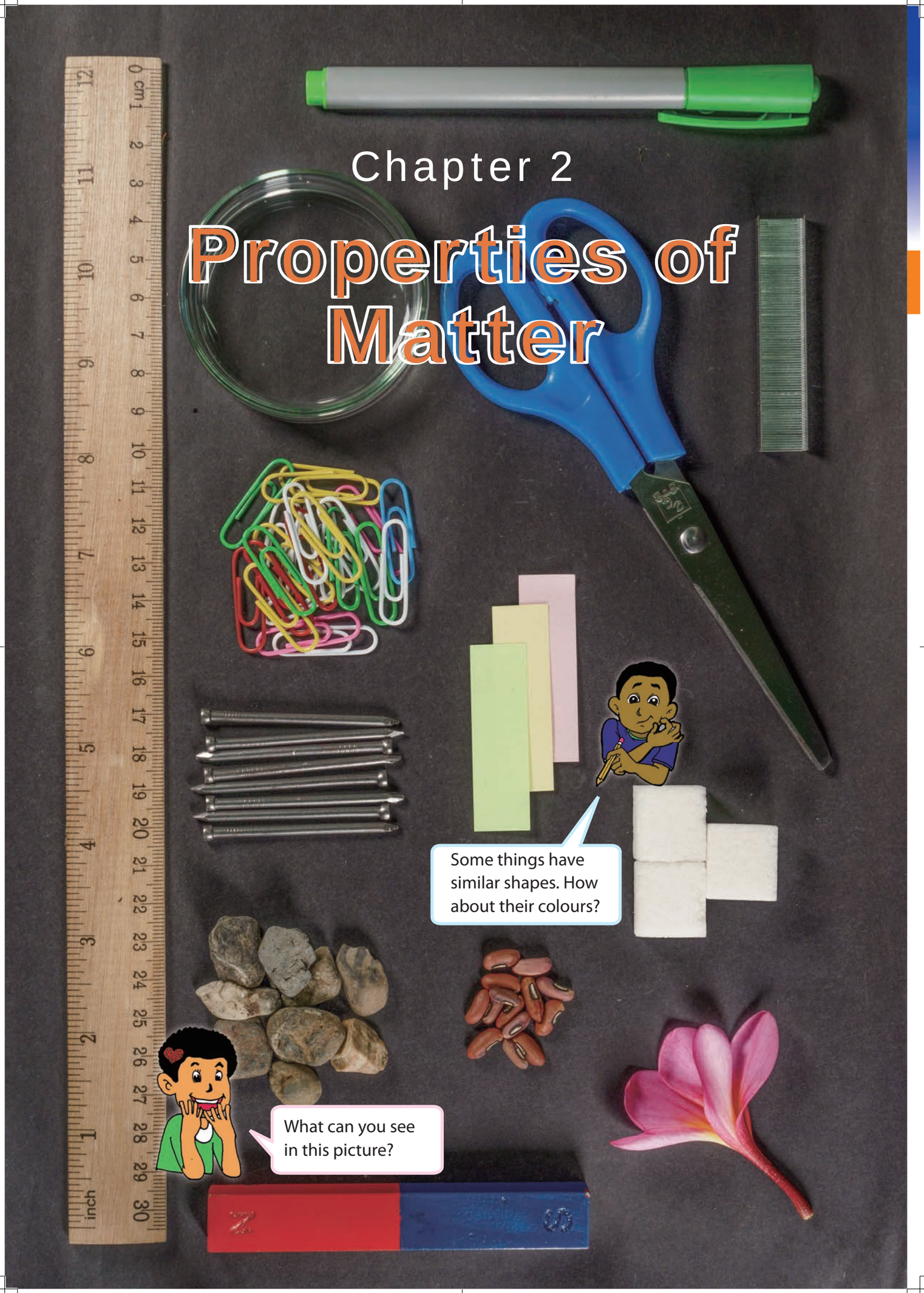

Chapter 2
Properties of Matter
Some things have similar shapes. How about their colours?
What can you see in this picture?

2.1 Describing Matter

Lesson 1: "Matter around Us"

What is matter? Matter is what all things are made of. Can you find matter around you?

What is matter?

Activity : Finding matter around us

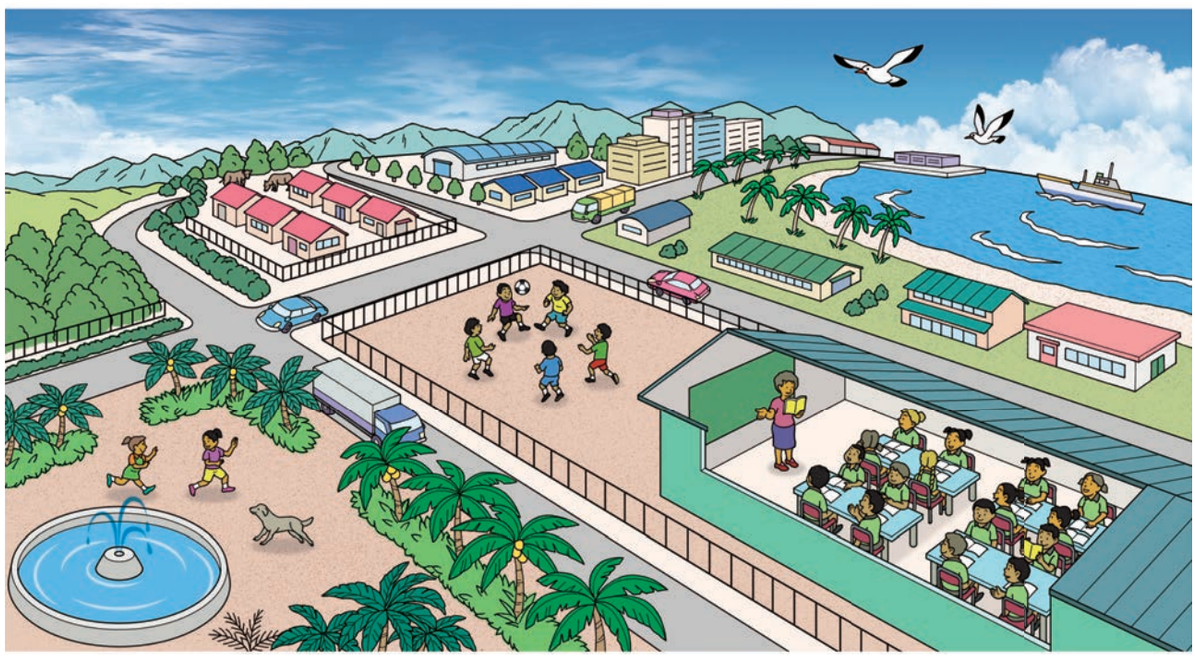
What to Do:

1. Make a table like the one shown below.
2. Look at the picture below and find different matter in the room.
3. Write in the table the names of the different matter you found.
4. Share your ideas with your classmates. Talk about things that are matter and things that are not matter.

Name of Matter You Find

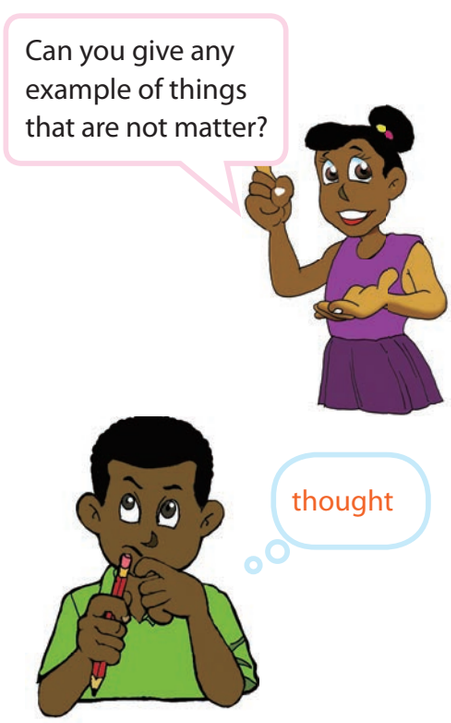
Summary

Matter is everything around us. We are matter. Your friends and teachers are also matter. Air, water, sand, the Earth, animals and plants are all matter. Everything around us is made up of matter. People, rocks, the Sun, ice and clouds are all made up of matter.

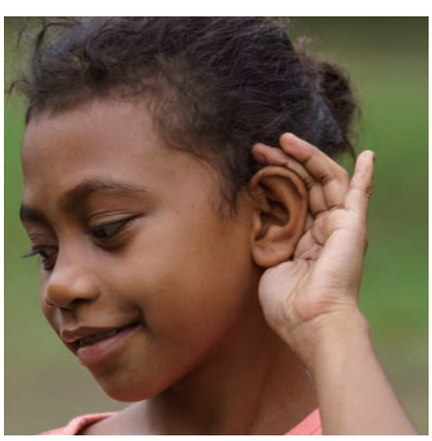


Everything around us is matter.

What is not matter? Time, sound, sunlight, heat, thoughts and memories are examples of things that are not matter.



Light



Sound

Lesson 2: "Properties of Matter"

Matter is everything around us. A desk, dog, flower, air and water are all matter. How are they similar or different?

How can we describe matter?

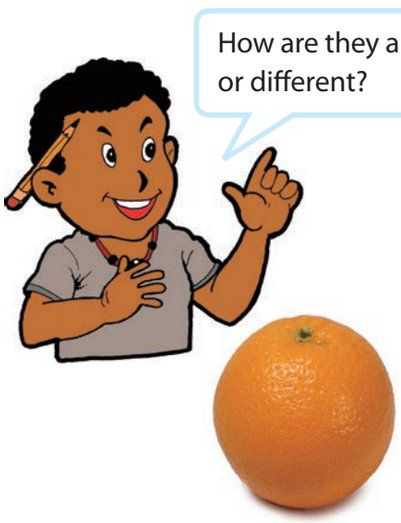
Activity : Describing matter

What to Do:

1. Make a table like the one shown on the right.

How they are similar	How they are different

2. Observe the pictures of two different matter below and find how they are similar or different.
3. Write the similarities and differences between the two matter in the table.
4. Share your can ideas with your classmates. Talk about how you can describe two different matter.



Orange

Basketball ball

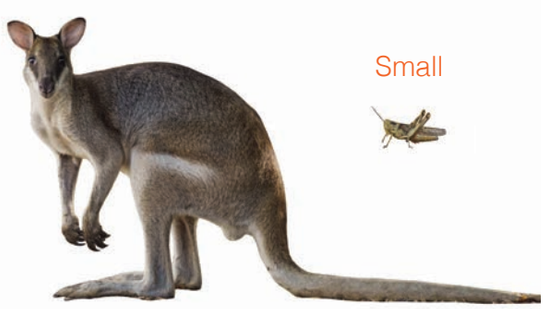
Summary

A **property** is anything about a matter that we learnt. **Weight**, **size**, **colour** and **texture** are all properties of matter. Temperature, taste and smell are also properties of matter.

We can compare and describe matter by using our senses. **Sight, smell, hearing, touch and taste are our senses.**

We can see the size, shape and colour of a matter. We can touch a matter to tell how it is rough or smooth and hot or cold. We taste a matter to test if it is sweet, sour or bitter. We can also tell how a matter smells and sounds.

Size



Big

Temperature

Cold

Hot

Colour

Red

Yellow

Green

Taste

Sweet

Sour

Shape

Round

Cube

Lesson 3: "Heavy or Light?"

Weight is a property of matter. **Weight** means how heavy a matter is. Let's compare the weight of matter!

How can we compare the weight of different matter?

Activity : Comparing weight

What We Need:

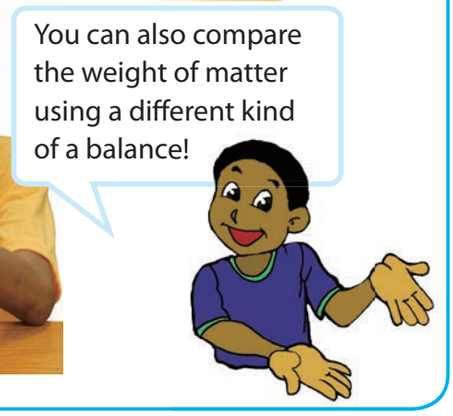
- a balance, three different coins

  [1 kina, 50 toea, and 20 toea]

What to Do:

1. Make a table like the one shown on the right.
2. Place two different coins at a time on the balance.
3. Compare the weight of the two coins and write which coin is heavier in the table.
4. Share your ideas with your classmates. Talk about what you observed and which coin is the heaviest.

