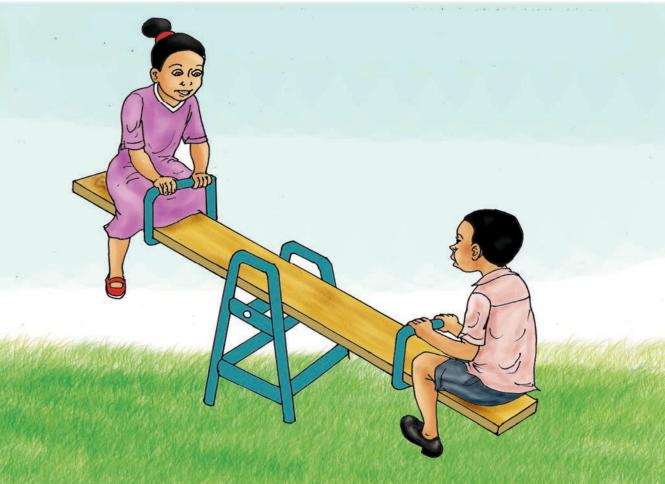


Primary Science



Pupil's Book



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- 2. Do not cut pictures out of the book.
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South Sudan

PRIMARY 3



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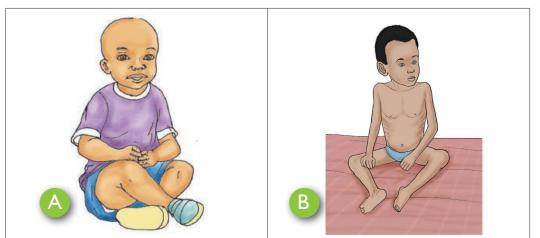
Importance of food to our bodies

Before you came to school, you ate some food. Can you tell your friend the food that you ate? Do you eat the same food every day?



Let us talk

Look at the pictures below.



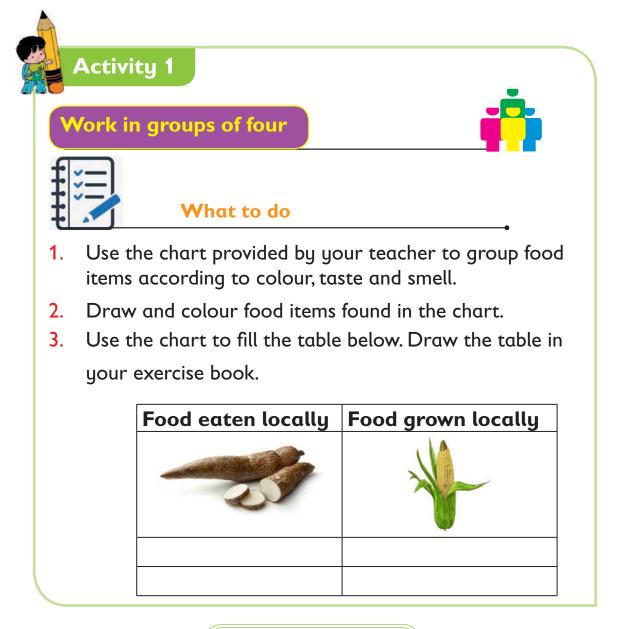
Which of the two children is healthy? Which one is unhealthy? What should the parents of unhealthy child do?



Our bodies need food. Food gives us the energy to grow and develop, to be healthy and active, to move, to work, to play, to think and to learn. The food that we eat in the morning is **breakfast.** The food we eat at noon is **lunch** and the food we eat in the evening is **supper.**



Foods we eat in the locality



Learning point

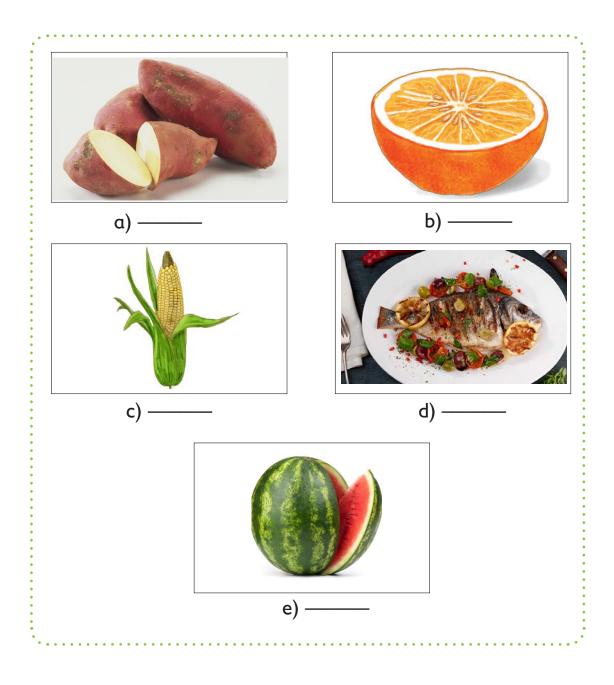
Some of the foods that we eat from our locality are:



My health my life

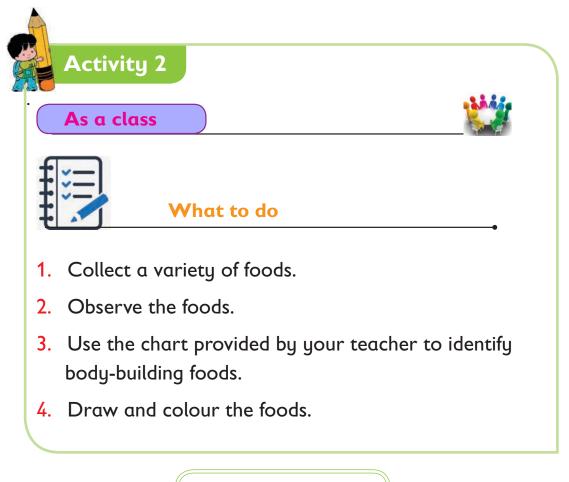
You should avoid eating take away foods such as chips, chicken and bugger. They can cause diseases like obesity.







Foods for body building and growth (Grow foods)



Learning point

Body building foods help us to **grow** and stay **healthy**. We are able to move, run, and exercise when we eat body building food. We get body building foods from a variety of animals and plant based foods. Examples of body building foods are:



Chicken	Eggs	Lentils
Beans	Meat	Glass of milk
	Fish	

Body building foods



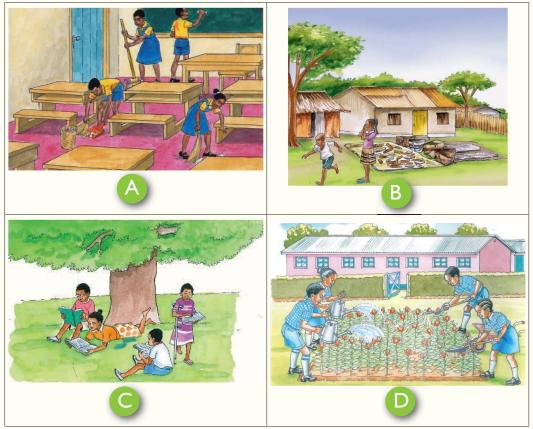


Foods for energy in movement, work and exercise (Go foods)

In our lives, we do many things.



Look at the pictures below.



Can you give other activities that we do at school and at home?

Role play different activities that you do at home and at school.

Learning point

The pictures above show some activities that we do in our lives. We work, play and study at home or at school.

We can work, play and study when we eat food that provide bodies with energy. When you do not eat enough energy containing foods, you will feel very tired when playing or working.

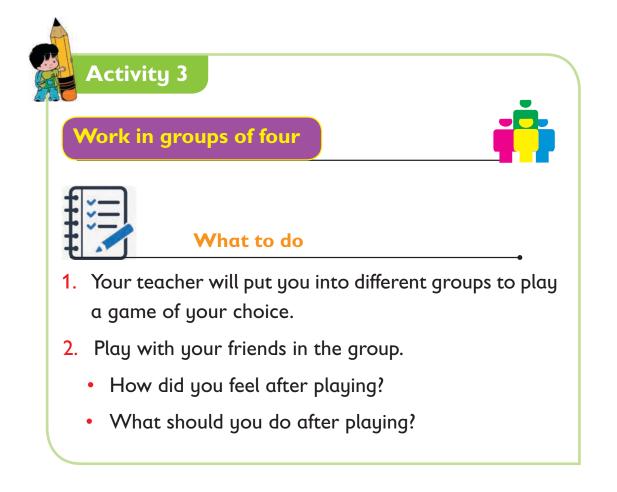
Maize	Posho	lrish potatoes
Cassava	Sugarcane	Rice
Bread	Yams	Sweet potatoes

Energy giving foods





Importance of exercises to our bodies





Learning point

Exercise is important to our bodies. Exercises help all the parts of the body. The exercises should not be difficult or too long for us. Exercises make us do our work well. They make our bodies stronger.

We regularly exercise by playing games. Some games that we play at school and at home are given below.

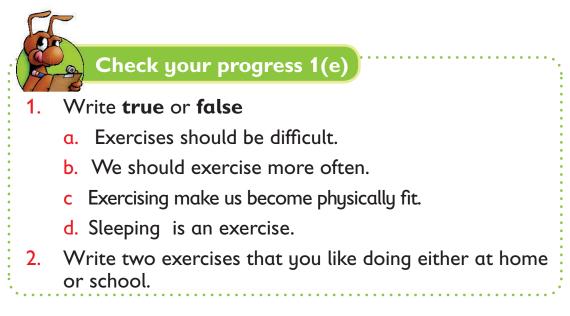
Remember! Exercise daily to remain physically fit.



