.

- A day can be wet when there is a lot of rain
- A day can be hot when the temperature is high.
- A day can be windy when there is a lot of wind.
- A day can be cloudy when there are many clouds covering the sly.
- Clouds like the nimbus bring rain and make weather rainy and cold.

Drought (natural causes)

- Drought is absence of rain for a long time.
- Drought is a condition when there is prolonged sunshine and there is no rain.

Drought causes many changes in the environment

- Plants cannot grow because they lack water to make their food.
- Animals will die when there are no plants for them to eat as food.
- Rivers, streams and wetlands can dry up killing all creatures which stay three and making water to be difficult to get.
- People can starve and grow thin because there is not food for them to eat.
- There is a lot of dust blowing from place to place.

Floods

A flood is when there is a lot of running water covering a large place after it has rained.

- Floods kill many people in India, Pakistan, Indonesia, Japan etc
- Floods spread many disease form one place to another.
- People die when they get drowned in floods
- Floods destroy a lot of property in shops and houses.

<u>Natural changes around us</u>

Floods, drought, earthquakes, landslides, storms, lightning, thunder, hail storms, soil erosion, weather changes, seasonal changes

<u>Floods</u> – Are heavy rains overflowing in a place.

Drought – Is a long period of too much sunshine.

Hail storm – Are small droplets of ice falling from the sky.

Earth quake – a sudden violent movement of the earth's surface.

Landslides – Sliding down of a heavy part of the earth or rocks from a side of a hill or mountain.

Soil erosion – Is the removal of top soil by running water, strong wind, animals, man (agents)

Changes in the sky

- Formation of rain
- Movement of clouds
- Rising and setting of the sun
- Changes in the moon shapesChanges in weather
- Changes in weather

Changes in plants

- Growth of plants
- Germination
- Drying plants
- Ripening of fruits

Managing changes

Floods - control

- Digging trenches
- Avoiding clearing swamps
- Avoid building in drainage systems, swamps

Drought

- Planting trees
- Avoid clearing swamps
- Digging valley dams

Rusting of metals

-Painting tools

-oiling tools

-keeping tools in a dry place

Exercise

1. What are natural changes?
2. Name three examples of natural changes in the environment.
3. In which season do floods take place?
4. What types of change takes place when sunny weather becomes cloudy?

Lesson

Effects if natural changes (Bad effects)

- Drought – causes hunger, diseases

People can starve and grow thin because there is no food for them to eat.

This situation is referred to as famine

- Destruction of homes and property of the people.
- Destruction of plants and animals.
- Soil erosion
    - Storms cause soil erosion
- Floods, earthquakes and landslides cause destruction of homes and property, plants and animals

Good effects of natural changes

- Growth of people, plants and animals
- A seedling growing into a big tree which can provide many things like shelter, shade, timber
- A chick growing into a hen and getting eggs and meat to eat.
- In wet seasons farmers grow crops
- In wet season plants grow quickly
- During the rainy weather people are able to harvest enough water.
- During the dry seasons farmers harvest and dry their crops,

How to manage natural changes in the environment

- Allow forest to grow because they help in rain formation.
- Trees should be planted to stop the speed of wind.

- Dig big trenches to avoid floods. Trenches direct water to the right place.
- Avoid clearing swamps. Swamps trap running water.
- Growing enough crops and storing food for future use helps us to have food security.
- Practicing good farming methods e.g. mulching, planting grass, terracing to control soil erosion

Exercise

1. Name three bad effects of natural changes.
2. Name three good effects of natural changes.
3. What should people do to avoid drought?
4. Name two ways in which people can control floods.

Lesson

Human activities/man-made changes

Definition;

- These are changes brought about by people or man.

Man has made a lot of changes in the environment

- Cutting down trees
- Construction buildings and roads
- Making bridges
- Burning the bush
- Arranging the property in the house
- Making medicine from plants
- Slashing the grass short
- Man has destroyed wetlands and swamps causing changes in weather pattern
- Man has changed many villages into towns by building many houses.
- Grazing many cattle in the same area which eat away all the grass (over grazing) causing soil erosion.