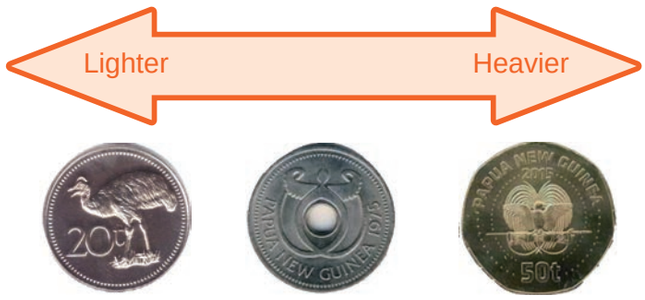
Coins	Which is heavier?
1kina and 50toea	
1kina and 20toea	
50toea and 20toea	



Result

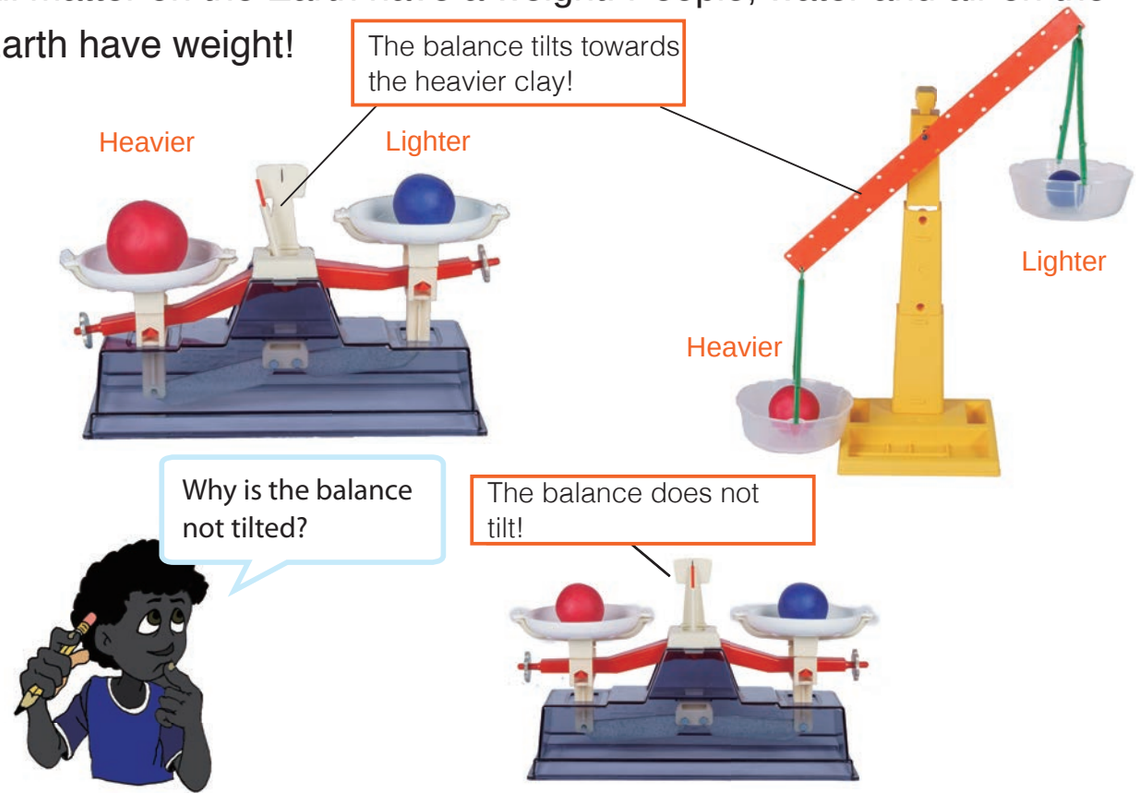
A 50 toea coin is heavier than a 1 kina coin. A one kina coin is heavier than 20 toea coin. A 50 toea coin is heavier than 20 toea coin. From this result, we found that 50 toea coin is the heaviest and 20 toea coin is the lightest among them.

Coins	Which is heavier?
1 kina and 50 toea	**50 toea**
1 kina and 20 toea	**1kina**
50 toea and 20 toea	**50 toea**



Summary

We can compare the weight of matter using a **balance**. A balance is a tool to weigh matter. A balance tells which matter is heavier or lighter than the other. The balance tilts towards the heavier matter. All matter on the Earth have a weight. People, water and air on the Earth have weight!



Lesson 4: "Big or Small?"

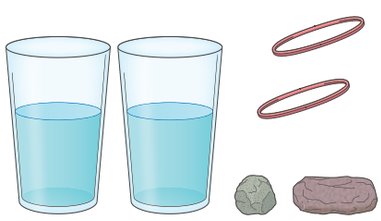
Size is a property of matter. Size means how big a matter is. Let's compare the size of matter!

How can we compare the size of matter?

Activity : Comparing the size of stones

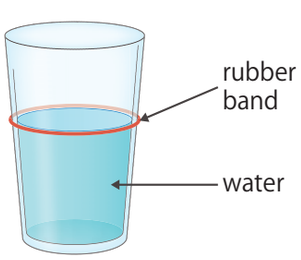
What We Need:

- two same kind of glass cups, water, rubber band, two different stones

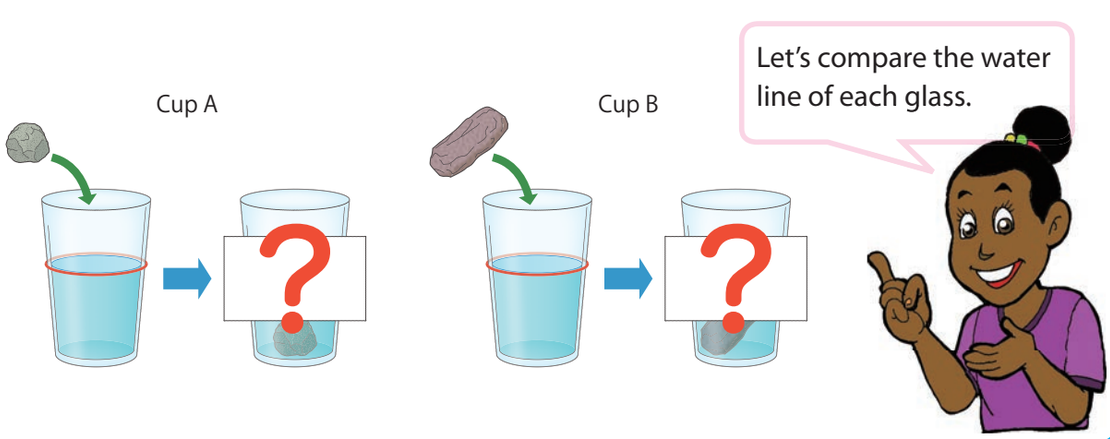


What to Do:

1. Observe the two stones and guess which one is bigger or smaller.
2. Pour water into the two glasses.
3. Set the rubber band at the same level of the water line on each glass as shown on the picture on the right.

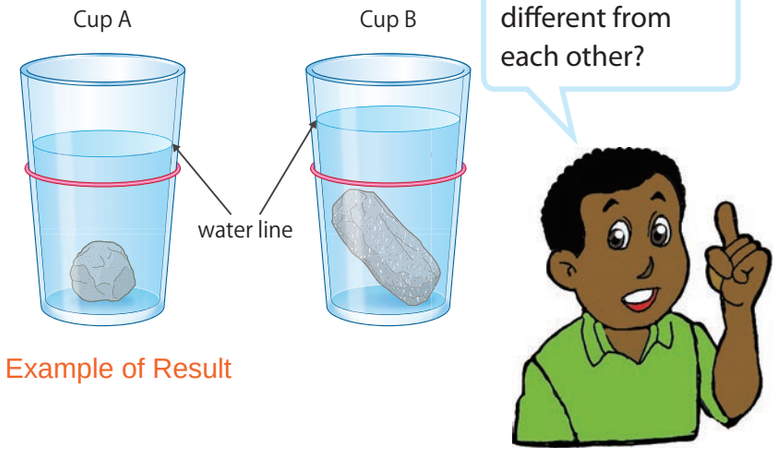


4. Place each stone into each glass slowly and observe what happens to the water line in each glass.
5. Share your ideas with your classmates. Talk about the size of the stone and increase in water level.



Result

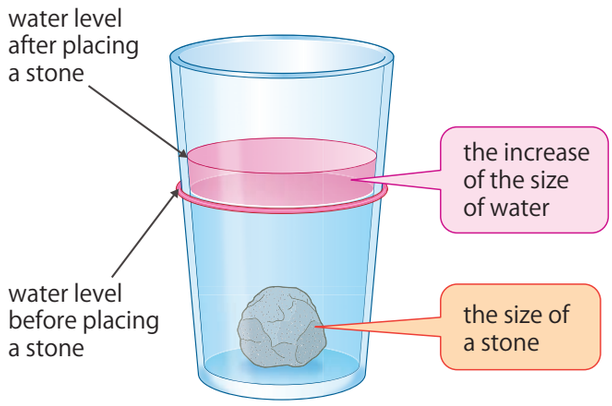
When we placed the stones into each glass, the water lines in the glasses rose. The water line of Cup B is higher than that of Cup A.



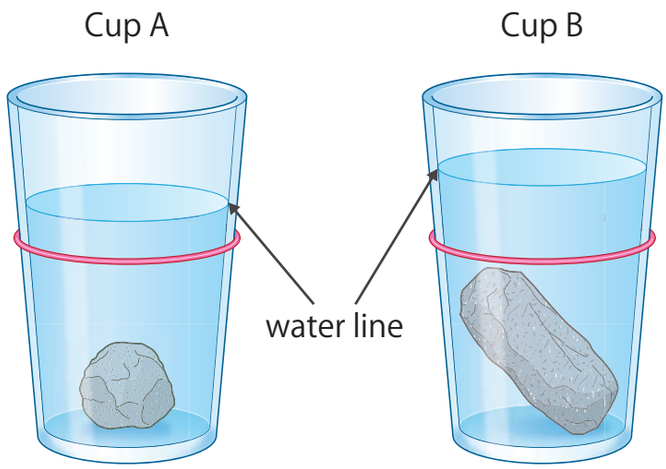
Example of Result

Summary

When we place matter into water in a container, the level of water line will rise. This is because the size of water in the container increases by the same amount as the size of the matter.



So, the bigger the matter is, the higher the water level in a container rises. We can compare the size of matter by observing the increase of the size of water in the container.



The bigger the stone is, the higher the water level in the container is.

Lesson 5: "Float or Sink?"

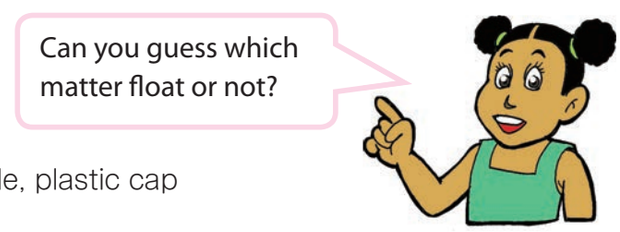
When we place matter in water, some float and others sink.

Which matter float or sink in water?

Activity : Matter that float or sink

What We Need:

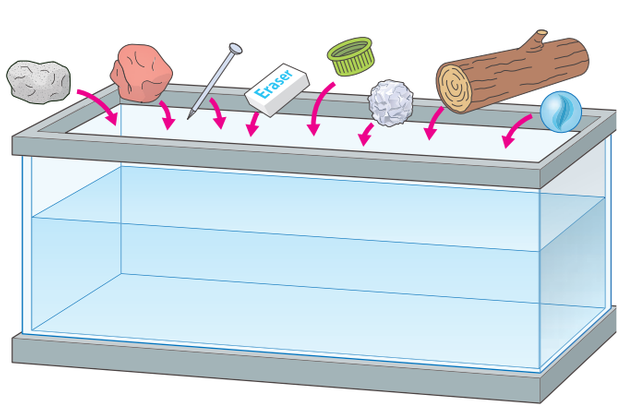
- water, container, wood stick, stone, iron nail, clay ball, aluminium foil ball, eraser, marble, plastic cap



What to Do:

1. Make a table like the one shown on the right.
2. Guess which matter will float or sink and write your prediction in the table.
3. Place each matter on water.
4. Write your observation in the table and group the matter into two: the matter that float on water and the matter that sink in water.
5. Share your ideas with your classmates. Talk about which matter float or sink in water and how you grouped the matter.

Matter	Your prediction: (Float or Sink)	Your Observation
Wood		
Stone		
Iron nail		
Clay ball		
Aluminium ball		
Eraser		
Marble		
Plastic cap		



Result

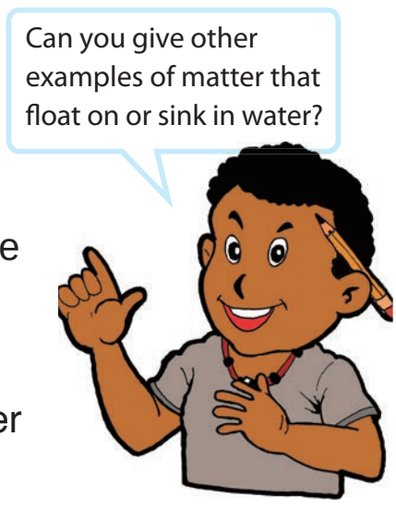
Wood and a plastic bottle cap can float on water. A stone, iron nail, clay ball, aluminium foil ball, eraser and marble sink in water.

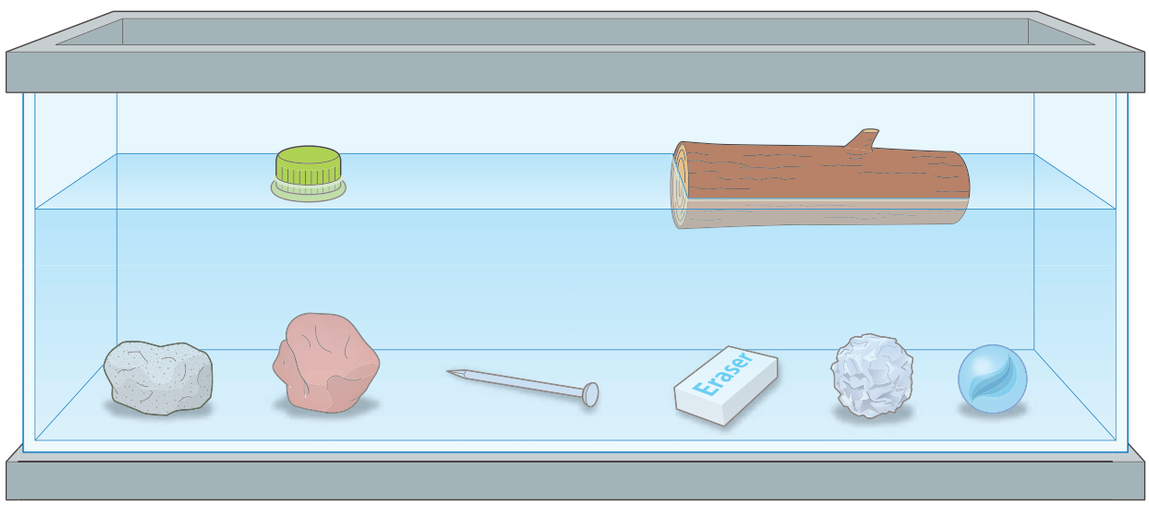
Matter that float on water	Matter that sink in water
Wood	Stone
Plastic bottle cap	Iron nail
	Clay ball
	Aluminium foil ball
	Eraser
	Marble

Summary

Floating and sinking is a property of matter. Float means to stay on or near the surface of water. Sink means to go down below the surface or to the bottom of water.