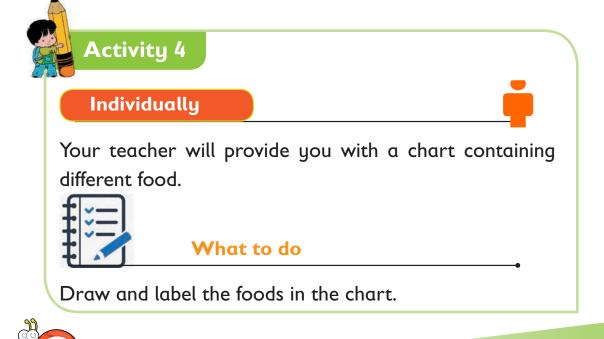
Remember! We should have enough rest after exercising.

My health my life

You should exercise daily to be physically fit!

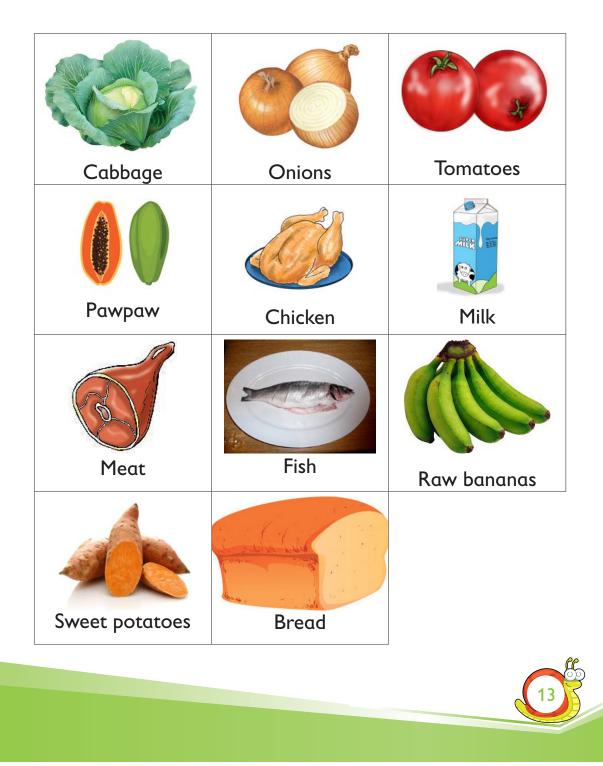


Foods that help the body work well (Glow foods)



Learning point

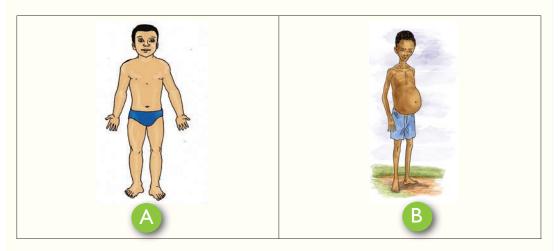
Some of the foods that help our body to grow well are given below.



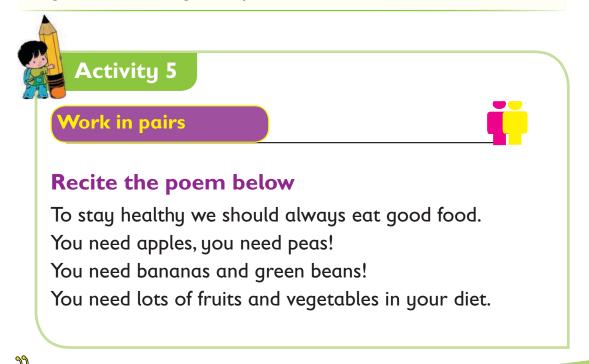
Deficiency (lack) of food



Look at the two pictures below. What can you see?



Say what is wrong with picture **B**.



You need cereals, bread, rice and porridge!

They are all energy–giving foods!

You need food to make your body grow!

You need fish, meat and eggs!

Yes you need body-building foods to make you grow.

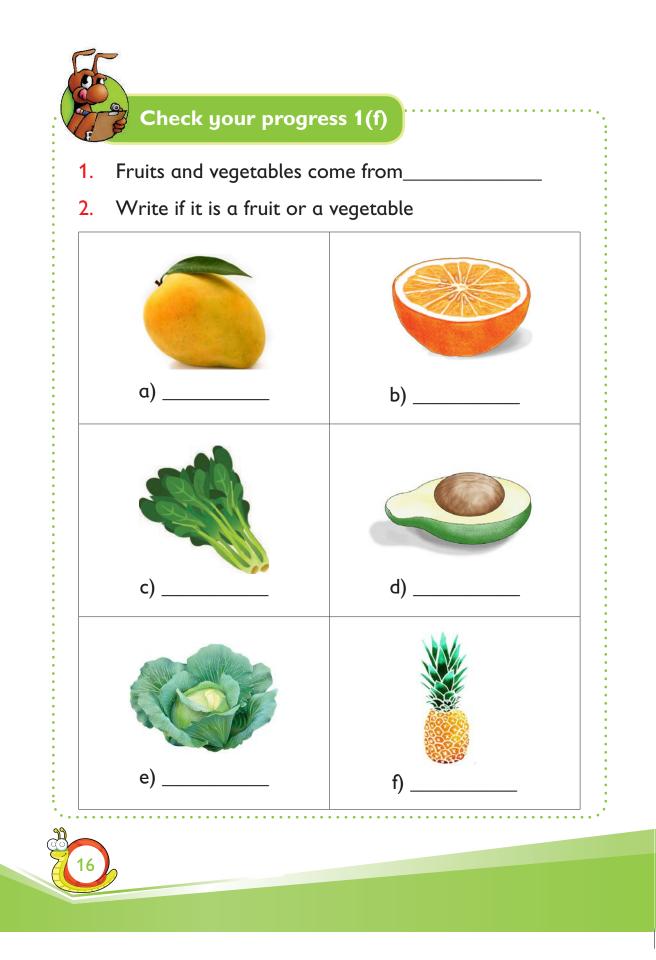
Answer the questions below

- 1. What did you learn from the poem?
- 2. Compose a similar poem replacing the foods described above with your favourite food.
- 3. Use the poem to fill the table below in your exercise book.

Healthy food	Tasty food

Learning point

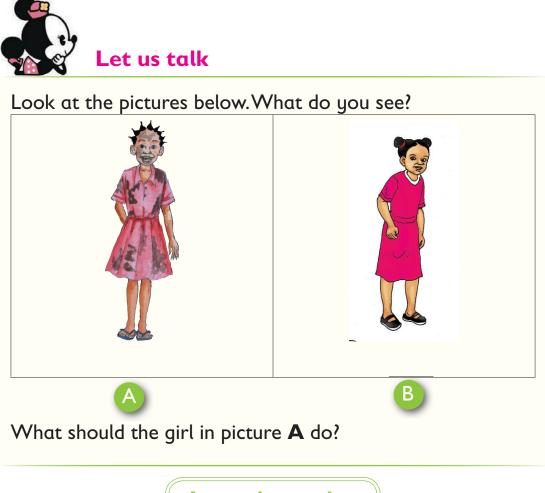
All foods are important to the body. Lack of any of them may result in **diseases.** Eating all food helps us to keep our bodies healthy. A healthy person is not **sick**, able to **work**, is **strong** and is **happy**.



Advice !

We should drink at least eight glasses of water everyday!.

Importance of washing dirty clothes



Learning point

The girl in picture \mathbf{A} is putting on dirty clothes and sandals. The girl in picture \mathbf{B} is putting on clean clothes and shoes.We should always put on clean clothes and clean shoes .When we put on clean clothes we look **smart** and **neat**. Dirty clothes smell bad. Dirty clothes can also can also make us sick. After wearing clothes we should wash them.

What do we need when washing clothes? What should we do when washing clothes?

Activity 6
Cleaning school uniform As a class
What you need Clean water, soap, basin and pegs What to do
 Soak your school uniform in soapy water. Using your hands, rub the school uniform to remove dirt.
3. Rinse the school uniform in clean water.
18

Q





Learning point

Clothes become clean when they are washed. Clean clothes are free from germs that cause diseases. Clean clothes last longer and smell good. When we wear clean clothes, we look neat and smart.

Did you know!

If we put on clean clothes, we protect ourselves from diseases.

Check your progress 1(g)
1. Dirty clothes smell _____ (good, bad)
2. Name three items we use when washing clothes.
3. We wash clothes to remove ______

Types of soaps and detergents



Let us talk

Look at the pictures below. What do you see? Do you know with the things in the pictures?



Learning point

Picture **A** shows a bar soap, picture **B** shows a powder soap, picture **C** shows a bathing soap and picture **D** shows a liquid soap. Picture **A** and Picture **B** are used in washing clothes; they can also be used in washing utensils.Washing dirty clothes requires adequate clean water, detergents (solid or powdered soap) and washing materials.



- 2. One group to wash dirty clothes without a detergent.
- 3. The second group to wash dirty clothes with a powder soap.