Effects of people – made changes

These changes are both good and bad in our environment

Good effects

- They bring a new look to our environment for example, building, roads and others
- The changes made on land though farming help us to get food.
- Good roads make transport easy and cheap
- The buildings put up are used for shelter and industries.

- Medicine made from plants cures diseases.

Bad effects

- Burning bushes to prepare gardens for planting destroys many animals habitats.
- Many drivers drive very fast on good roads and cause accidents
- Smokes from industries spoil air in the environment. This usually causes some diseases to people.
- Clearing land leaves soil with no plant cover to protect it.
- Running water easily carries unprotected soil away. This leads to soil erosion,
- Cutting down of trees without planting others leads to less rainfall received in the area.
- Man has destroyed wetlands and swamps causing changes in weather pattern,
- Man keeps many cattle in the same area which eat away all the grass (over grazing) causing soil erosion.

Exercise

1. Name the two types of changes in our environment.
2. What are people made changes?
3. Identify or name five people – made changes in the environment.
4. Give three good effects of people – made changes.
5. Name four bad effects of people – made changes.

Lesson

Possible ways of managing people made changes

- Planting more trees (afforestation)
- Preserving swamps avoid clearing wetlands
- Dig valley dams to keep water for animals and irrigation of crops.
- Avoiding burning bushes.

Activity

Simple project of planting trees or tree planting

Exercise

1. Name three things or possible ways of managing people made changes in our environment

WEEK FIVE

Theme 4: Environment and weather

Lesson one

Air

What is air?

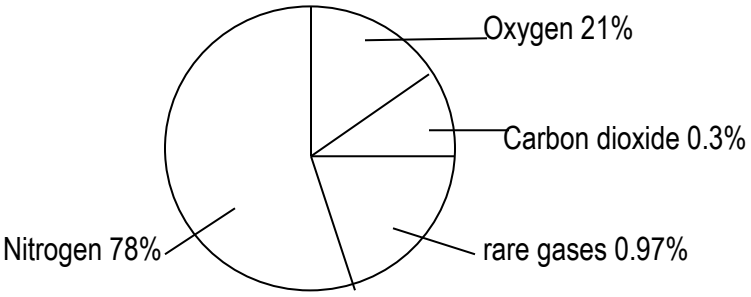
Air is the mixture of gases.

Components of air

Air is made up of the following gases

1. Nitrogen
2. Oxygen
3. Carbon dioxide
4. Rare gases

The percentage of air in the atmosphere is shown by the following diagram



- Nitrogen occupies the largest part of the atmosphere with 78%.
- Oxygen follows with 21%
- Rare gases occupy o.97% the third largest in the atmosphere.
- Carbon dioxide occupies the least part.

Examples of rare gases are Krypton, neon, helium, argon and xenon

- Hydrogen is not part of the air but produced in a lab

Exercise

1. What is air?
2. Name the gases which make up air.
3. Which gas takes the biggest percentage?
4. Give two examples of rare gases.
5. Which gas is not part of air but produced in the laboratory?

Lesson two

Properties of air

There are three common properties of air these are

1. Air has weight
2. Air occupies space
3. Air exerts pressure

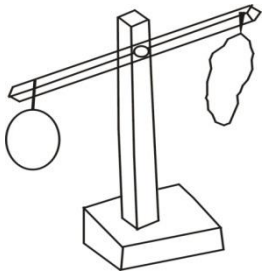
Experiment/activity

Does air have weight?

- Get two balloons
- A local weighing balance

What to do

- Blow air in the balloons of the same size.
- Tie necks of the balloons with string to keep air inside.
- Then tie the balloons on a balance to make them balance
- Make a hole into one of the balloons using a pin



- This show that air has weight

Exercise

1. Name three properties of air.
2. Draw the property of air which shows air has weight.

Lesson three

Air occupies space

Does air occupy space?