Some matter such as wood, some kinds of plastic and even oil usually float on water. Matter such as stone, metal, rubber and glass sink in water. We can compare and describe matter by observing whether it floats on or sinks in water.





Some matter can float on water and some sink in water

Lesson 6: "What Matter Do We Use?"

Objects around us are made up of matter. An **object** is a thing that we can see or touch. A chair, stone, tree and water are examples of objects. Some objects are made by people.

What kinds of matter do we use to make objects?

Activity : What are objects made from?

What to Do:

1. Make a table like the one shown on the right.
2. Look at the picture below, and find the objects.
3. Write the names of the objects and what the objects are made from in the table.
4. Share your ideas with your classmates. Talk about the objects you found and what kinds of matter are used to make the objects.

Object	What is the object made from?

Summary

Objects are all made from matter. The kind of matter that is used to make an object is called material. There are different kinds of materials. Wood, glass, rubber, metals and plastics are examples of materials. We use different kinds of materials to make different objects.

Wood

Wood comes from tree. It can be used to make furniture, house and even paper.

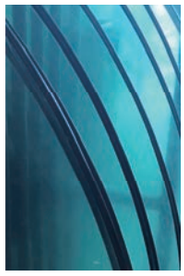

Tree


Wood (Timber)


Wooden Chair

Glass

Glass is used for making window panes, glass cups and pairs of glasses.


Glass plate


A Pair of Glasses


Grass cup

Rubber

Rubber is made from the sap of rubber trees. Rubber bands, erasers and balls are made of rubber.


Rubber Trees


Rubber band


Rubber ball

Plastic

Plastic is made from oil. People use plastic to make objects in many ways. Toys, containers and cutleries are made of plastic.

Oil


Toy


Plastic container

Summary and Exercise

Summary 2.1 Describing Matter

Matter around us

- Matter is what everything around us is made of.

Examples of Matter			Examples of Non-matter		
					
House	Ball	Books	Fire	Light	Sound

Properties of Matter

- Matter has different properties, color, size, shape and texture are examples.
- Different properties of matter can be described using the senses.

Heavy or Light

- Weight is how heavy or light a matter is.
- A balance is a tool used to weigh matter.

Big or Small

- Size is how big or small a matter is.

Float or Sink

- Floating and sinking are properties of matter.
- Objects that can float are; leaf, pencil, empty can and plastic cap.
- Objects that can sink are; stone, nail and iron metal.

Types of Materials

- Matter is made up of different kinds of materials.
- Wood, glass, rubber, metal and plastic are kinds of materials used to make different objects.

Summary and Exercise

Exercise 2.1 Describing Matter

Q1. Complete each sentence with the correct word.

(1) _____ is everything around us.

(2) We use our senses to compare and describe the_____ of matter.

(3) A _____ is used to measure weight of matter.

Q2. Choose the letter with the correct answer.

(1) Which one of the following objects is made of glass?

A. Rubber band

B. Table

C. Plastic container

D. Glass bowl

(2) Colour is a property of matter. Which sense is used to observe the color of matter?

A. Touch

B. Taste

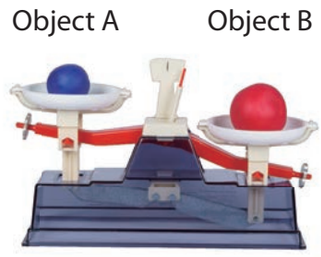
C. Sight

D. Smell

Q3. Answer the following question.

Look at the picture shown on the right.

Which object is heavier than the other?



Q4. Tom wants to compare the size of two objects using a cup of water. How could he tell that one object is bigger than the other object?

2.2 Measuring Matter

Lesson 1: "Taking Up Space"

Different matter have different properties. Size, colour and shape are the properties of matter. But, what is a common property of matter?

What is a common property of matter?

Activity : Space in a cup

What We Need:

- cups, pebbles, water



What to Do:

1. Put as many pebbles as possible into an empty cup. Observe the space inside the cup. Record your observations.
2. Fill an empty cup half-full with water. Observe the space inside the cup. Keep on pouring water into the cup. Observe the space inside the cup. Record your observations.
3. Share your ideas with your classmates.


If we keep on putting pebbles and water into a cup, can you guess what will happen?

Discussion

Think about the following questions based on your observation:

- When an empty cup is filled with pebbles, what happens to the space in the cup?
- Can you add more pebbles into the cup? Why?
- When you fill an empty cup half-full with water, what happens to the space in the cup?
- When you keep on pouring water into the cup, what happens to the water? Why?

Summary

All matter take up space. When a matter takes up space, nothing else can take up the same space at the same time. The amount of space that a matter takes up is called the **volume**. All matter have volume.

When a cup is filled with pebbles, more pebbles cannot be added into the cup. This is because the pebbles take up space in the cup. Other pebbles cannot take up the same space in the cup.

When we keep on pouring water, water is spilled out of the cup. This is because the space in the cup is occupied by water. No water can take up the same space at the same time.

Other pebbles cannot take up the same space in the cup.

No water can take up the same space at the same time.

Lesson 2: "Measuring Volume of Water"

All matter have their own volume. Water also has its volume.

How can we measure the volume of water?

Activity : Measuring volume of water

What We Need:

- measuring jar, water

What to Do:

1. Pour some water into a measuring jar.
2. Measure the volume of water.
3. Share your ideas with your classmates. Talk about the measurement of the volume of the water.

Summary

Measuring cylinder, beaker, and measuring jar are used to measure the volume of water. Volume of water is often measured in **millilitre** (mL) or in **litre** (L).

Measuring jar

Beaker

Measuring Cylinder

• Science Toolbox •

Measuring Volume of Water

STEP 1:

Pour some water into a measuring container.

STEP 2:

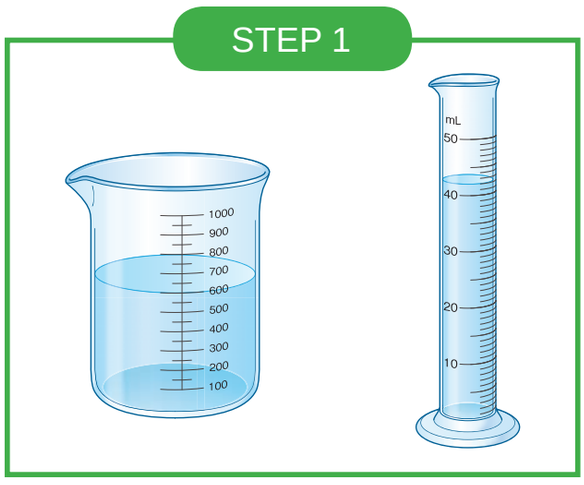
Position your eyes at the level with the top of the water. Read the scale line that is closest to the surface of the water.

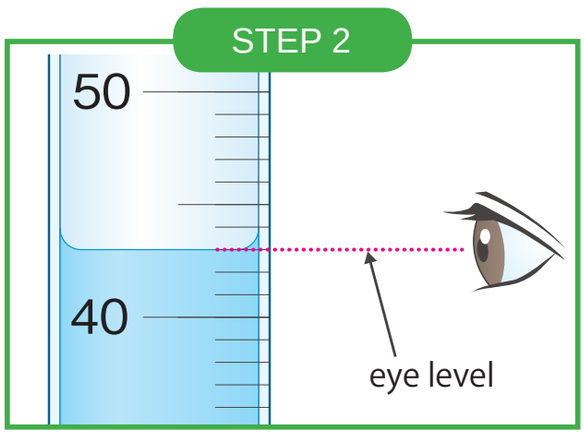
If the surface of the water is curved up on the sides, look at the lowest point of the curved water surface.

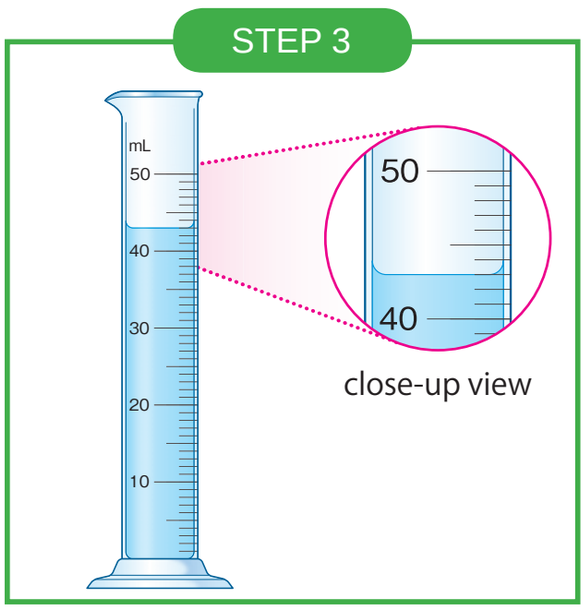
STEP 3:

Read the measurement on the scale.

The volume of water in the figure on the right is 43 mL.







Lesson 3: "Measuring Volume of Stone"

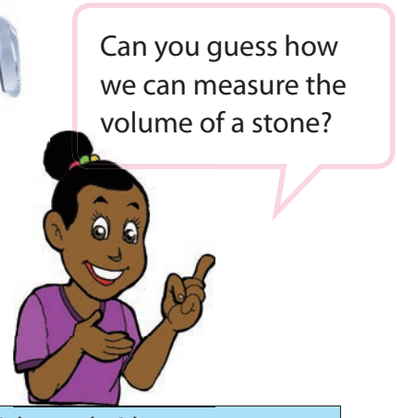
All matter have their own volume. A stone also has its volume.

How can we measure the volume of a stone?

Activity : Measuring the volume of a stone

What We Need:

- stone, measuring jar, water, string

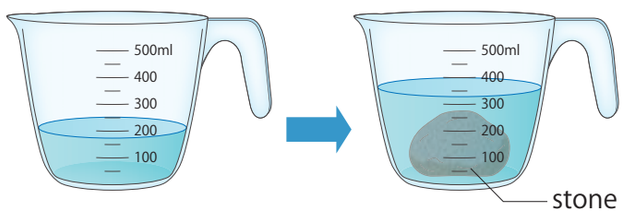


What to Do:

1. Make a table like the one shown below.

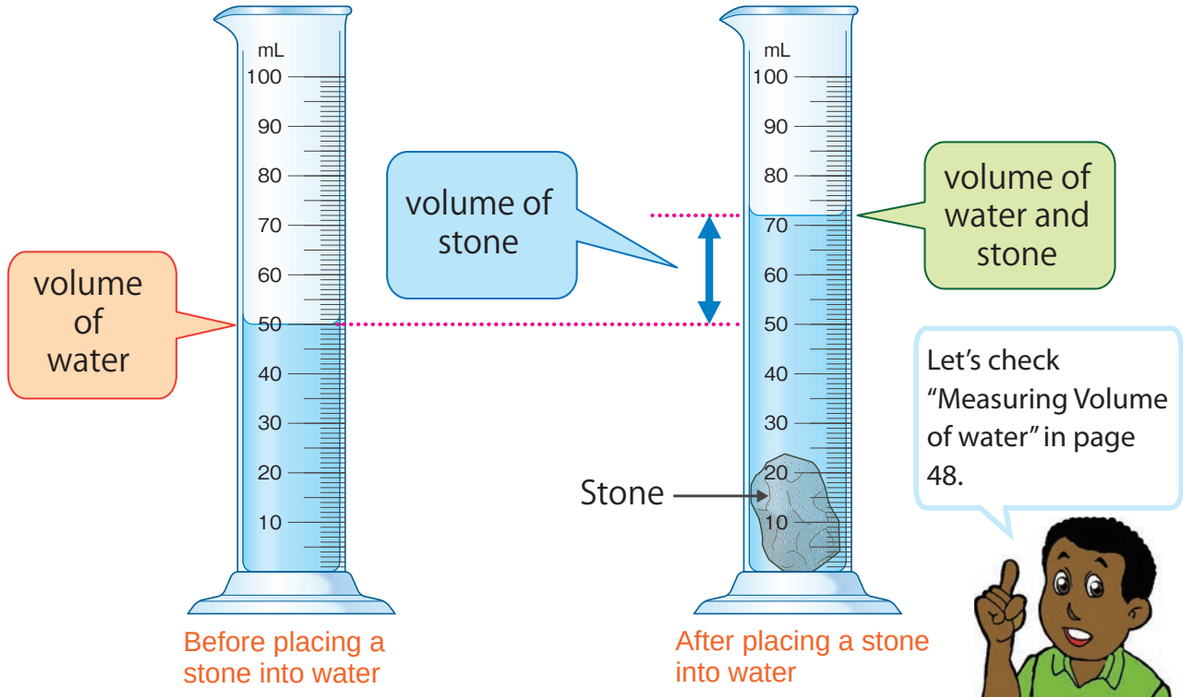
Objects	Volume (mL)
(1) Water	
(2) Water and Stone	
(3) Stone	

2. Fill the measuring jar with some water and record the volume of water in column (1) in the table.
3. Tie the stone with string and put the stone gently into the water.
4. Record the volume of water and stone in column (2) of the table.
5. Find the volume of the stone and write it in column (3) of the table.
6. Share your ideas with your classmates. Talk about how you found the volume of the stone.



Summary

We can measure the volume of a stone by using a measuring cup or cylinder, string and water. The volume of water in the measuring jar or cylinder increases when we place a stone into the water of the measuring jar or cylinder. The increase of the volume of water shows the **volume of the stone.**



We can calculate the volume of a stone as following:

Volume of Stone = (Volume of Water and Stone) – (Volume of Water)

The volume of the stone is measured in **cubic centimetres** (cm^3).

The volume of the stone in the figure above is:

$$\begin{pmatrix}\text{Volume of}\\ \text{Stone}\end{pmatrix} = \begin{pmatrix}\text{Volume of}\\ \text{Water and Stone}\end{pmatrix} - \begin{pmatrix}\text{Volume}\\ \text{of Water}\end{pmatrix}$$

$= 72\ mL - 50\ mL$

$= 22\ mL$

$= 22\ cm^3$

The volume of stone is $22\ cm^3$

Lesson 4: "Weight and Shape of Matter"

Weight and shape are properties of matter. If we change the shape of matter, does the weight of the matter also change?