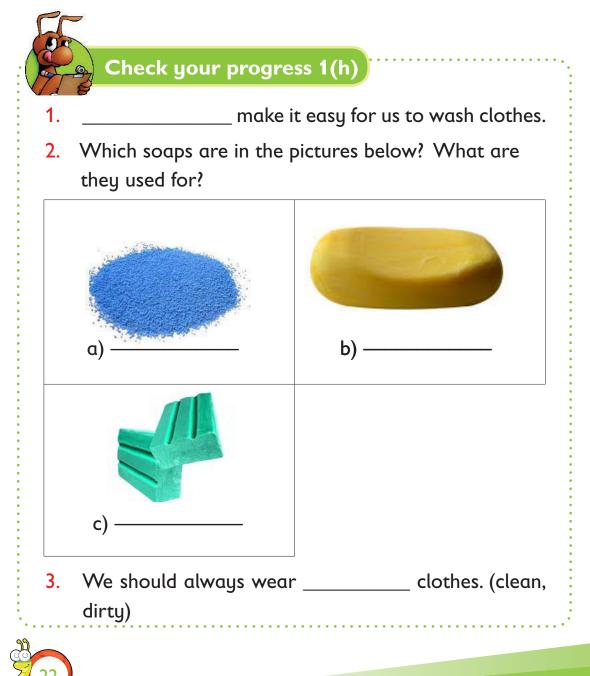


- 4. The third group to wash dirty clothes with bar soap.
- 5. Change roles and wash again.
 - In which case was it easier to clean the clothes?



Learning point

Soaps and detergents help us to remove dirt from dirty clothes with ease. It becomes difficult to wash clothes without soap. Powder soaps are better in washing clothes than bar soap.

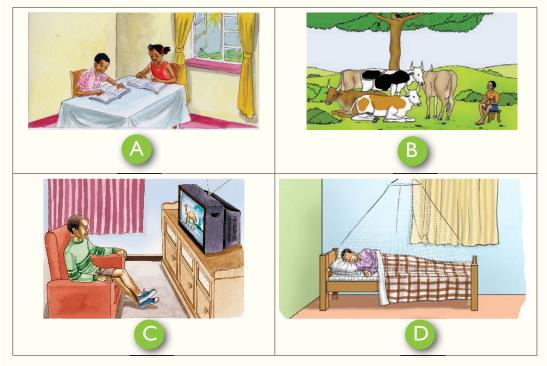


Importance of rest and sleep



Let us talk

Look at the pictures below. Talk to your friend about what is going on in the pictures.



Learning point

Pictures above show some ways of resting after working or playing. Resting helps our bodies to regain energy in order to work or play next time. Young children need rest in order to grow. Getting enough sleep at the right time helps you work well throughout the day. Activity 8

1. Write a list of activities that makes you tired. Share what you have written with your friend.

Learning point

Some of the tiring activities include:





Check your progress 1(i) ...

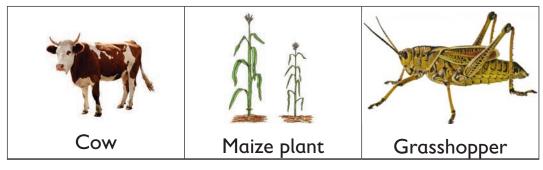
- 1. When we get tired, we _____.
- 2. Resting makes our bodies to _____. (feel pain, relax)
- 3. Name the various ways in which we rest.
- 4. When we get enough sleep, we are _____ in class. (active, inactive)
- 5. Copy and complete the table below in your execise book.

Most tiring activities	Least tiring activities

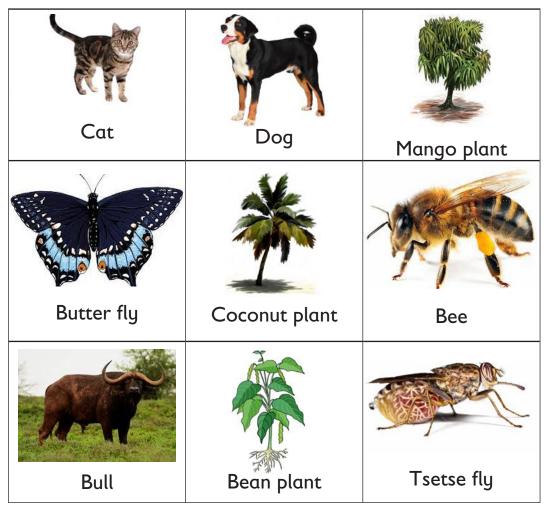




When we look around us we see plants, animals, water bodies such as lakes and other things such as buildings. Common plants and animals that are found around us include:







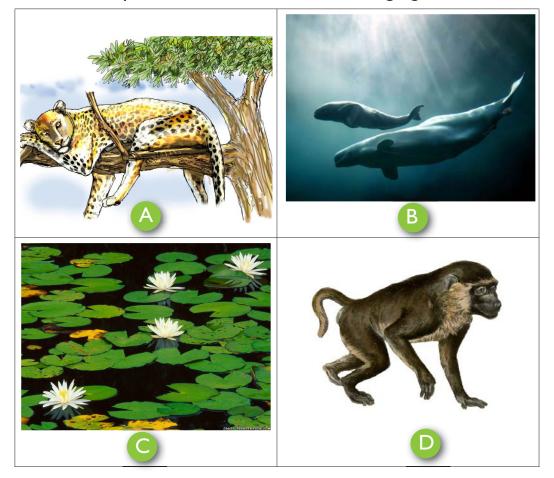
Name other plants and animals around you that are not listed above.



Habitats of different plants and animals



Look at the pictures below. Name the things you can see?



Did you notice different places in which animals and plants above live? Can you name the places?



Learning point

Different animals and plants live in different places.

Examples of places where animals and plants live are:

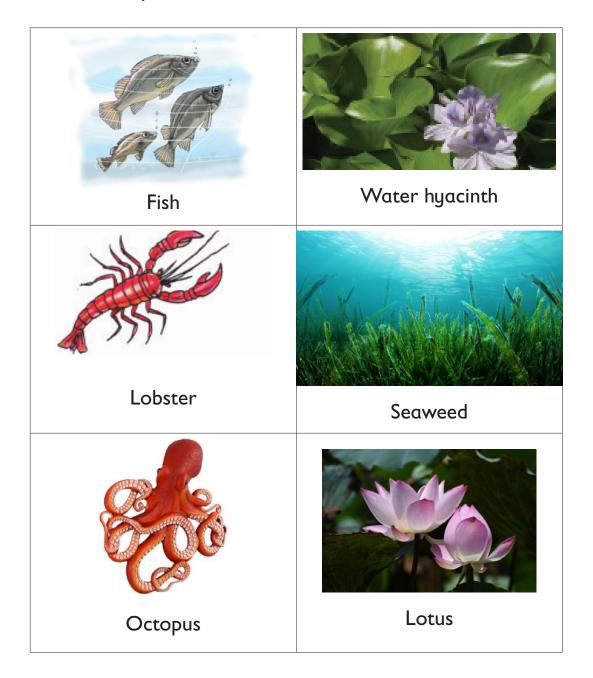
a. Water

Some living organisms live in water. Water environments where plants and animals live are rivers, oceans, dams, lakes, ponds and swamps.

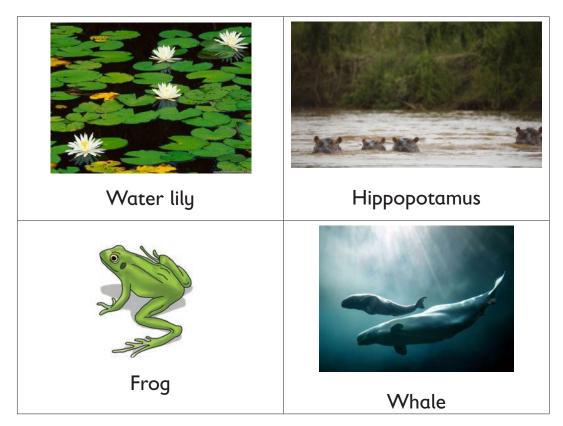
	Activity 1
V	Vork in group of five
	What to do
1.	Under parents or teachers guidance, visit a river, lake, fish pond, ocean, swamps or dam.
2.	Name the animals and plants that live in those places.
3.	Write them down in your exercise book.



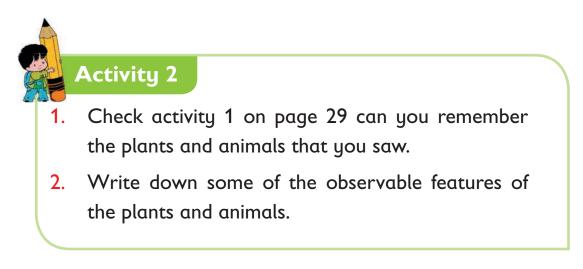
Some of the plants and animals that live in water include:







Characteristics of plants and animals that live in water





Plants that live in water have large and broad leaves.

Most of them have many leaves and floating flowers.

Animals that live in water have fins, gills and they are able to swim.

Check your progress 2(b)

- 1. Write two characteristics of plants that live in water.
- 2. Draw and name a plant that lives in water.
- 3. List observable features of animals that live in water.
- 4. Draw and name two animal that lives in water.