Things you need

A glass

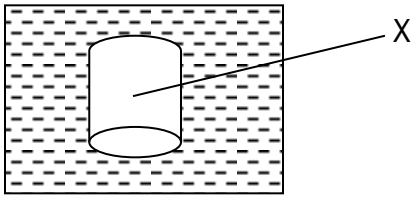
A bowl

Water

What to do

- Put water into the bowl
- Turn the glass upside down and push it into water
- Hold the glass straight into the water
- The space x left without water contains air

Picture A

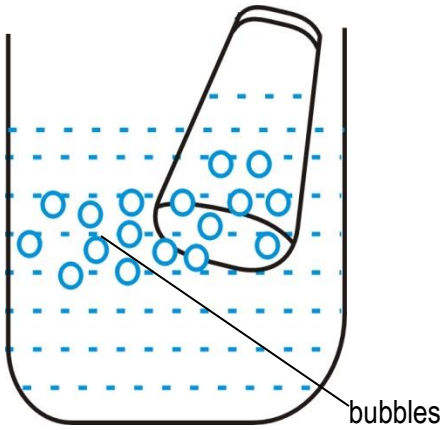


Water did not enter the glass because there was air.

- Turn the glass to one side as in picture B below
- Watch the bubbles coming out of the glass
- What do the bubbles show

The bubbles show air getting out from the glass. Water entered the glass as air got out of it.

Picture B



Picture C

The property of air which helps the boy full air balloon with air is air occupies space.

Air exerts pressure

Experiment 1

- Get an empty glass or bottle
- Fill it with water up to the top
- Get a piece of paper and put it on the top of the bottle or glass.
- Turn it upside down carefully without pouring water out.
- What happens, the paper does not fall off

Explanation

The pressure of air outside the bottle is equal to the pressure of water inside the bottle

1. We use the property air exerts pressure to do the following.

To drink soda, or water form a glass or bottle using a straw

2. Getting water form a water tank
3. A man can pump air into the bicycle tube because air exerts pressure
4. The doctor or nurse uses a syringe to inject medicine into the skin by putting and pushing the piston of the syringe because air exerts pressure.

Exercise

1. Give two examples of incident or experiment which prove that air occupies space.
2. What property of air is sued when
   (a) You drink soda from a bottle?
   (b) A doctor injects medicine into your buttock
   (c) You pump air into a bicycle tube using a hand pump
   (d) When you blow or fill air in a balloon.

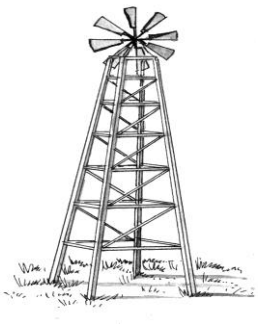
Lesson

Uses of air

Air is needed for burning and the gas is oxygen.

Experiment

- Get two candles and light them
- Put a glass jar upside down on one of them what happens after sometime?
- After sometime, candle in b stops burning meaning air is used up.
- Plants need part of air called carbondioxide to make their own food.`
- Air is needed for rusting
- Moving air (wind) turns wind mills.
- Wind mills help to produce electricity
- Wind mills help to draw or pump water from the ground
- Wind mills can turn grinding mills in order to grin posho, millet, sorghum, wheat



wind turns it and it rotates

- Air helps to dry our clothes even at night.

- Moving air (wind) helps the sailing of boots
- Air (carbon dioxide) is used by pants to make their own food.
- Carbon dioxide is used in sodas and beers to keep it fresh and not to go bad.

Dangers of air/wind

- Moving air is called wind
- Too much wind/strong wind destroys buildings
- Strong wind causes soil erosion
- Strong wind destroys plants and can break trees
- Strong wind capsizes boats

Exercise

1. What is moving air called?
2. Write down four uses of air in our environment.
3. Which gas is needed during rusting?
4. Write down two uses of windmills.
5. Which gas is needed by plants to make their food?
6. Which gas is used in sodas and beers?
7. Write down two dangers of air in our environment.