What will happen to the weight of matter if its shape changes?

Activity : Comparing the weight of different shapes of clay

What We Need:

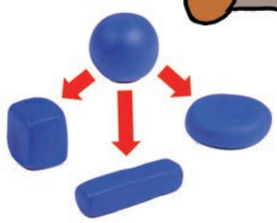
- a balance, equal weight of two clay ball

What to Do:

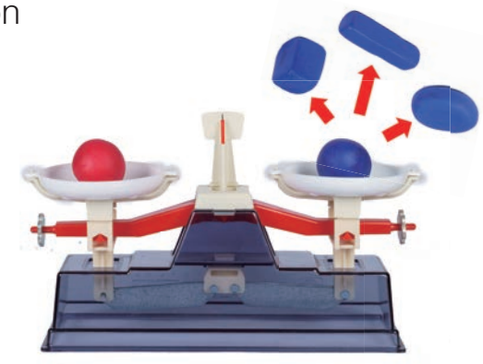
1. Make a table like the one shown below.

Shape	Which is heavier?

2. Change the shape of one of the clays and write the name of the shape in the table.

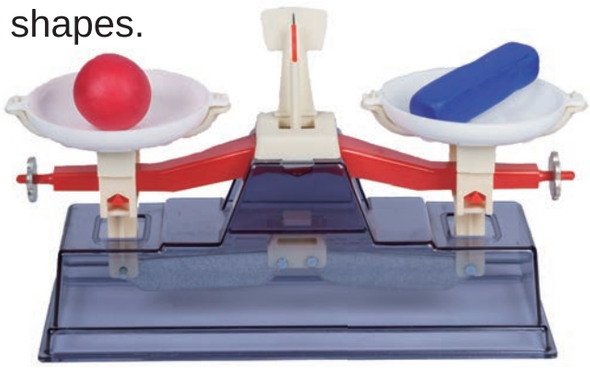


3. Compare the weight of the clay ball and the different shape of the clay with a balance and record your observation in the table.
4. Continue steps 2 and 3 with other shapes and observe what happens.
5. Share your ideas with your classmates. Talk about the relationship between the weight and the shape of the clay.



Result

The weight of the clay did not change even when we changed the shape of clay into different shapes.

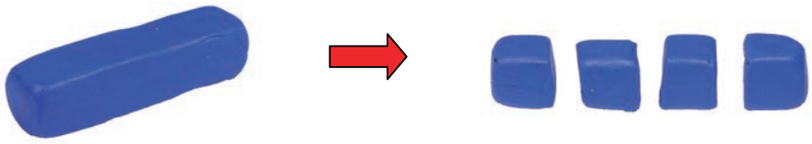


A balance is not tilted because the two clays have the same weight.

Discussion

Does the weight of clay change if it is divided into small pieces?

1. Think about the following question by yourself:
   - "If clay is divided into some small pieces, does the weight of the clay change?"



2. Share your ideas with your classmates.

Summary

The weight of matter does not change even if the shapes of matter changes or it is divided into some small pieces.

Lesson 5: "Weight and Volume of Matter"

There are different kinds of matter around us. If different matter have the same volume, do they also have the same weight?

How can we compare the weights of different matter?

Activity : Comparing weight of matter

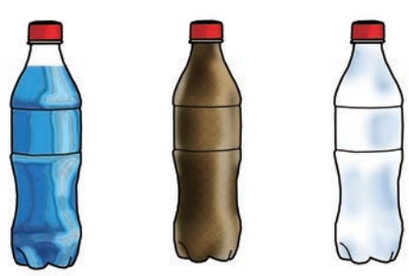
What We Need:

- a balance, three same empty plastic bottles (500mL), water, sand

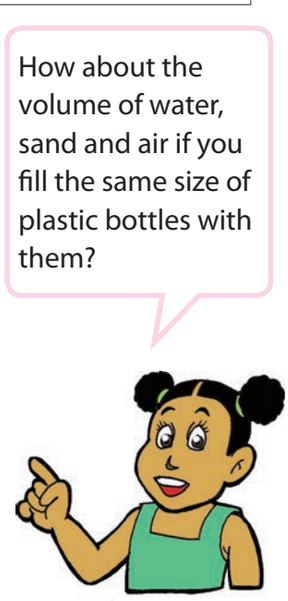
What to Do:

1. Make a table like the one shown on the right.
2. Fill each plastic bottle with water, sand and air.
3. Compare the weight of the three plastic bottles with the balance. Record your observation in the table.
4. Share your ideas with your classmates.

Comparing weights between:	Which is heavier?
Water and Sand	
Sand and Air	
Air and Water	



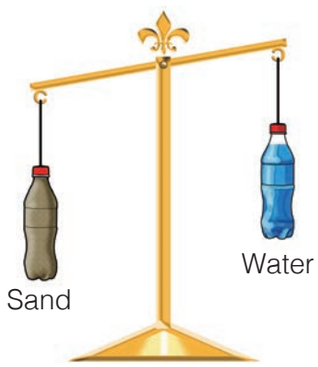
Water Sand Air



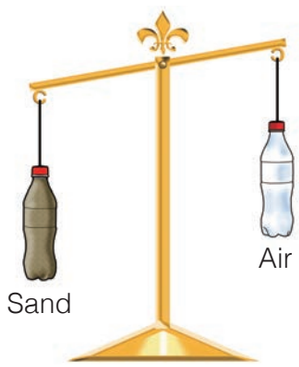
Result

Water, sand and air have the same volume. Sand is heavier than water.
Sand is heavier than air.
Water is heavier than air. From these results, we found that the same volume of water, sand and air have different weights.

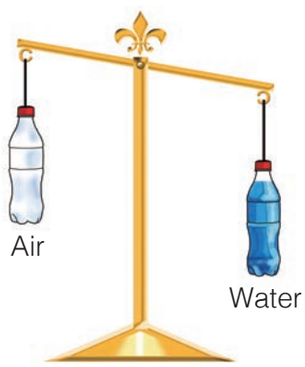
Comparing weights between:	Which is heavier?
Sand and Water	Sand
Sand and Air	Sand
Air and Water	Water



Comparing weight of sand and water



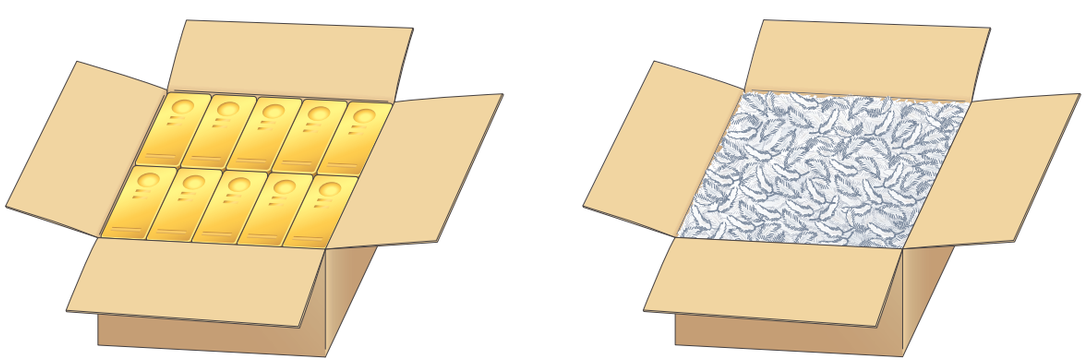
Comparing weight of sand and air



Comparing weight of air and water

Summary

Different kinds of matter with the same volume have different weights. For example, the two boxes below have the same volume. If we filled one with gold and another with feathers, the box filled with feathers would be much lighter because the feathers are not as compact as the gold. We can compare the weights of different matter if their volume is the same.



The gold would be heavier than the feathers in the same box.

Summary and Exercise

Summary 2.2 Measuring Matter

Measuring Volume

- All matter take up space.
- The amount of space that matter takes up is called volume.

Measuring Volume of water

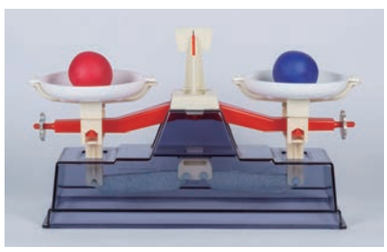
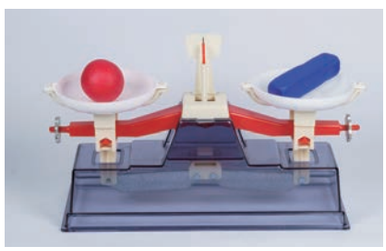
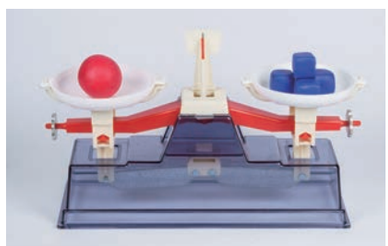
- Measuring cylinder, beaker and measuring cup are used to measure the volume of water.
- Volume of water is often measured in millimetres (mL) or litres (L).

Measuring Volume of Stone

- The volume of stone can be measured using a measuring cup, beaker or measuring cylinder, string and water.
- The volume of stone is often measured in cubic centimetre (cm^3).

Weight and Shape of Matter

- The weight of matter does not change even though the matter changes its shape or is divided into small pieces.

Weight and Volume of Matter

- Different types of matter with the same volume have different weights.

Summary and Exercise

Exercise 2.2 Measuring Matter

Q1. Complete each sentence with the correct word.

(1) All matter take up _____.

(2) Volume of water is often measured in_____ or _____.

(3) The weight of matter does not change even though the matter changes its _____.

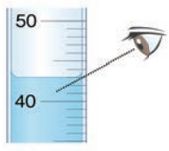
(4) Different kinds of matter with the same volume have _____ weights.

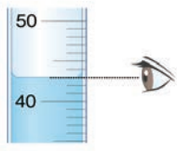
Q2. Choose the letter with the correct answer.

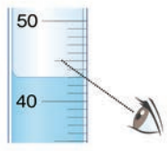
(1) Which one of the following is used to measure the volume of water?

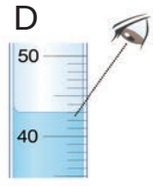
A.  B.  C.  D. 

(2) Which diagram shows the correct way of taking a reading from the given instrument?

A 

B 

C 

D 

Q3. Answer the following question.

Look at the objects shown below. Which one is likely to float?

Plastic bottle cap

Iron nail

Q4. Mori wants to fill a cup with a lot of shells. As she is filling it up, she notices that she could no longer put in more shells. Explain why.

2.3 Mixing Matter

Lesson 1: "Observing a Mixture"

Matter has its properties. When we mix different kinds of matter together, do their properties change?

What will happen when we mix different kinds of matter?

Activity : Let's mix different matter

What We Need:

- small stones, nails, paper clips, dried beans, a bowl

What to Do:

1. Make a table like the one shown below.

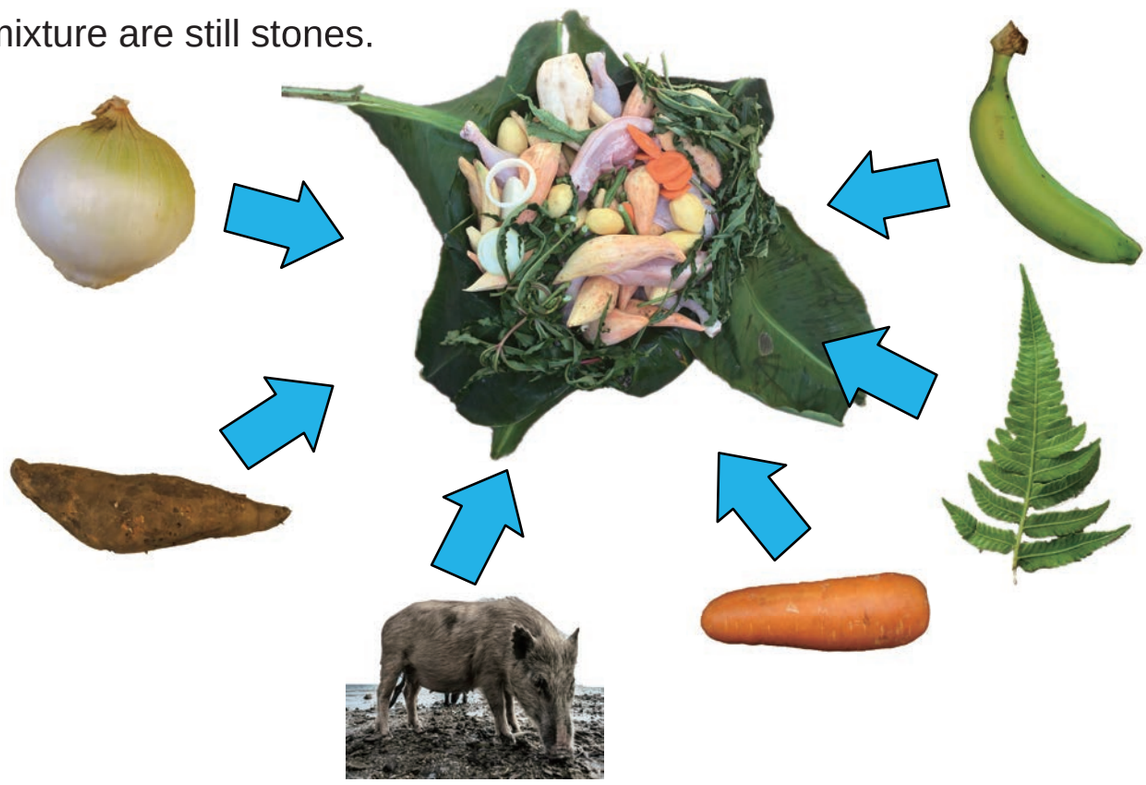
Matter	Properties before mixing	Properties after mixing
Stone		
Nails		
Paper clips		
Dried beans		

2. Observe the properties of each matter and write your observation in the table.
3. Pour all the objects above in the bowl and mix them together.
4. Observe the properties of each matter in the bowl and write your observation in the table.
5. Share your ideas with your classmates. Talk about how the properties of matter change before and after mixing.