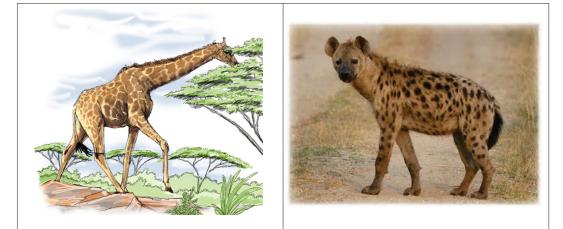
b. Land

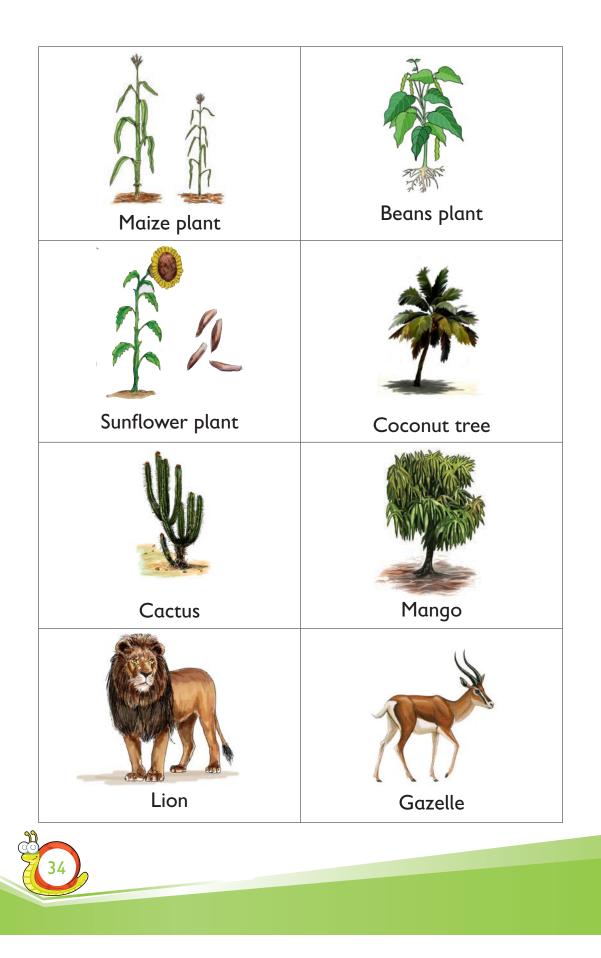
We live on land. Land is made up of soil. We step on soil as we go to school. Depending on the location of the land, where we stay, land has different characteristics.

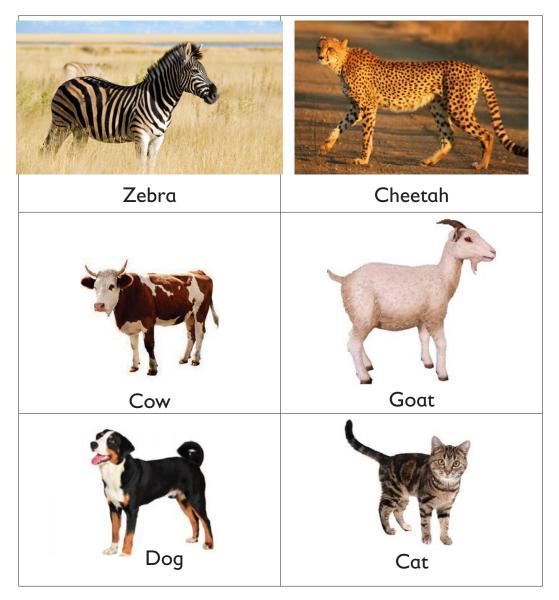


	Activity 2
	As a class
	What to do
1.	Go outside class and observe the plants and animals in their environment.
2.	Back in class, group them as plants and animals found in gardens, farms, forests and bushes.
3.	Draw and name plants found in different habitats.

Some of the plants and animals found on land include:





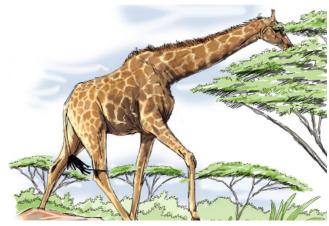


Name other animals that are found on land that are not listed in the above pictures.



Characteristics of plants and animals found on land

Some animals that live on land have long necks to enable them to eat. Example is giraffe.



Giraffe

Others have Long legs enabling them to run while others have fur to keep them warm.



Baboons with fur on their body

Some of the animals such as lion has strong and sharp claws that catch and tear flesh from prey.

Activity 3

- 1. Go for natural walk.
- 2. Observe plants and animals around you.
 - What is common with plants around you?
 - What about animals around you?



(i) Plants

- Have long roots because of need for water.
- Some plants have big leaves, others have small leaves.
- Some plants have very few leaves, some have many.
- Some plants have thick stems that are soft. Others have hard stems.

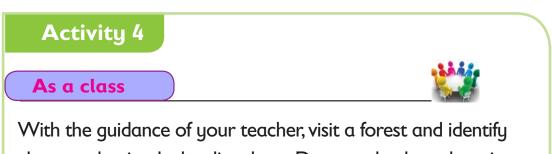
(ii) Animals

Some have long necks to enable them reach leaves high up on tree.



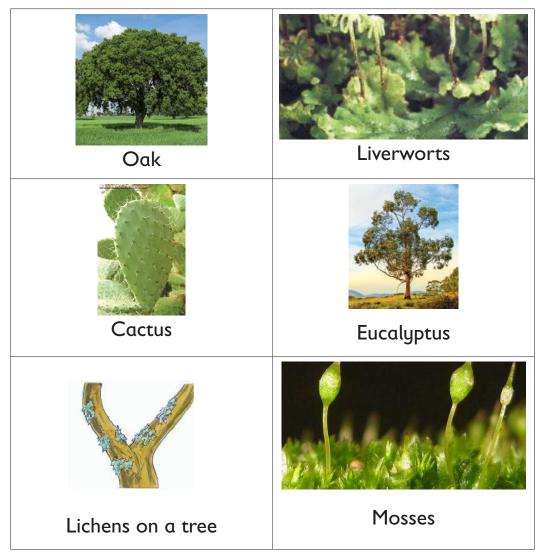
Check your progres	ss 2(c)			
1. Hippopotomus, baboon, lio	n, seaweed, fish, camel,			
water lily, whale, octopus, c	log, goat, and lotus.			
• • • •	Use the table to group the above as either a plant that live on land or water.			
(b) Copy and fill the tab	ole below.			
Animal that live on land	Animal that do not live			
	on land			

(iii) Forest



plants and animals that live there. Draw and colour them in your exercise books.

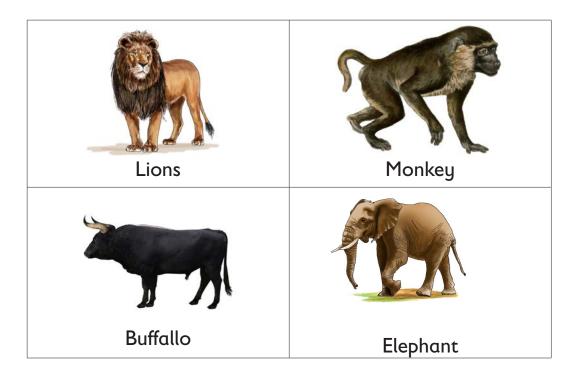
In the forest, there are many types of plants. Many animals also live in the forest. Some of the plants that are found in the forest are:





Name other plants that are found in the forest that are not in the listed pictures.

On the other hand animal that are found in the forest are:



Name other animals found in the forest that are not in the pictures above.



My environment my life

We should avoid polluting our land and water.

Fruits and seeds

Activity 5

- 1. Collect a variety of seeds and fruits.
- 2. With the guidance of your teacher, group fruits in one column and seeds together. Use a table like this.

Seed

3. Draw and colour the fruits and seeds in your exercise book.



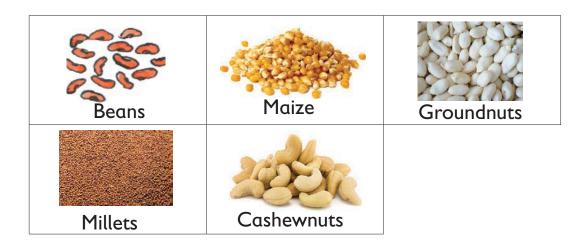
We have a variety of fruits and seeds. They include:



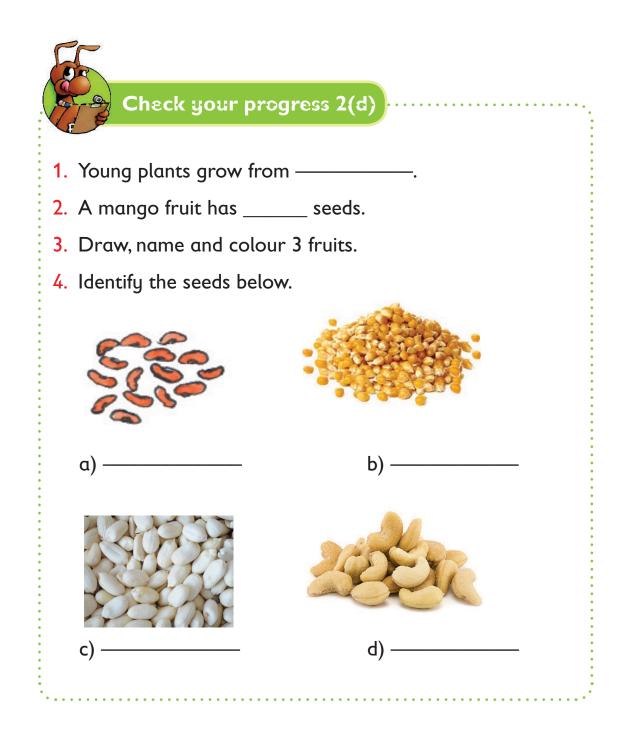
Common fruits

Orange	Tomatoes	Avocado
Pineapple	Mango	

Common seeds











The five senses



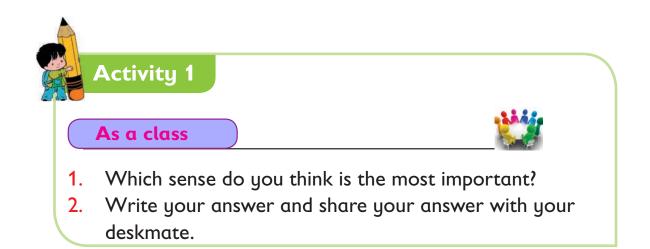
What are sense organs? How many are they? Can you draw all the sense organs?.