Lesson

The sun

- The sun is a huge star nearest to us.
- The sun is made of hot burning gases high above in the sky.
- The sun rises in the east and sets in the west.
- The sun creates days and nights.
- When the sun rises it makes a day and when it sets it makes a night.
- A night is the time between sunset and sunrise.
- The sun provides us with light energy and heat energy.

Shadows

Shadows are formed when an opaque object blocks light.

- Every object formsits own shadow.
- The object and the shadow have the same shape
- The shadows look dark

<u>Formation of shadows</u>

Shadows are formed when an opaque object blocks light.

Shadows are formed when an opaque object stands in the way of light.

Opaque objects:

These are objects which do not allow light to go through them.

Examples of opaque objects

Walls, books, trees, tables, desks etc

Transparent objects

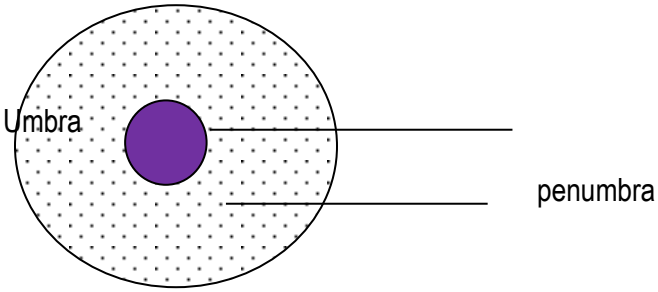
These are objects which allow light to go through them e.g. clear glass, colourless polythene, sun glasses.

Parts of a shadow

A shadow has two parts.

a) Umbra – the darker part of a shadow

b) Penumbra – the lighter part of a shadow



Characteristics of shadows

- Have two parts (umbra and penumbra)
- Shadows are always formed on the opposite side of the source of light.
- Appear shortest at noon or when the sun is overhead the object.
- Appear longest in the early morning and late evening.

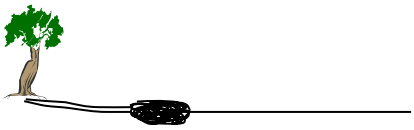
Uses of shadows

- Shadows help us tell time
- Shadows give us shade
- Shadows help us show direction

How shadows are formed


source of light

1. Opaque object



2. 

Source of light

In the morning and evening shadows are long

In the evening this shadows are formed in the east direction. This is so because sunlight comes from the west.

Exercise

1. Pupils go out to draw different shadows of their fellow pupils
2. When are shadows long?
3. What is a shadow?
4. In which direction are the shadows formed?
5. Give a reason for your answer above
6. When are shadows short?
7. Where is the shadow when: -
    a. The sun is in the East?
    b The sun is in the west?
8. What is the time between?

(i) Sunrise and sunset called

(ii) Sunset and sunrise called

Lesson

Day and night

- When the sun rises. It brings day light
- When the sun sets, darkness comes and we say it is nighttime.
- Day and night are caused by the turning or rotation of the earth

Effects of the sun

- The sun provides us with light energy, and heat energy.
- Energy from the sun is called solar energy.

Uses of the sun

- Light from the sun helps is to see
- The sun's heat helps us to feel warm
- Heat from the sun helps in the rain formation
- The sun can be used as a source of energy.

Some people having cooking and lighting equipments that use energy form the sun.

Some calculators and watches also use energy from the sun

- Plants need light in order to grow well
- Green plants use sunlight to make food n their leaves
- Sunshine helps to kill some germs
- The sun helps our skin to make vitamin D.

Activity

1. How does sunlight help animals which do not make their own food?
2. How does the sun help in rain formation?
3. What form/type of energy got from the sun is used in cooking and lighting equipment.
4. Name the two other forms of energy got form the sun apart from the one mentioned above.
5. Write down four uses of the sun.

Lesson

Dangers of the sun

- It is dangerous to look at the sun directly.

  The sun can spoil our eyes if we look at it directly
- Too much sunshine spoil our crops

It can make the crop dry when there is no rain. This is so because the sun heat dries water in the soil

- Water in the wells and streams also decreases as a result of too much heat.
  It is difficult to get water for use. A long period without rain is called drought
- Too much o the sunshine makes the day very hot.
- Too much sunshine causes drought and famine because crops do not grow rivers dry up the land becomes hard animals die and food becomes hard to get.