Summary

When we put different matter together, we can make a mixture. A **mixture** is something made of two or more kinds of matter.

When we make a mixture, there is no new matter. Even though two or more matters are mixed together, the properties of each matter in the mixture do not change. When we mix stones, nails, paper clips and dried beans together in a bowl, the properties of each matter does not change. The nails in a mixture are still nails. The stones in a mixture are still stones.



Mumu is an example of a mixture. Corns and ferns in mumu are still corns and ferns.

Discussion

Mixtures around us

1. Make a list of mixtures around us and find the different matter that make up the mixtures.
2. Share your ideas with your classmates.

Lesson 2: "Separating a Mixture"

A mixture is made up of two or more kinds of matter. Each matter in a mixture is still there.

How can we separate a mixture?

Activity : Let's separate a mixture

What We Need:

- nails, sand, piece of wood, a bowl, water, magnet, strainer

What to Do:

1. Make a table like the one shown below.

Matter	Properties
nails	
sand	
wood	

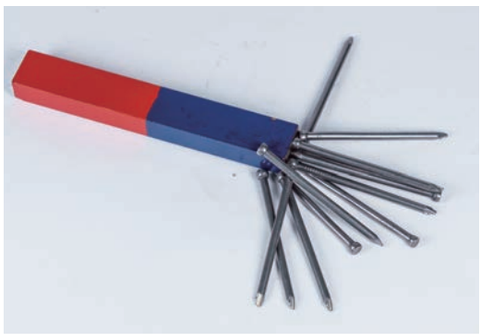
2. Observe each matter and write their properties in the table.
3. Pour these objects in the bowl and mix them together.
4. Think about the ways to separate the nails, sand and wood in the mixture by using water, a magnet and a strainer.
5. Separate the mixture based on your ideas.
6. Share your ideas with your classmates. Talk about how to separate a mixture.

Summary

The properties of each matter in a mixture do not change. So, a mixture can be separated into each matter by using the properties of each matter. We can separate a mixture of nails, sand and wood in different ways.

Using Sight

Each matter in a mixture has the same properties such as size, colour and shape. We can separate a mixture by seeing the properties of matter.



Using a Magnet

Some matter are attracted to a magnet. We can separate nails from the mixture by using a magnet as a nail is made of iron.

Using a Strainer

We can separate sand from the mixture by using a strainer. Strainers separate a mixture by the size of its matter. The size of sand is small enough to pass through a strainer.

Using Water

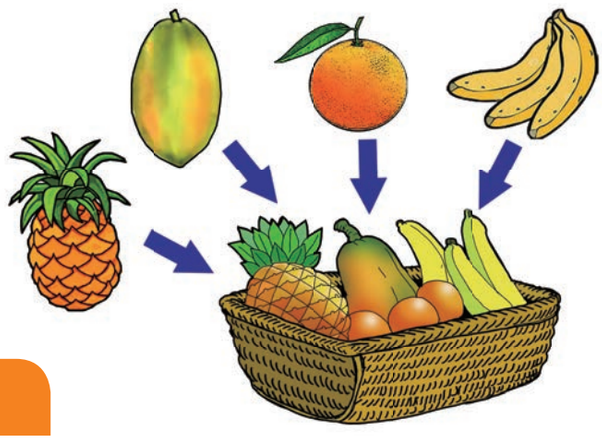
Some matter float in water, some sink in water. We can separate wood from the mixture by using water. Wood can float in water but nails and sand sink.

Summary and Exercise

Summary 2.3 Mixing Matter

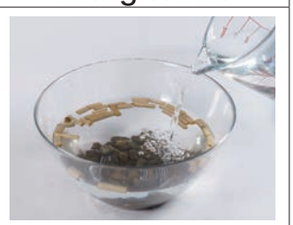
Observing a Mixture

- A mixture is made up of two or more kinds of matter.
- When different kinds of matter are mixed together, the properties of each matter do not change.



Separating Mixtures

- A mixture can be separated by using its properties such as colour, size and shape.
- Mixtures can be separated in many different ways.

Using sight	Using magnet	Using strainer	Using water
			
Matter that have properties such as size, colour and shape in a mixture can be separated by using sight.	Such matter like nails in a mixture can be separated using a magnet.	Strainer can separate a mixture by the size of its matter.	Using water to separate matter that can float and those that can sink.

Summary and Exercise

Exercise 2.3 Mixing Matter

Q1. Complete each sentence with the correct word.

(1) A _____ is made up of two or more kinds of matter.

(2) When a mixture is made, no new _____ is formed.

(3) Mixture can be separated using the _____ of matter such as size, colour and shape.

(4) Shells and sand can be separated using a _____.

Q2: Choose the letter with the correct answer.

(1) Which of the following mixtures can be separated using a strainer?

A. Bean seeds and raw rice grains

B. Salt in water

C. Different fruits in a basket

D. Rice grains and water

(2) How can you separate a mixture of different fruits in a basket?

A. Using a strainer

B. Using a magnet

C. Using water

D. Using sight

Q3: Answer the following question.

What property is used to separate nails from sand in the picture?

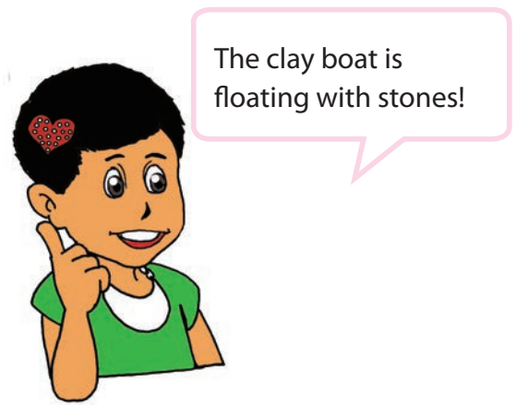
Q4. A boy drops rice grains on the ground. The rice grains are mixed with small pieces of wood and sand. How can he separate the rice grains from the mixture?

Will an iron ship float in water?

Why does an iron ship float while an iron nail sink in water?

A ship has a large centre space filled with air. The air helps the ship and boat to float. If the ship fills the centre space with water, the ship will sink.

Let's make a boat using clay! Change its shape and try floating it in the water! How many stones can you put on your clay boat?



Chapter Test

2. Properties of Matter

Q1

Complete each sentence with the correct word.

(1) _____ is everything around us.

(2) Matter can be described by their _____ such as colour, size and shape.

(3) _____ is how heavy or light a matter is.

(4) _____ is the amount of space matter takes up.

(5) Volume of water is often measured in _____ or _____.

(6) A _____ is something made of two or more kinds of matter.

Q2

Choose the letter with the correct answer.

(1) Which tool is used to measure the volume of water?

A. A balance

B. A measuring cylinder

C. A thermometer

D. A magnet

(2) Which sentence is <u>not</u> true about matter?

A. All matter has weight and takes up space.

B. Some matter like air cannot be seen.

C. Size, shape, color and texture are properties of matter.

D. All matter sink in the water.

(3) Which of the following would happen when you change the shape of a clay?

A. The weight of the clay becomes lighter.

B. The weight of the clay becomes heavier.

C. The weight of the clay doesn't change.

D. The weight of the clay becomes zero.

(4) Michael prepared two plastic bottles with the same volume. He filled each bottle with sand and water and compared the weights. Which of the explanations is correct about volume and weight?

A. The same volume of sand and water have the same weight.

B. The same volume of sand and water have different weights.

C. The same volume of sand and water do not have weight.

D. The same volume of sand and water sometimes have the same weight.

Q3

(1) Garry poured cooked spaghetti and water into a strainer to separate the two matters. How does the strainer separate the spaghetti from the water?

_____

_____

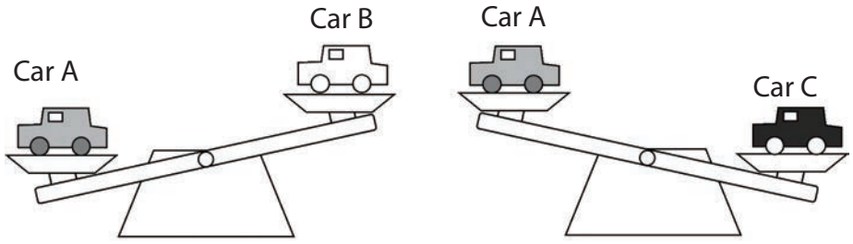
(2) A cup was placed under a dripping tap. After a while, water started spilling out. Why does the water spill out from the cup?

_____

_____

(3) A student compares the weight of three toy cars using a balance. His observation results are shown below. Which toy car is the heaviest?

_____



Q4

Kay filled a beaker with water up to 50 millilitres. She then put in a stone and the level of the water rose up to 75 millilitres.

a) How many millilitres does the water level increase by?

_____ mL

b) Explain why the level of water rose when she put the stone into the beaker.

_____

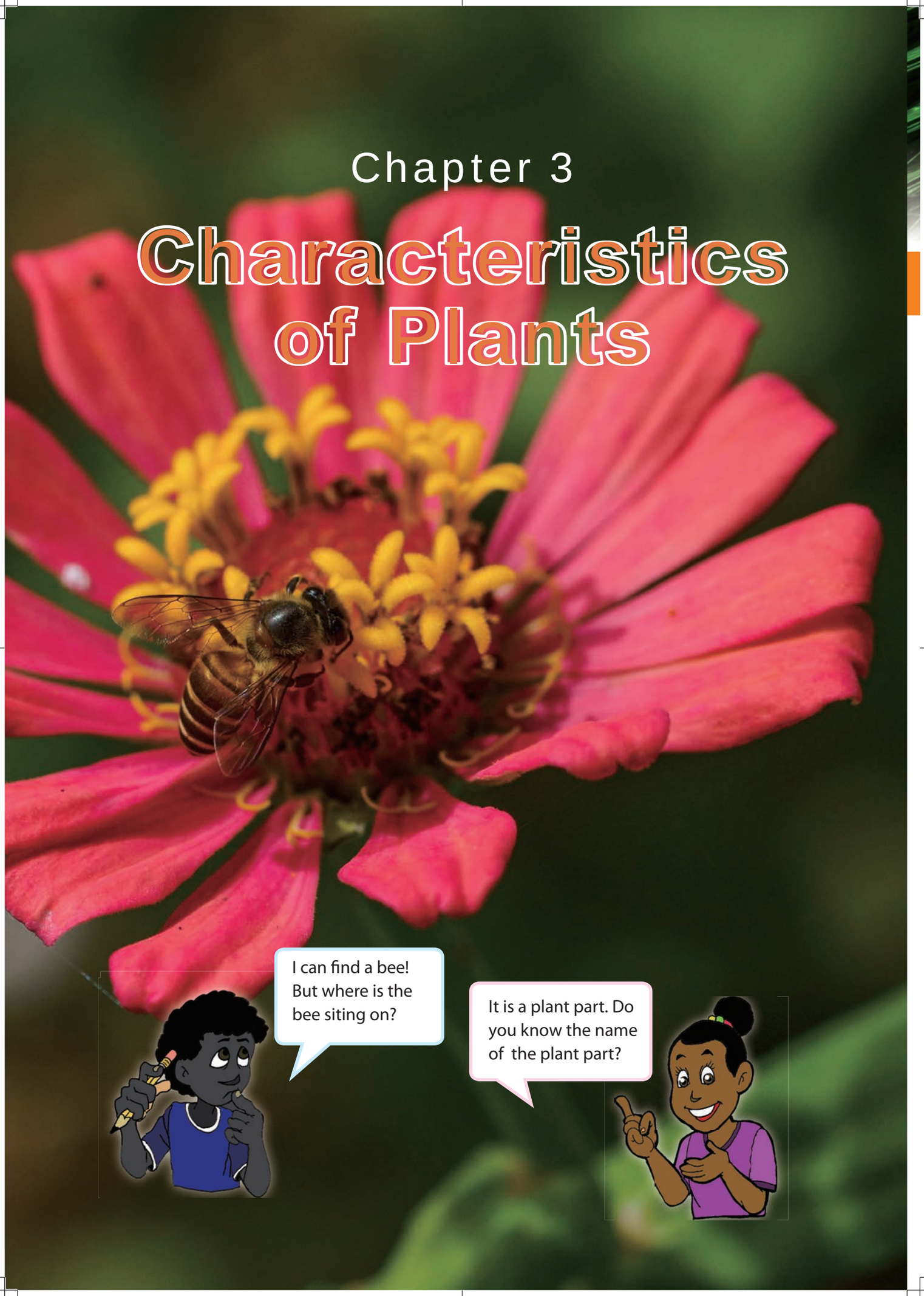
_____

c) What is the volume of stone?

_____ cm^3

Chapter 3

Characteristics of Plants



3.1 Observing Plants

Lesson 1: "Plants around Us"

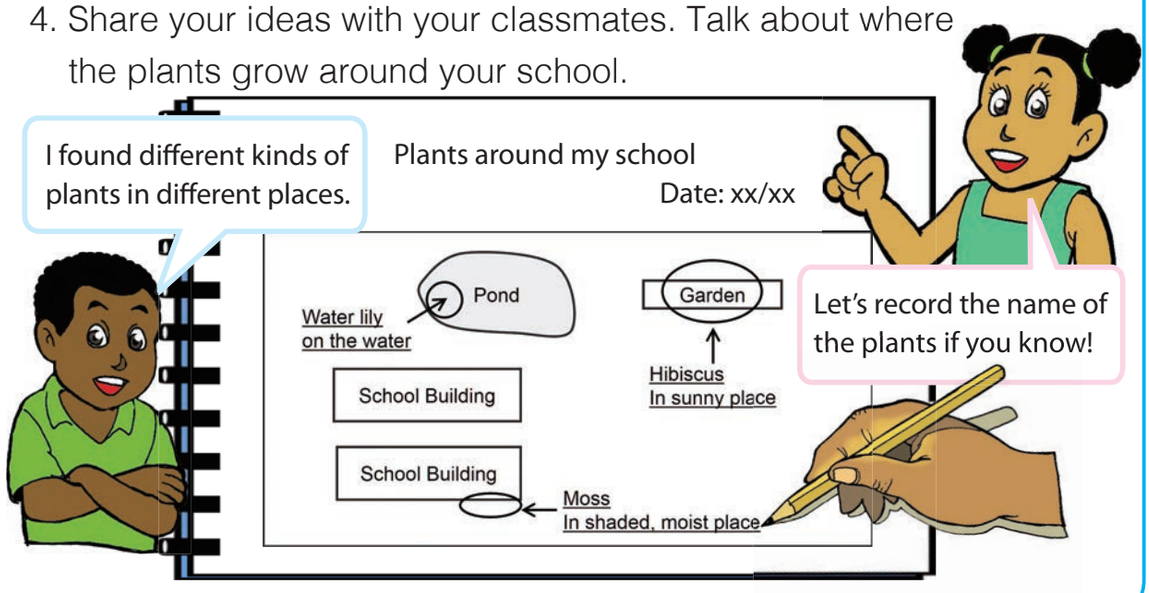
Look around us! There are many different kinds of plants around us. Where can we find plants?