Learning point

The eye,ear,nose,tongue and skin are **sense organs.** Different sense organs helps in detecting different things around us:

- We use our eyes to **see**.
- We use our nose to **smell**.
- We use our skin to **touch** and **feel** things.
- We use our ears to **hear**.
- We use our tongue to **taste**.





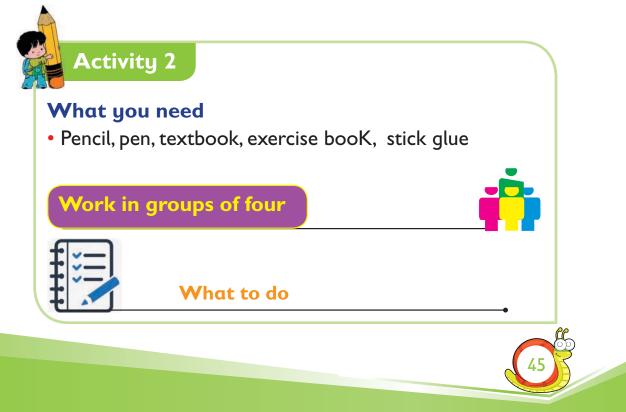
Taste, smell, touch, sight and hearing are the five senses.

Our senses tell us about the world around us.

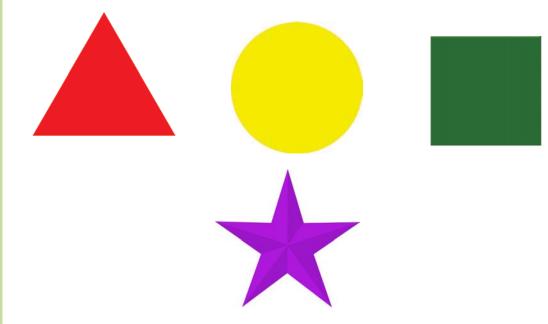
All the five senses are important to us.

Investigation using our senses

1. Sense of sight



- 1. Cover your eyes with your hands and identify the items above.
- 2. Now remove your hands and check if you identified them correctly.
- 3. Look at the shapes below.



• What colours are they?

- 4. Draw same shapes in your exercise book then colour them using different colours.
 - How were you able to detect the colour and shape of the pictures?

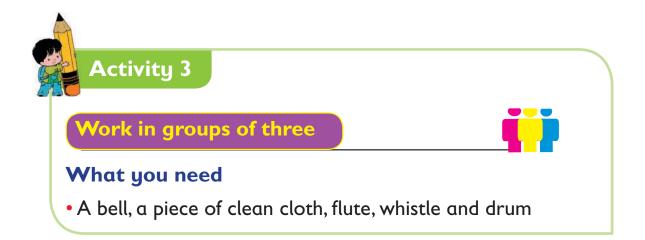


Eyes are the sense organ of seeing. You are able to see the shapes and colours using your eye. Also identify the items correctly using eyes.



Eye

2. Sense of hearing







What to do

1. Let one of the pupil ring a bell.

- Did you hear the bell ring? What about others?
- 2. Cover the eyes of your friend with a clean piece of cloth.
- 3. Play the instruments provided above.
 - 4. Ask your friend to say what they heard. Record the results in a table like this in your exercise book.

Instrument	Did your friend get it right
Flute	
Bell	
Whistle	
Drum	

- 5. Change roles and say what you heard as your friend records.
- 6. Try creating your own sounds using available instruments around.



The ears are our organs of hearing.





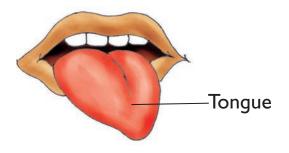
Ear

Ears are found on the head.Whatever the ear hears is known as sound. **Sound** is produce by different objects. When you talk you produce sound. Different animals produce different sounds too.

3. Sens	e of taste)			
Activ	ity 4				
As a c	lass				
	What	to do			
the tab	ble below in y		ns. Use the ite rcise book .	ems to fill	
ltem	Taste	1	I	1	
	Sweat	Sour	Tasteless	Bitter	Salty



Tongue is the sense organ for taste.

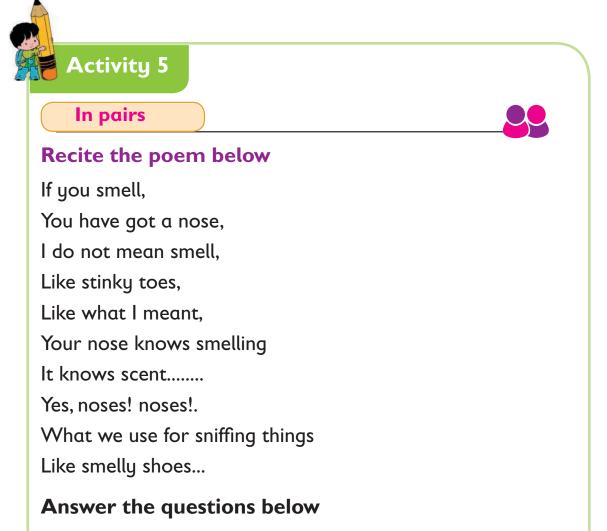


Mouth showing tongue

We use our tongue to tell if something is **sweet, bitter, salty** or **sour**. There are things which have no taste, as well. We say that they are **tasteless.**



4. Sense of smell



- 1. Compose another poem with the theme 'Sense of smell'.
- 2. Copy the trend of the above poem.



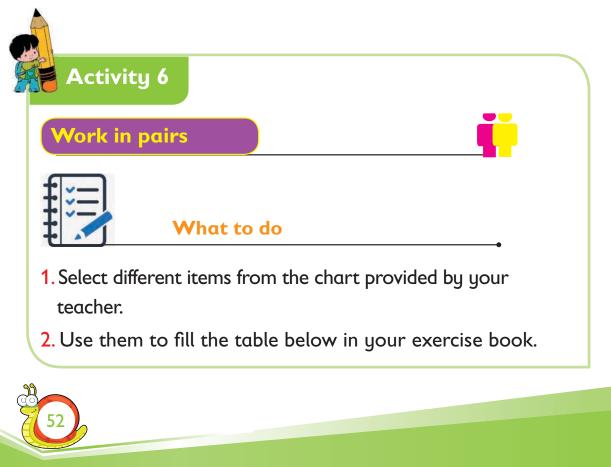


Nose

Nose is the sense organ of smell. It smells both bad and good things

5. Sense of touch or feeling

What organ do we use to feel things?



ltem	Textu	ire				
	Hard	Hot	Soft	Rough	Smooth	Cold

We use our skin to touch and feel things.

We can know about things by feeling them. For example:

- We can feel **hot** things.
- We can feel **cold** things.
- We can feel **smooth** things.
- We can feel **soft** things.
- We can feel **rough** things.
- We can feel **sharp** and **pointed** things.



Check your progress 3(a)

1. Match the sense organs with the correct sense.

Sense organ	Sense
Eye	Taste
Ear	Sight
Nose	Touch
Tongue	Smell



- 2. We feel with our _____
- 3. Copy and fill the table below in your exercise book.

How it feel	object	
Rough		
Hot		
Sharp		
Cold		
Smooth		
Hard		

Image formation



Let us talk

Look at the pictures below with a friend. What can you see?



In picture **B**, why is the girl able to see herself on the mirror?

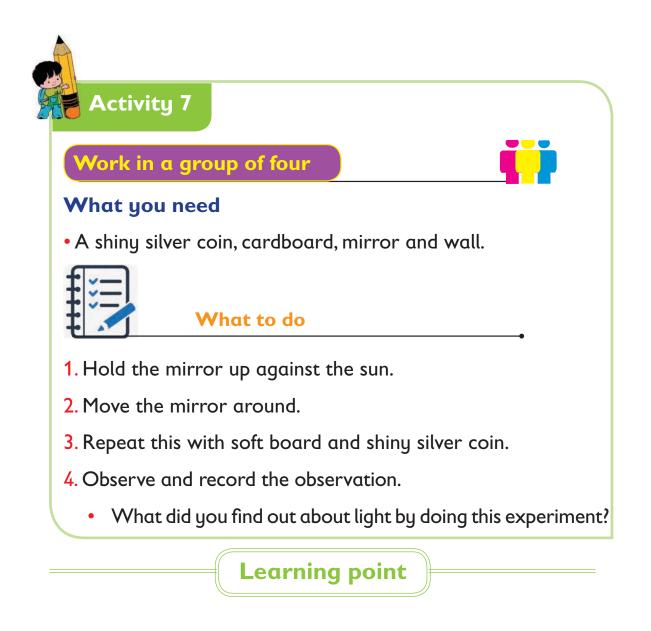


Image is formed when there is bouncing back of light ray on a shinny surface.





Check your progress 3(b)

- 1. Write 3 sources of light.
- 2. The bouncing back of light is called _____.
- **3**. ______ is formed when light is reflected.
- 4. Copy the table below in your exercise and tick in the right box.

Material	Reflects	Does not reflect
Still water surface		
Book		
Piece of cloth		
Polished metals		
Shiny mirror		
Coin		
Piece of wood		



Echoes



Try playing with the ball as shown below.



What happens? Now throw the ball against a wall.What happens?