Activity

1. Write down five dangers of the sun
2. What is drought?
3. Give two ways of how to protect our eyes form direct rays of sunshine.

Lesson

Clouds

There are four main types of clouds namely:

(i)	Cirrus clouds	(iii)	Stratus clouds
(ii)	Cumulus clouds	(iv)	Nimbus clouds

(a) Cirrus clouds

- They look like feather in the sky.
- They are the furthest clouds in the sky.
- They indicate fair weather and do not bring rain or snow.

(b) Cumulus clouds

- They are white clouds which resemble cotton piles with flat bottoms
- They appear lower than the cirrus clouds
- They ca n develop into thunder clouds and therefore they indicate rain stratus clouds

(c) Stratus clouds

- They are nearer the earth than the cumulus
- They spread in the sky in clam flat layers
- They are a sign of fair weather

(d) Nimbus clouds

- They are clouds to bring or give us rain
- They are nearest to the earth.

- They don't have any special shape.
- They are dark grey in colour.

Use of clouds

- Clouds help in the formation of rainfall
- Clouds protect us from direct sunshine
- Clouds make our weather cool.

Activity

1. When are nimbus clouds usually seen in the sky?
2. Which clouds are commonly seen in a sunny day?
3. Write down the clouds which:
   (a) Can develop into thunder
   (b) Indicate rain
   (c) Are a sign of fair weather?
   (d) Give us rain
4. Give three ways how clouds are important in the environment.