Where do plants live and grow?

Activity : Finding plants around us

What to Do:

1. Draw a school map like the one shown below.
2. Go out of the classroom and find plants around your school.
3. Record the place where you found the plants and also describe the characteristics of the place such as sunny, shady, wet or dry on the map.
4. Share your ideas with your classmates. Talk about where the plants grow around your school.



Summary

Plants can be found in many places. Different plants grow and live in different places. They grow on the ground, in sunny places, in shady and moist places. Some plants grow in fresh or salt water.

Sunny Place

Many plants grow on the ground in sunny places. They get enough sunlight in these places.

Some plants grow in sunny places.

Shady and Moist Place

Some plants grow in shady and moist place. There is enough water for plants in shady and moist place.

Moss and fern grow in shady and moist places

Fresh and Salt Water

Many plants grow in water. There are two kinds of water; fresh and salt water. Some plants grow in or on fresh water and some live and grow in salt water.

Water lily grows in fresh water.

Seaweed grows in salt water.

Lesson 2: "Observing Plant Parts"

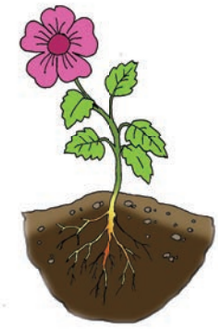
Even though there are so many different kinds of plants, most plants have some parts that are common.

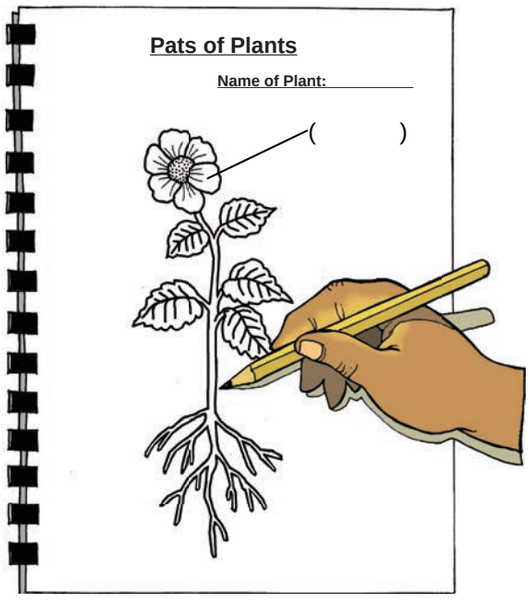
How are the parts of plants common?

Activity : Observing parts of plants

What to Do:

1. Go outside and bring a plant.
2. Observe the plant and sketch it in your exercise book.
3. Write the name of each plant part in your drawing.
4. Share your drawing with your classmates. Talk about the parts of plant and how plant parts are similar.





Summary

Plants are made up of different parts. Most plants have the same parts, such as roots, stems and leaves. Some plants also have flowers.

Different parts of a plant

Roots

Roots are the parts of the plants that are usually found under the soil. They hold the plants in the ground and keep them upright.

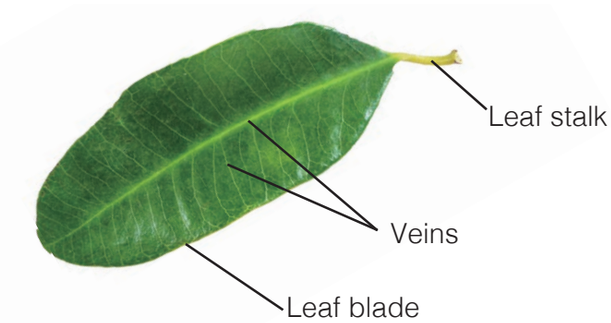
Roots hold a plant in the ground.

Stems

A **stem** connects the roots to other plant parts. Stems help hold the plant up.

Leaves

Many plants have flat and green **leaves**. A leaf is made up of a leaf stalk, veins and leaf blade.



A leaf stalk, a leaf blade and veins

Flowers

Some plants have flowers. Different plants have different shapes, sizes and colours of flowers.

Different shapes, sizes and colours of flowers

Lesson 3: "Function of Plant Parts"

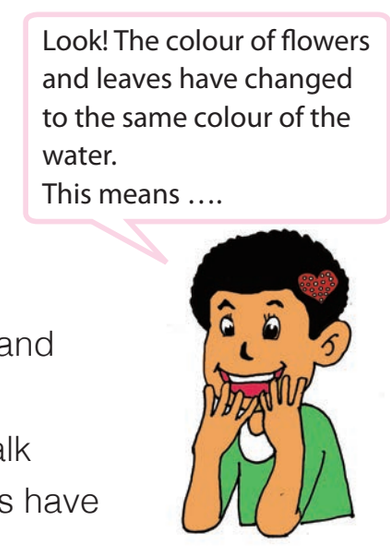
Plants are made up of different parts. Each plant part helps the plant in different ways.

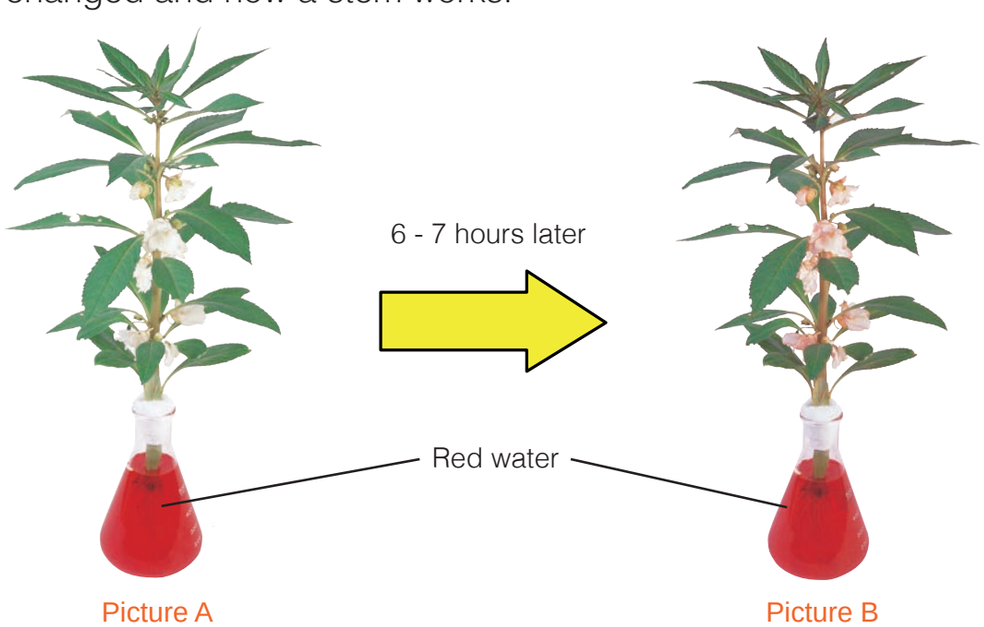
How do plants use their parts?

Activity : Function of a stem

What to Do:

1. Look at the pictures below. A white flowered plant was placed into the red water (Picture A). After 6 - 7 hours, the colour of the flowers and leaves changed (Picture B).
2. Think about why the colour of the flowers and leaves changed to red.
3. Share your ideas with your classmates. Talk about why the colour of flowers and leaves have changed and how a stem works.





Summary

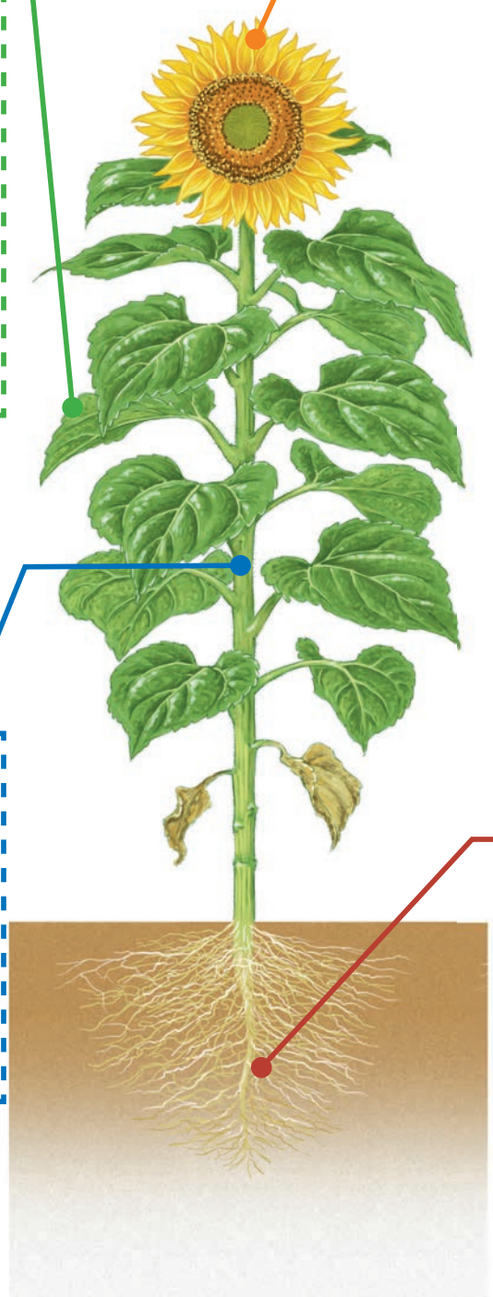
Plants use their parts to meet their basic needs. Each plant part has different functions.

Leaves

Leaves make food for the plants to grow. Leaves take in light energy from the sun to make plant food. Leaves also help take in and give off air.

Flower

A flower is a part of the plant that makes seeds. When a seed is planted, it will grow into a new plant.



Stems

A stem carries water and nutrients to other plant parts. It also helps hold up the plant and leaves.

Roots

Roots take in water and nutrients from the soil and hold the plant in the soil.

Summary and Exercise

Summary 3.1 Observing Plants

Plants around us

- Different plants grow and live in different places.
- Plants can be found in sunny places, shady and moist places and fresh and salt water.

Sunny place	Shady and moist place	Fresh and salt water
		

Parts of Plants

- Most plants have parts that are common, such as roots, stem and leaves. Some plants also have flowers.

Roots	Stem	Leaves	Flower
			

Function of Plant parts

- Each plant part has its function to help the growth of a plant.
  - Roots: Roots take in water and nutrients from soil and hold the plant in the soil.
  - Stem: A stem carries water and nutrients to the other plant parts. It also helps hold up a plant and its leaves.
  - Leaves: Leaves take in sunlight, make food for the plants and help take in and give off air.
  - Flower: A flower is the part of the plant that make seeds.

Summary and Exercise

Exercise 3.1 Observing Plants

Q1. Complete each sentence with the correct word.

(1) _____ plants grow in different places.

(2) Most plants have parts that are common; roots, stem, flowers and _____.

(3) A _____ carries water and nutrient to plant parts.

(4) A _____ makes seeds and fruits.

Q2. Choose the letter with the correct answer.

(1) Why are plant roots under the soil?

A. To grow a flower in the ground.

B. To get sunlight in the ground.

C. Take in water from the soil.

D. To get air from the soil.

(2) Which of these sentences is correct about plants.

A. Different plants grow and live in different places.

B. All plants grow in sunny places.

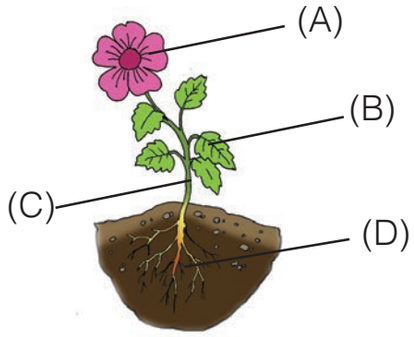
C. No plants grow in fresh water.

D. Different plants cannot grow in different places.

Q3. Answer the following questions.

(1) Look at the picture on the right. Name the plant part beside each letter.

(2) What is the function of plant part (D)?



Q4. Which of the plant's needs would no longer be met if you cut off the roots?

3.2 Grouping Plants

Plants are made up of different parts such as roots, stems, leaves and flowers. How can plants be grouped by their parts?

Lesson 1: "How to Group Plants: Roots"

Most plants have roots. Different plants have different roots. How can we group plants by their roots?

? How can plants be grouped by their roots?

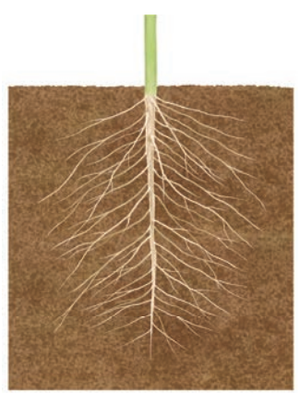
Activity : Comparing roots

What to Do:

1. Make a table like the one shown below.

How are they alike?	How are they different?

2. Look at the pictures below. Observe the two kinds of roots and describe how they are alike or different in the table.
3. Share your ideas with your classmates. Talk about how the roots are alike or different and how we can group plants by their roots.