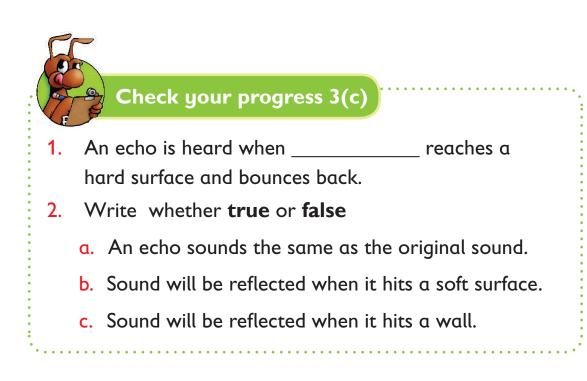
When the ball is thrown against the wall, it bounces back. This also happens, when the sound comes across a barrier such as a wall, it bounces back. This is the sound which follows after the first sound is heard. It is normally heard when the first sound has been reflected by a hard surface. This sound is known as **Echo**.

Activity	8	
Work in p	airs	
What you I	need	
• Wall		
	What to do	0
1. Stand in fro	ont of a large wall.	
2. Clap your	hands once at a time a	s you listen carefully.
• Can yc	ou hear a second clap?	
	vhat has caused it?	

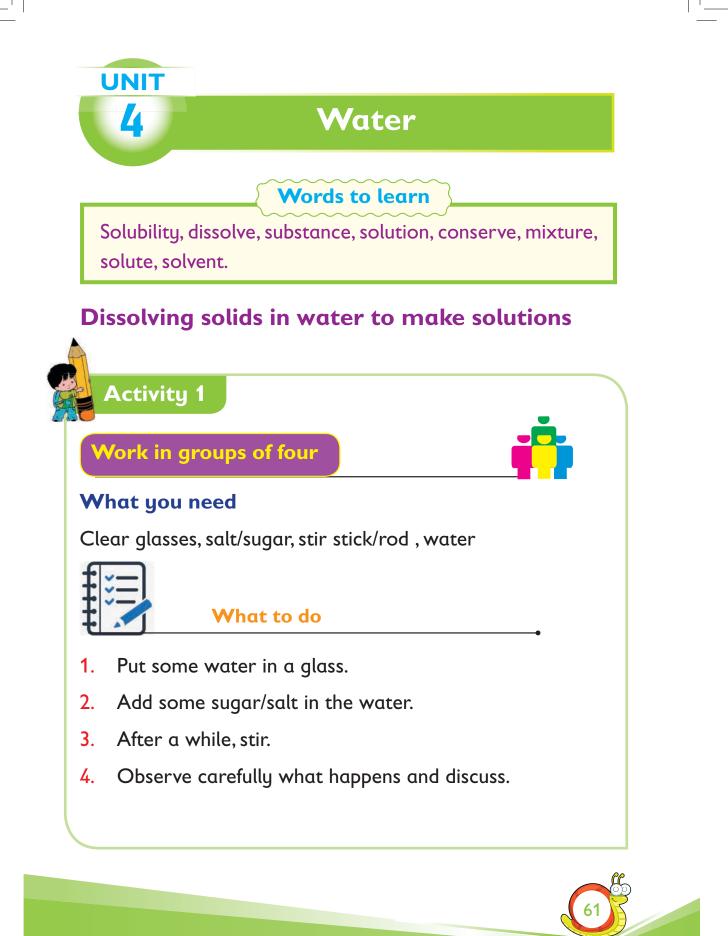
When you clap, the sound waves travel away from your hands in all directions. On reaching the wall, the waves are bounced back.

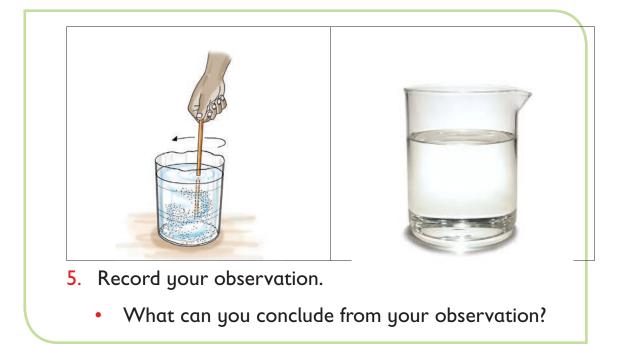
Therefore, echo refers to sound that bounces back when it encounters a **barrier**.



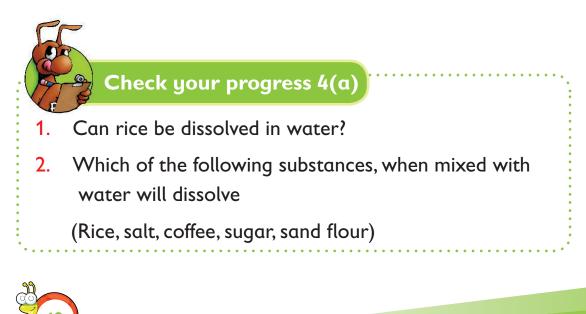




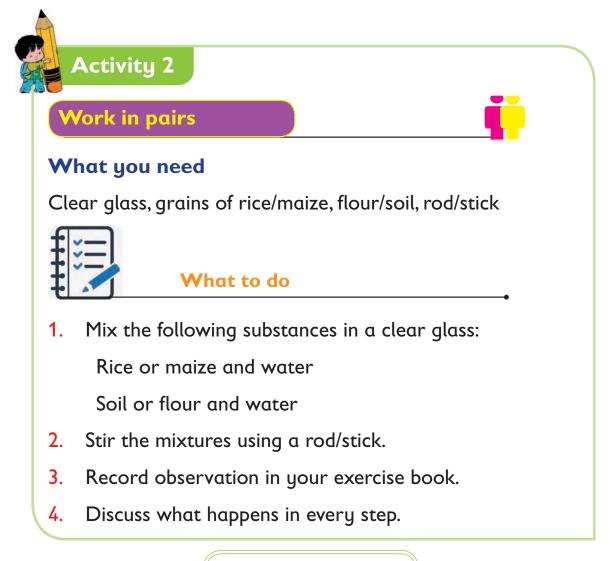




When sugar or salt is mixed with water and stirred well, the sugar or salt disappears. We say sugar or salt **dissolves** in water.



Insoluble substances in water



Learning point

You may have observed that rice grains, maize grains, soil or flour did not dissolve in water. They settled at the bottom of the container. Solids that do not dissolve in water are called **insoluble substances.**





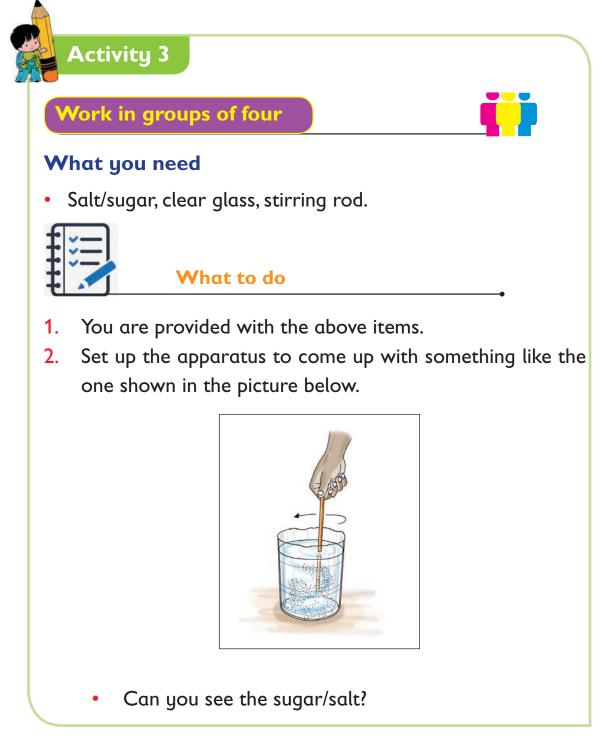
Check your progress 4(b)

 Copy the puzzle in your note book. Identify common words used when dissolving substances in liquids. Example is shown in the puzzle.

Х	S	V	W	В	D
S	Ο	L	U	Т	Е
0	L	U	0	D	Y
L	U	Μ	G	I	Т
U	Т	I	F	S	Ζ
В		X	Н	S	D
I	Ο	Т	Т	0	Α
L	N	U	R	L	С
I.	Μ	R	Q	V	Е
Т	Q	Е	Μ	Е	J
Y	R	Ζ	Α	С	D



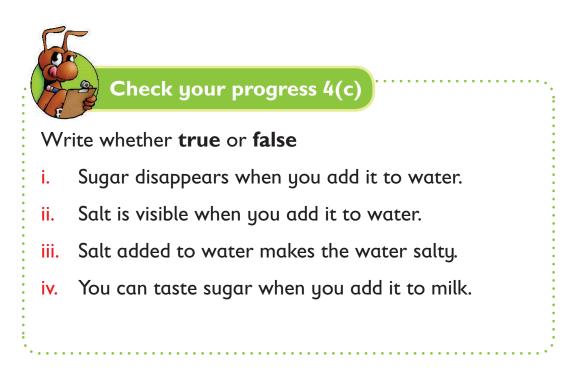
Dissolving and disappearing





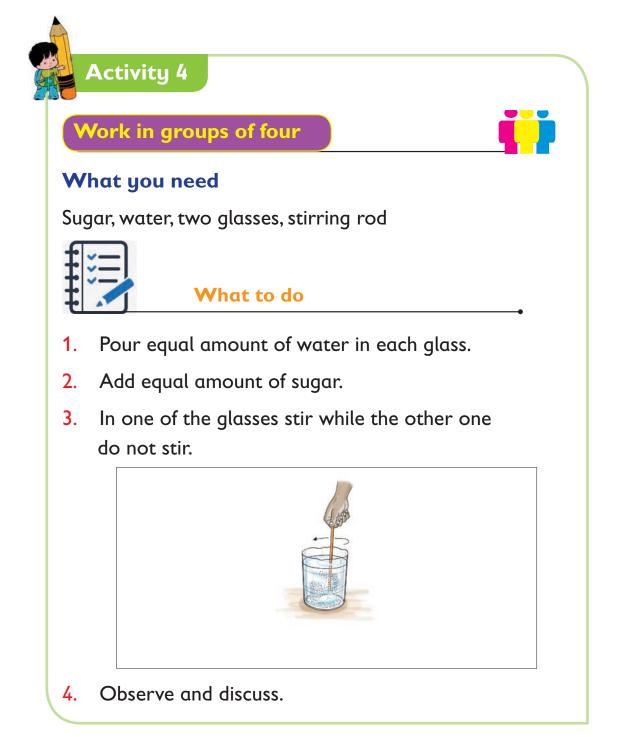
While we may not be able to still see the substances like sugar or salt in water, it doesn't mean it has disappeared, it just means it has dissolved into the water.