Lesson

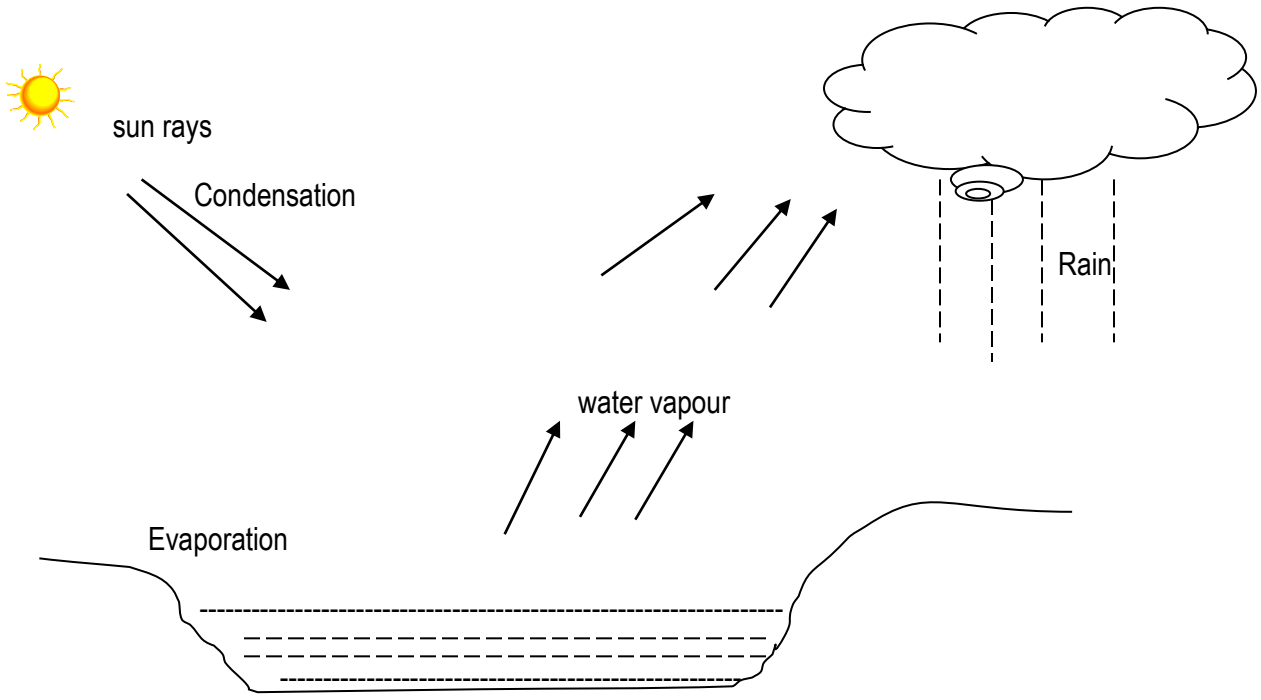
Rain

- Rain is the amount of water falling in separate drop from the clouds
- Rain is formed by the process called water cycle.

In the water cycle

- The sun heats the water bodies like rivers, lakes, oceans,
- This heat causes water vapour (evaporation).
- The water vapour rises and forms clouds.
  This process is called condensation
- The clouds become bigger and heavy and later falls as rain
- The rain flows as running water until it reaches the water body again.
- The sun again heats the water body and gain the cycle reapers itself.

Rain is the main natural source of water on earth.



Water body

Uses of rain

Rain can causes changes in the environment

- When it rains the weather becomes colder,
- We need to wear heavy clothes to keep us warm.
- When it rains, the soil becomes soft and muddy.
- When it rains plants get enough water and grow well.
- Rain water can be harvested in tanks. Pots and basins.
- The water can be used at home in many ways for domestic purposes
- Rain cools the atmosphere and we also feel cold.

Dangers of rain

- Too much rain spoils road, buildings and bridges.
- Too much rain may also cause floods which destroy people's homes and property
- People and animals can be killed by the floods.
- Rain water carries away top soil.

Activity

1. What is the main natural source of water?

2. Write any two places where rain water goes after it has rained.
3. Name two dangers of much rain in the environment.

Lesson

Managing water

Water is one f the nature's most important gifts to mankind

- Every living thing needs it to live
- Nothing living on earth exists without.

Importance of water

- Water helps in the transportation of the nutrients that are required by all living things.
- Most living things require a certain type of water to lives. E.g. fish in the oceans need salt water while humans require very clean water to live.
- We need water for drinking
- Water is used in cooking
- Water is used for washing clothes and utensils.
- Water is used to cool running machines
- Water is sued in industries as a raw material for drinks.
- Animals need water for drinking and cooling their body.
- Plants need water for proper growth.

Sources of water

The main natural source of water is ran.

Other natural sources are rivers, lakes, wetlands and oceans,

Artificial sources include boreholes and tap water.

<u>Ways of protecting water sources</u>

- By fencing sources
- Putting laws
- Planting grass around them
- Proper disposal of waste products
- Adding chlorine to water sources to kill germs.

Water harvesting

It is the activity of direct collection of rain water.

- Rain water harvesting is the accumulating and storing of rain water for use before it reaches the ground.
- Rain water harvesting can be done by using tanks and pumps.

Water harvesting

Ways of collecting water

- By using tanks
- Using jerry cans
- Tapping from the roof
- Using dams
- Tapping from trees

Activity

1. What makes water important to living things?
2. State any five importance of water.
3. Mention any four sources of water.
4. What is water harvesting?

Lesson

Maintenance of water sources

Keeping water sources clean

Clean water is good and healthy to drink. However, if water is made dirty or contaminated then it can spread a number of diseases like, cholera, dysentery, doarrhoea, typhoid fever, worms, polio, hepatitis and bilharzias.

Ways how water sources are made dirty

- Through rubbish in our near water sources
- Urinating in or near water sources
- Allowing animal drink from the water sources, as they drink, they urinate and put in their dung.
- Building a latrine near a water source. It should be at least 30 metres from it.
- Washing clothes in or near water sources.
- Bathing and swimming in water sources.

We can maintain and conserve water sources by avoiding all the above ways.

Activity

1. Why is keeping water sources clean important?
2. List down four disease spread through water contamination.
3. Mention four ways how water sources are made dirty.
4. Write down three ways we can keep water sources clean.