Roots (A)

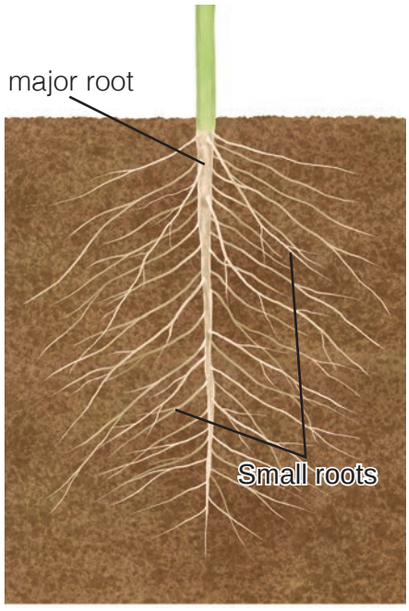
Roots (B)

Summary

Plants can be grouped by their roots. There are two major types of roots; taproots and fibrous roots.

Taproots

A **taproot** is a root that has one major root that grows very deep into the ground. Taproots can be long and thick. Smaller roots grow out from the main root. Plants like carrots have taproots.



Taproot

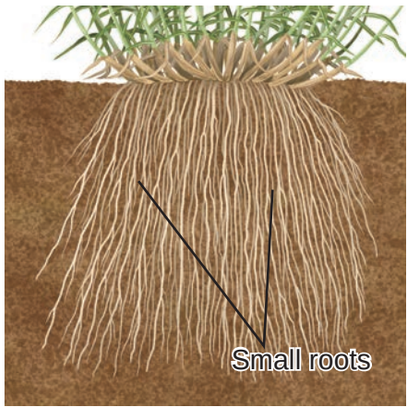
Examples of Taproots


Carrots


Bean

Fibrous roots

A **fibrous root** is a root that has many smaller roots that branch out in different directions. The roots tend to stay closer to the surface. Plants like onion, palm tree, corn and bamboo have fibrous roots.



Fibrous roots

Examples of Fibrous root


Onion


Corn

Lesson 2: "How to Group Plants: Stems"

A stem is a plant part. How are stems alike or different?

How can plants be grouped by their stems?

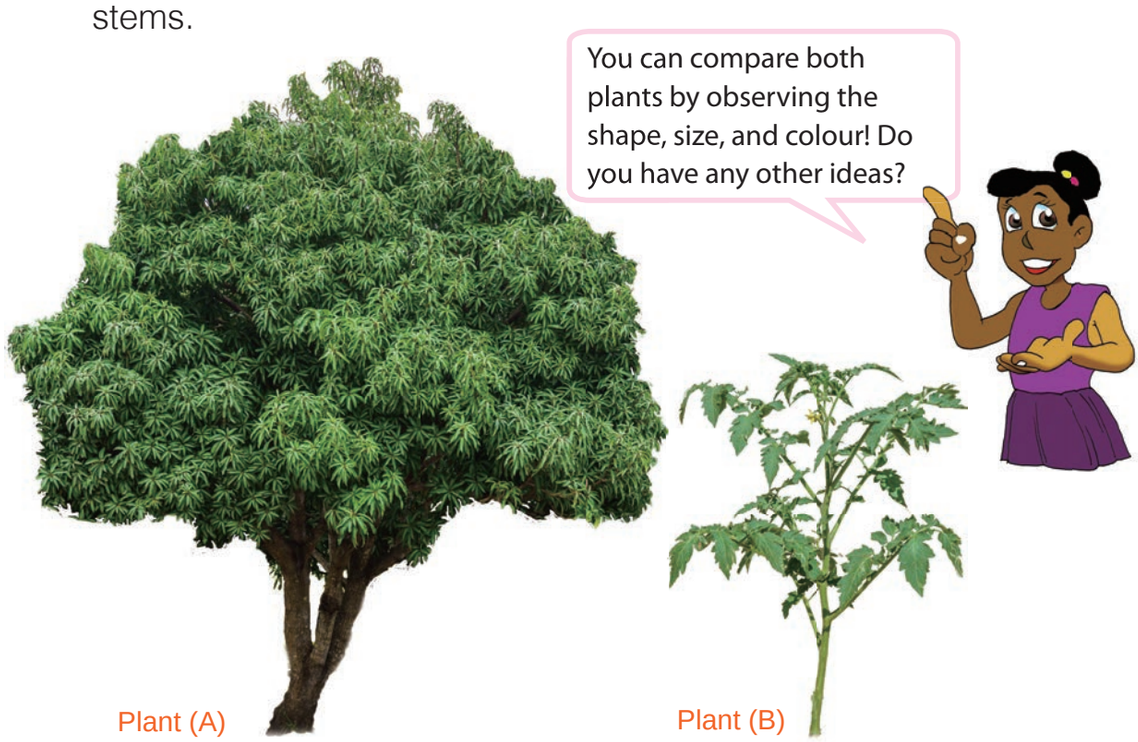
Activity : Comparing stems

What to Do:

1. Make a table like the one shown below.

How are they alike?	How are they different?

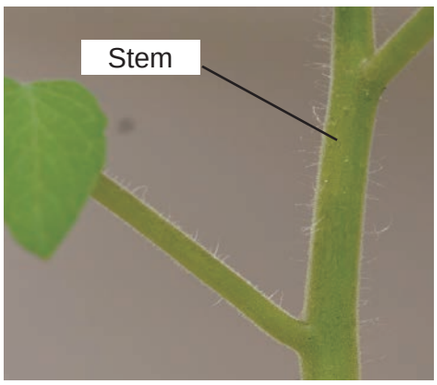
2. Look at the pictures below. Observe the stems of both plants and describe how their stems are alike or different in the table.
3. Share your ideas with your classmates. Talk about how stems are alike or different and how we can group plants by their stems.



Plant (A) Plant (B)

Summary

Plants can be grouped by their stems. We can group stems by their colour, hardness and size.



Stem of Tomato

Soft, Thin and Green Stems

Some plants have soft, thin and green stems. Plants with soft and green stems are known as **herbs**. Plants like tomato, chilli and potato are herbs.

Hard and Woody Stems

Some plants have hard and woody stems. These stems are also taller and thicker than herbs. Plants with hard and woody stems may be **trees** or **shrubs**. Trees grow taller than shrubs. Plants like mango and coconut are trees. Bougainvillea, hibiscus and rose are shrubs.

Examples of Trees


Mango trees


Coconut trees

Examples of Shrubs


Hibiscus


Bougainvillea

Lesson 3: "How to Group Plants: Leaves"

There are thousands of different plants. Different plants have different leaves.

How can plants be grouped by their leaves?

Activity : Comparing leaves

What to Do:

1. Make a table like the one shown below.

How do you group leaves?

2. Go outside and collect different kinds of leaves.
3. Observe the leaves and group them.
4. Write how you grouped the leaves in the table.
5. Share your ideas with your classmates. Talk about how we can group plants by their leaves.

Summary

Plants can be grouped by their leaves in many ways. Different plants have different shape, size, colour and vein pattern of leaves. The following show some examples of how to group leaves.

Edges

Leaves can be grouped by the shape of their edges called the **leaf margin**. Some plants have smooth edges. Some plants have jagged edges.

Different Types of Leaf Margins

Blades

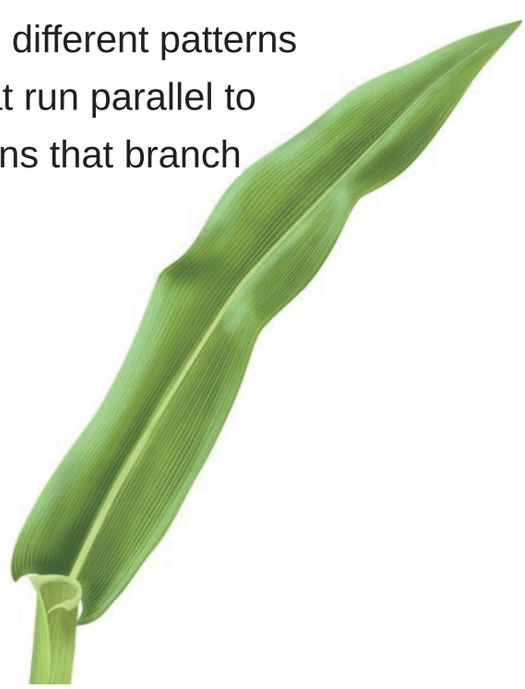
Leaves can be also grouped by the shape of their blades. Some plants have broad and flat blades. Some plants have needle-shaped or long blades.

Different Types of Blades

Veins

A **vein** is a tube that helps carry food, water and nutrients throughout the leaf. Different plants have different patterns of veins. Some plants have the veins that run parallel to each other. Some plants have netted veins that branch out from main veins.

Netted Veins



Parallel Veins

Summary and Exercise

Summary 3.2 Grouping Plants

How to Group Plants: Roots

- A **Taproot** is a root that has one major root with smaller roots.
- A **Fibrous** is a root that has many smaller roots.

Taproot	Fibrous root
	

How to Group Plants: Stems

- **Herbs** are plants with soft and green stems.
- **Trees** or shrubs are plants with hard and woody stems.

Herbs	Trees or shrubs
	

How to Group Plants: Leaves

- Leaves can be grouped by the shape of their **edges**, **blades** and **veins**.

Edges	Blades	Veins
		

Summary and Exercise

Exercise 3.2 Grouping Plants

Q1. Complete each sentence with the correct word.

(1) Roots, stems and leaves are plant_____ that can be used to group plants.

(2) The shape of the leaf's edge is known as the _____.

(3) A _____ has one major root that grows very deep into the ground.

(4) Herbs are plants that have soft and green _____.

(5) Plant leaves can also be grouped using netted and _____ veins.

Q2. Choose the letter with the correct answer.

(1) Which of the following plants does not have fibrous roots?

A. Coconut.

B. Grass.

C. Mango.

D. Corn.

(2) What does the 'blade' of a leaf refer to? It is referred to as:

A. Edges.

B. Colour.

C. Veins.

D. Flatness.

Q3: Answer the question below.

Study the pictures in the table. What is an example of a plant that has the leaf veins shown on the right.

	Leaf Vein	Plant
(1)		
(2)		

Q4. How can you describe the difference between a tree and a shrub?

Plants can be also grouped by flowers into two; flowering plants and non-flowering plants.

Flowering Plants

Flowering plants are plants that make flowers. Flowering plants are the largest group of plants. About 90 percent of all types of plant make flowers. Rose, orchid, mango, banana and grass are examples of flowering plants.


Tomato


Orchid


Rice

Non-flowering Plants

Non-flowering plants are plants that do not make flowers. Most of them live in shady or moist places. Ferns, mosses, fungus and seaweeds are examples of non-flowering plants.


Fern


Moss


Fungus


Seaweed

Chapter Test

3. Characteristics of Plants

Q1

Complete each sentence with the correct word.

(1) Most plants have the same parts in common; roots,leaves, flowers and _____.

(2) _____ are part of a plant that makes food for the plants to grow by taking light energy from the sun.

(3) A _____ is a root that has many smaller roots that branch out in different directions.

Q2

Choose the letter with the correct answer.

(1) Which part of a plant carries water and nutrients from the roots to the other parts of the plant?

A. vein B. stem C. leaf D. flower

(2) Which of the following plants has fibrous roots?

A. bean	B. carrots	C. onion
		

(3) Which of the statements is true about herbs, shrubs and trees?

A. Herbs have hard woody stems while shrubs and trees have soft green stems.

B. Herbs have soft green stems while shrubs and trees have hard woody stems.

C. Herbs and shrubs have small woody stems while trees have large woody stems.

D. Herbs have soft woody stems while shrubs and trees have hard woody stems.

(4) Which statement is <u>not</u> true about different places where plants grow?

A. No plants grow in sea because of salt.

B. Plants can obtain enough sun light in sunny places.

C. Many plants grow on the ground in sunny places.

D. Moss and fern grow in shady and moist places because they need enough water.

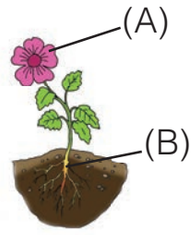
Q3

(1) A white flowered plant is placed into the red water as shown in the picture. What colour will the flowers be after 7 hours? Explain why.

_____

_____

(2) Look at the plant picture on the right. Name and state the function of the part of plant A and B.



A. Name_____

Function_____

B. Name_____

Function_____

(3) Look at the picture of a plant leaf on the right. What do we call the type of veins in the picture?

_____

Q4

(1) A part of a plant is removed as shown by the following pictures. Which of them is most likely to survive? State with your reason.