The water becomes either salty or sugary, hence the salt/ sugar hasn't disappeared, it just dissolves and becomes part of water.





Increasing solubility of substances in water

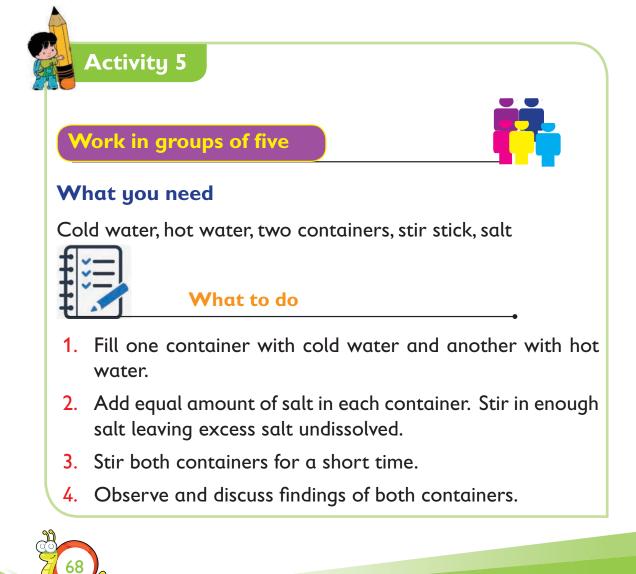




Stirring speeds up the dissolving process because it helps distribute the solute particles throughout the solvent.

When you add sugar to water or tea, and then stir the water, the sugar will dissolve faster. If you do not stir the tea, the sugar may eventually dissolve, but it will take longer.

How hot water makes a difference to dissolving



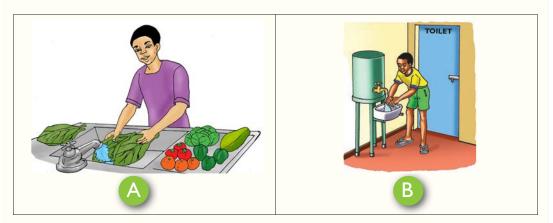
Salt dissolves faster in hot water, than it does in cold water. Solubility of a substance is increased when the solvent is hot.

Uses of water at home



Let us talk

Look at the pictures below. What can you see?



Can you mention other ways in which water is used that is not in the pictures above?

Learning point

The pictures above show some ways in which water is used. Others uses include:



Cooking

Washing





Drinking

Ways of conserving water



Look at the pictures below. What can you see?



Picture **A** shows harvesting of rain water and storing it in a water tank. Picture **B** shows water stored in a dam. These are examples of ways in which we can conserve water. You can also conserve water by:

- Reusing water used in washing clothes to clean latrine and bathroom.
- Reusing water used in cleaning utensils to mop the house.
- Reusing water used in mopping the house to irrigate kitchen garden.
- Closing running taps and fixing leaking taps and pipes.







Check your progress 4(d)

- 1. Draw three ways in which we can store water.
- Copy the following sentences in your exercise books.
 tick where water is used well and a cross where

 it is not.
 - i. A tap left running and water is overflowing.
 - ii. Harvesting rain water.
 - iii. Leaking pipe.
 - iv. A boy brushing teeth.
- 3. List down ways in which we can reuse water at home.





Weather and wind

Words to learn

Temperature, weather, sunny, rain cloudy, wind, forecast.

Weather changes Today's Weather



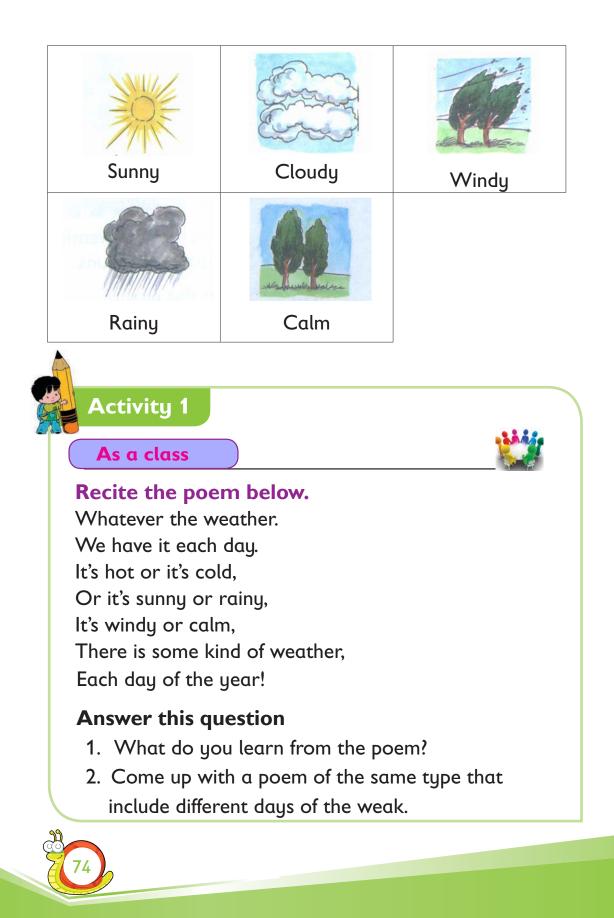
Look outside at the weather. Talk to your friend about the weather today. Is it the same as yesterday's? In which weather does the school flag fly?

In which weather do clothes dry?

Learning point

Weather refers to the day to day changes in the atmosphere. The weather is not always the same. The changes may be described as:

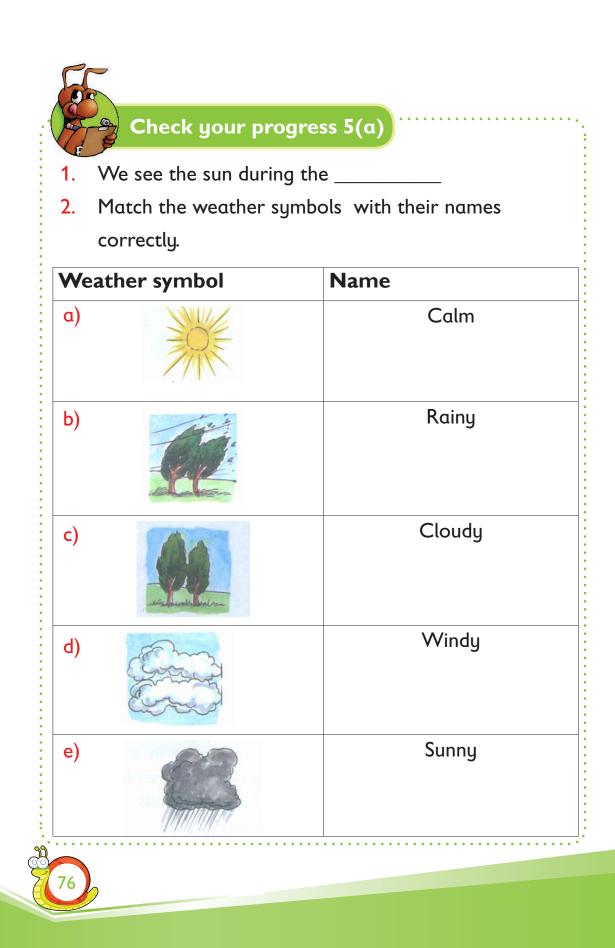


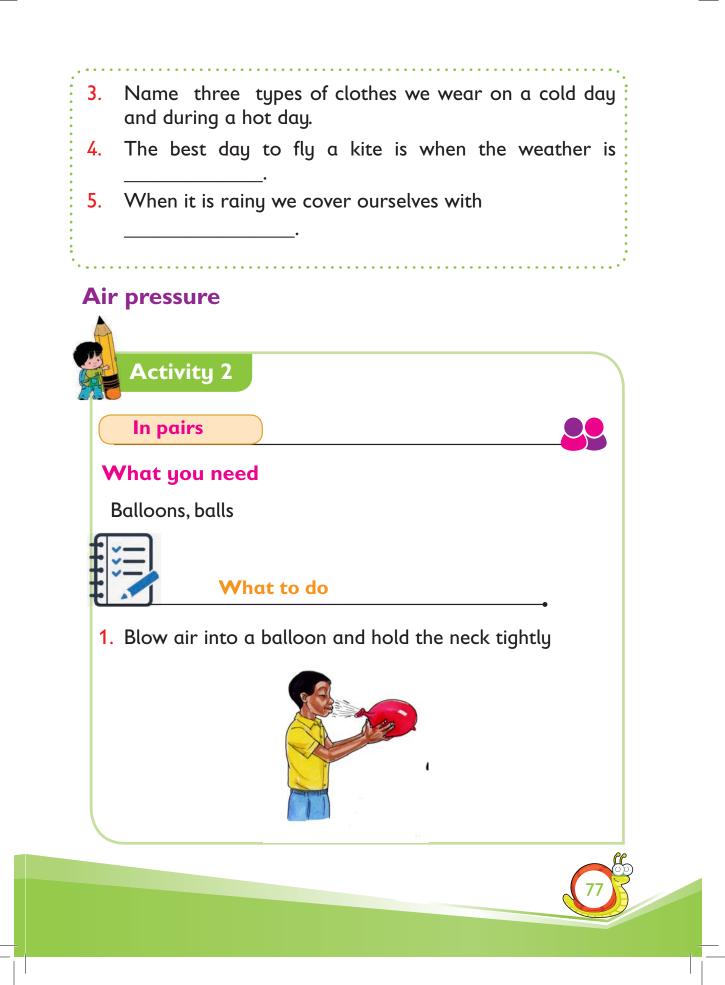


A change in weather influences our daily activities. We also dress according to different weather. Some of the activities influenced by weather include:



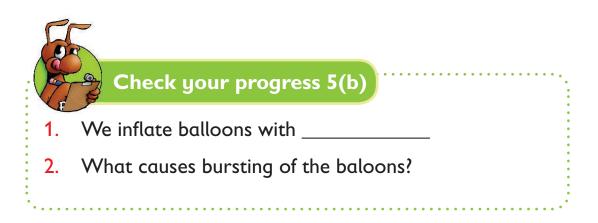






- 2. Put the balloon in front of your face an release the neck.
 - What do you feel?
- 3. Put air in the balloon.
- 4. Release the baloon and observe how far it will travel.

When you release a balloon full of air onto your face, you will feel some force from the balloon. This shows that air exerts pressure. We inflate a balloon with air. Air is a a mixture of different gases. A balloon will burst if too much air is inflated into it. Baloon will burst because the air in it is at higher pressure than its surrounding.





Recording weather changes

Activity 3					
Work in pairs					
What to do 1. Your teacher will help you to make a wall chart on a					
hard paper.					
 Use weather symbols to show the weather conditions for each day of the week. 					
	Mon	Tue	Wed	Thur	Fri



We use table to record different weather condition. Different weather symbols are used.





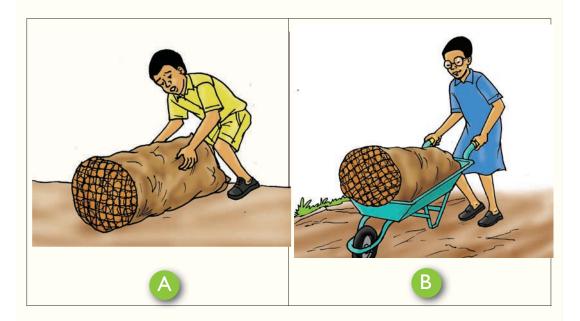
Check your progress 5(c)

At the end of the week, answer the following questions

- i. What kind of weather did you see the most? The least?
- ii. What other kinds of weather could you have seen?
- iii. How many days did it rain?
- iv. How many days had the same kind of weather?
- v. How many days had more than one kind of weather?
- vi. Predict the weather for next week, monitor it and then note down the accuracy of predictions.



Look at the pictures below. What is going on in each picture?



Whose work is easier?



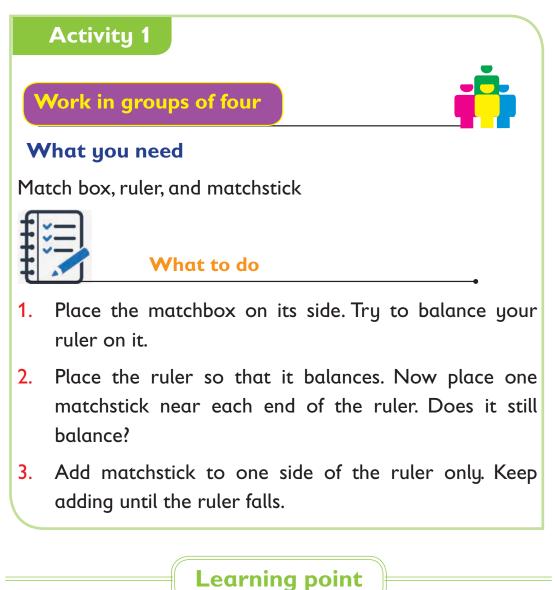
In picture **A**, the boy finds it difficult to transport sack of potatoes, in picture **B**, it is easy for the girl to transport sack of potatoes. The girl in picture **B** is using a simple machine which is the wheelbarrow.

A simple machine enables people to do work with less effort and faster.

Examples of simple machines include:

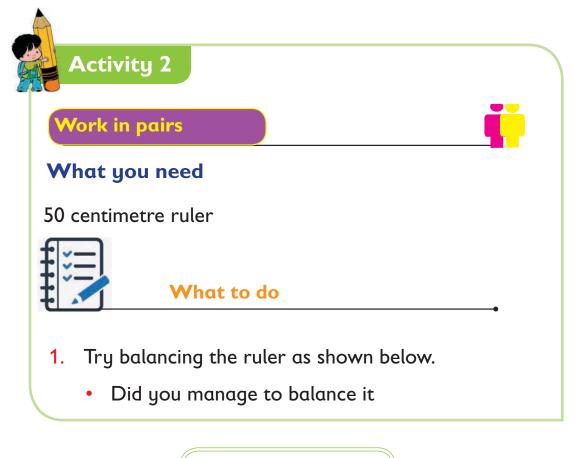


Constructing simple levers



This activity helps to know how to balance. Balancing is very important in our daily lives.

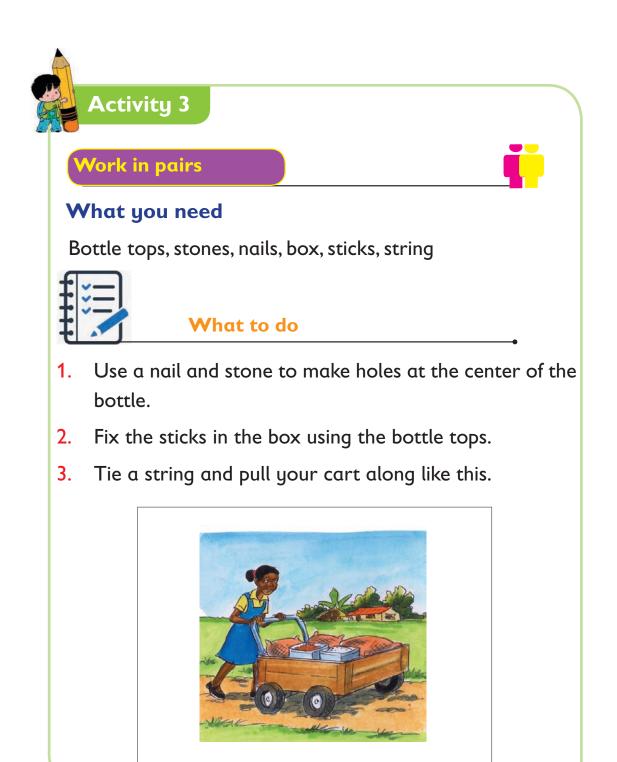




From this activity we learn how to make a seesaw. We use seesaw in our daily lives.

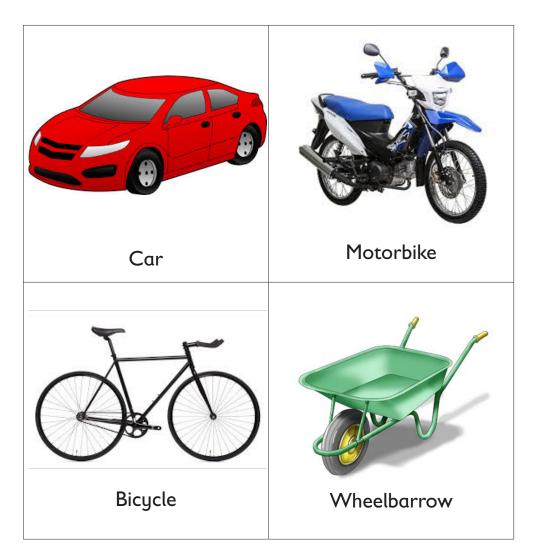
Name ways in which seesaw is used in our daily lives.







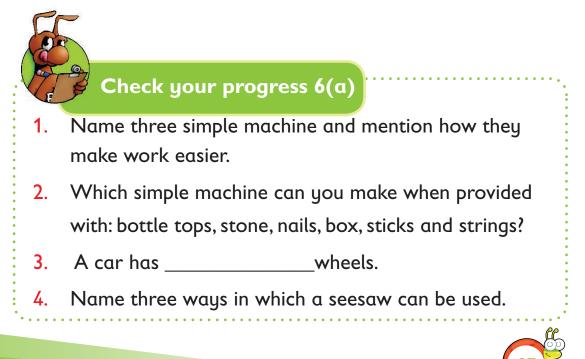
From this activity, you learn how to make wheels. Wheels make work easier. Things using wheels move easily. Wheels are used in







Name other things made of wheels that are not in the pictures above.





Primary Science

5

Primary Science has been written and developed by Ministry of General Education and Instruction, Government of South Sudan in conjunction with Subjects experts. This course book provides a fun and practical approach to the subject of Science, and at the same time imparting life long skills to the pupils.

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- Stimulating illustrations.



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