Without leaves	Without Flower	Without Roots	Without Stem
			

_____

_____

_____

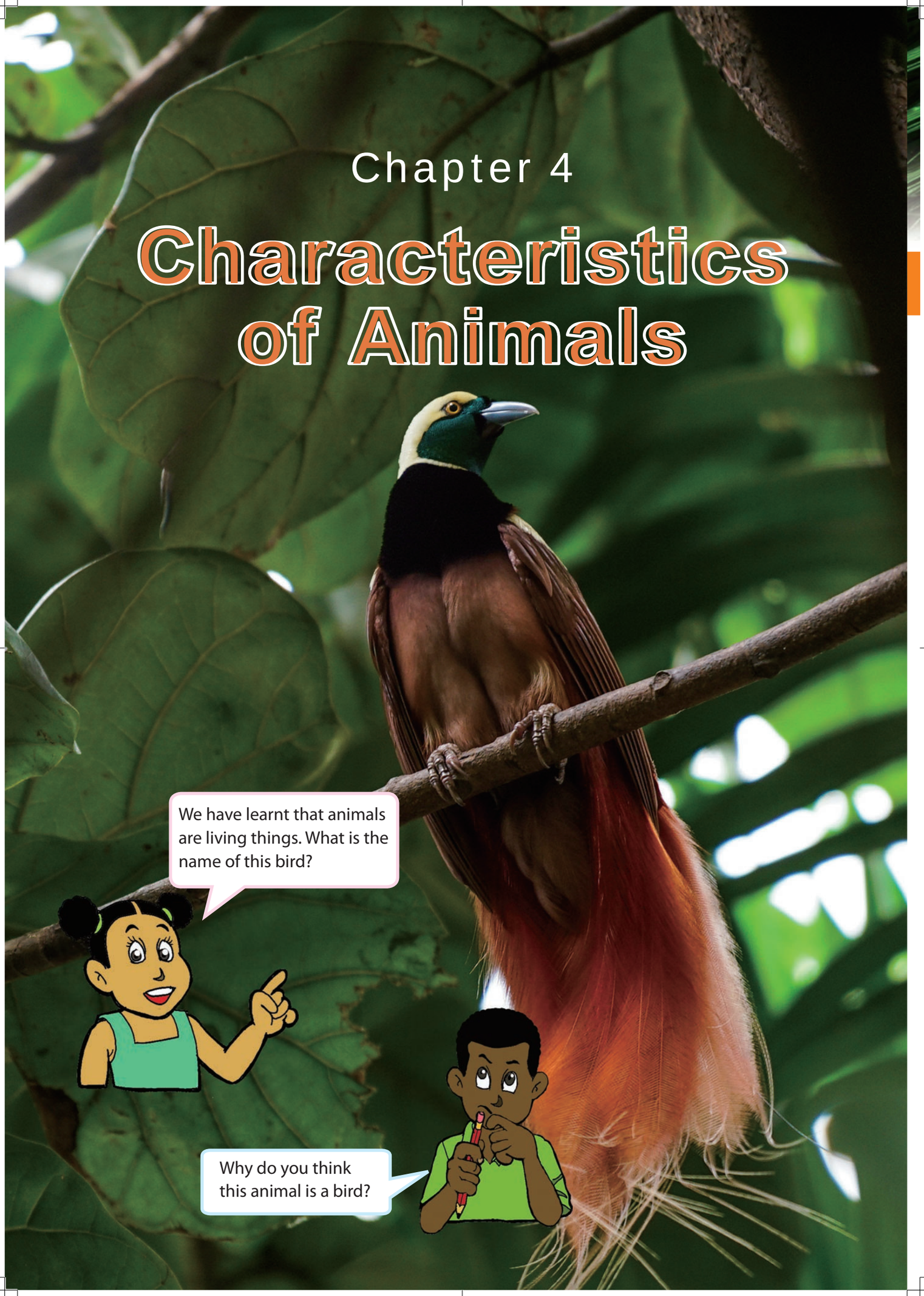
(2) Give an example of herbs and trees or shrubs found in your school, garden or at home.

Herb:_____

Tree or Shrub:_____

Chapter 4

Characteristics of Animals



4.1 Observing Animals

Lesson 1: "Animal Groups"

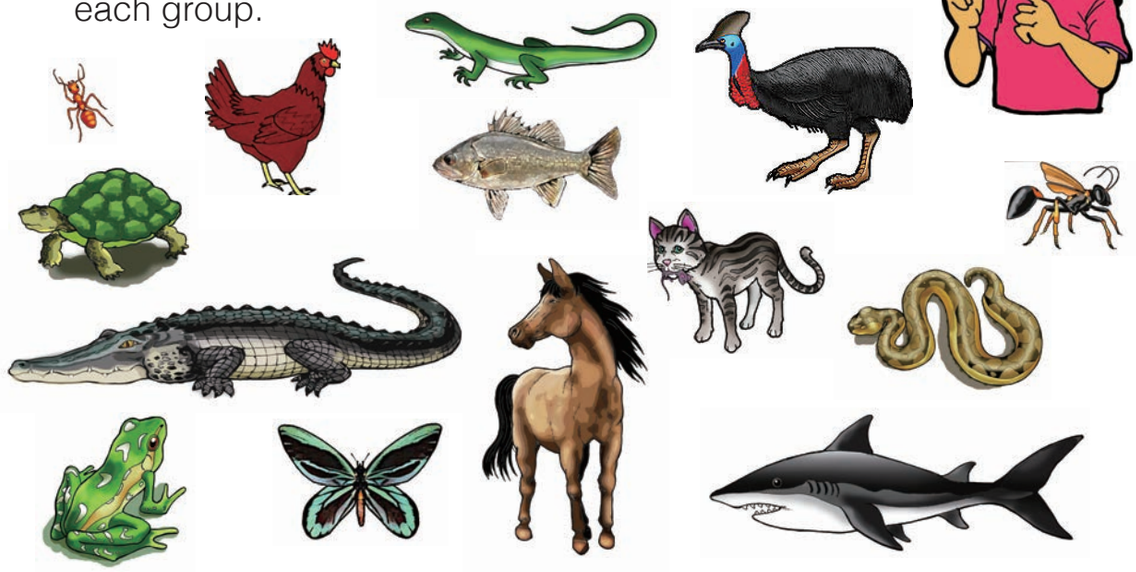
Look around you! There are many kinds of animals around us. What kinds of animals are there? How can we group animals?

How can animals be grouped?

Activity : Grouping animals

What to Do:

1. Look at the pictures of different animals below.
2. Group the animals based on your ideas. Record how you grouped the animals and the name of the animals in each group in your exercise book.
3. Share your ideas with your classmates. Talk about how you grouped the animals and the name of animals in each group.



Summary

We can group animals by their similarities. Some animals have similar body covering. Some have similar body parts. There are many ways to group animals but animals usually can be grouped as **insects**, **fish**, **amphibians**, **reptiles**, **birds** and **mammals**.

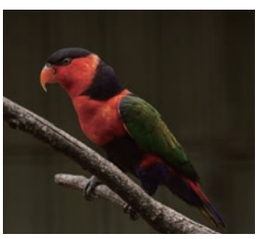
Insects


Fish


Reptiles



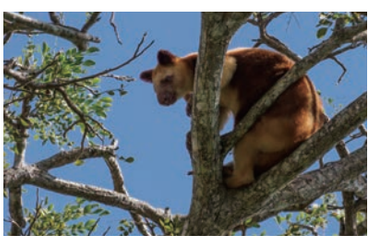
Birds

Amphibians

Mammals





Lesson 2: "Observing Insects"

Animals can be grouped by their similarities. All animals in the same group have some common characteristics.

What common characteristics do insects have?

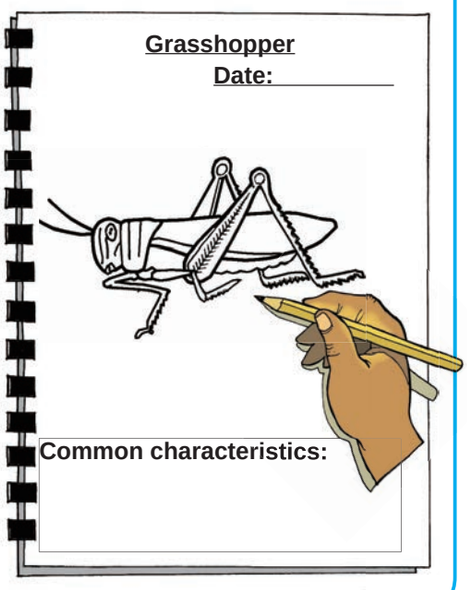
Activity : Observing body parts of insects

What to Do:

1. Go outside and fetch an insect.
2. Observe the body parts of the insect and sketch it in your exercise book.
3. Share your drawing with your classmates. Talk about the common characteristics of body parts of insects.

Let's observe the body parts of insects! What parts do insects have?

Do all insects have the same number of legs or not?



Summary

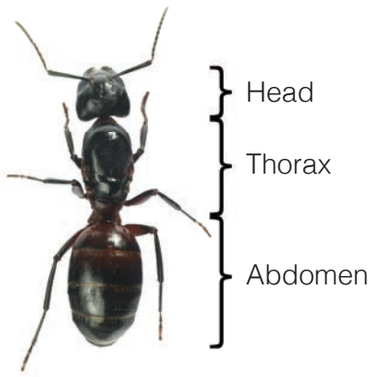
Butterfly, bees, dragonfly, grasshopper and ants are examples of insects. They have some common characteristics of body parts.

Legs

Insects have three pairs of legs (Six legs).

Body Parts

All insects have three parts; the head, the thorax and the abdomen.

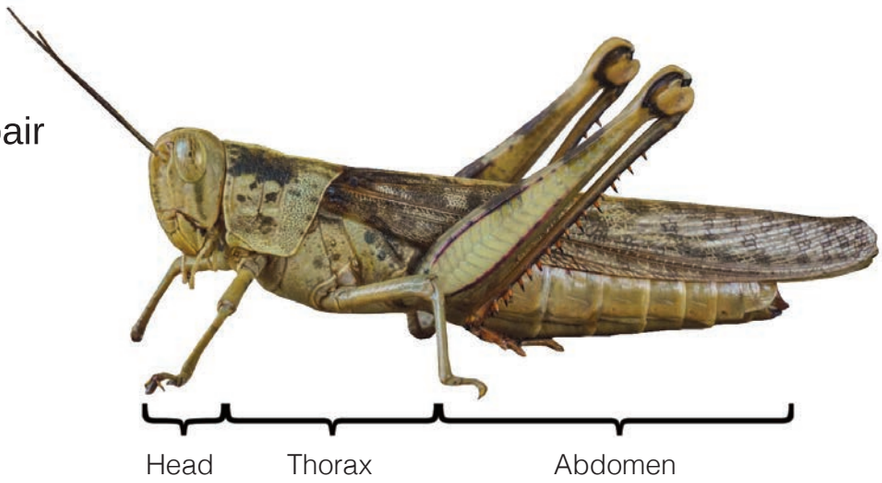


Body Covering

Insects do not have bones like us. They have a hard outer covering. This covering protects insects and gives the insect its shape.

Antennae

Insects have a pair of antenna.



Discussion

Is a spider an insect?

1. Look at the picture of a spider on the right.
2. Think about the following questions:
   - "Is a spider an insect?"
   - Why do you think so?
3. Discuss your ideas with your classmates.

Lesson 3: "Observing Fish"

Fish is one of the animal groups. How are fish similar?

What characteristics do fish have in common?

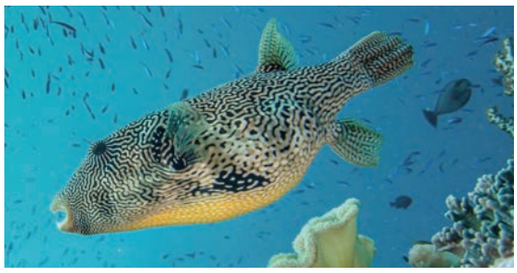
Activity : Characteristics of fish

What to Do:

1. Make a table like the one shown below.

Fish	Characteristics
What is it covered with?	
What parts does it use to move?	
What are other characteristics?	

2. Observe the pictures of the fish below and complete the table based on your observation.
3. Share your ideas with your classmates. Talk about the common characteristics of fish.



Let's think about how fish move or breathe and where they live!

How can we find the common characteristics of their body parts? … the shape and colour of their bodies are different……

Summary

All fish have some similar characteristics.

Fins

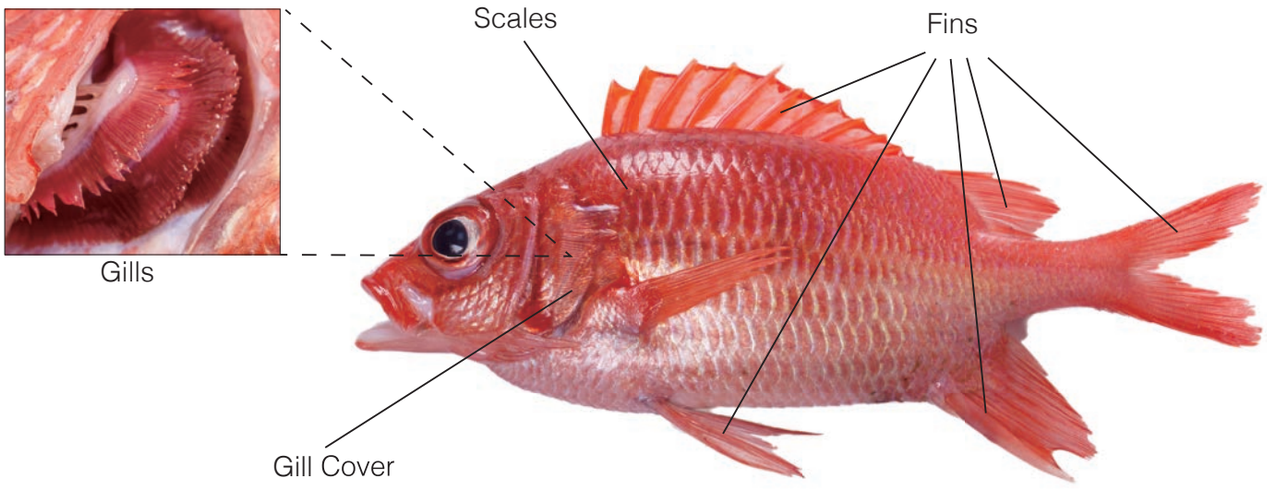
Fish live in fresh or salt water. Fish do not have legs, but they have **fins**. Fins help fish swim in water.

Body Covering

The body of fish is covered with **scales**. The scales help protect the fish.

Gills

Fish use their **gills** to help them breathe in water.



Discussion

Are dolphins fish?

1. Look at the picture of the dolphin shown on the right.
2. Think about the following questions:
   - Is dolphin a fish?
   - Why do you think so?
3. Discuss your ideas with your classmates.

Lesson 4: "Observing Amphibians"

Frogs are examples of amphibian. What characteristics do amphibians have?

What characteristics do amphibians have in common?

Activity : Characteristics of a frog

What to Do:

1. Make a table like the one shown below.

Frog	Characteristics
Where does it live?	
What is it covered with?	
What parts does it use to move?	
What are other characteristics?	

2. Observe the picture of a frog shown below and write its characteristics in the table.
3. Share your ideas with your classmates. Talk about the characteristics of a frog.

Summary

All animals in the group of amphibians have similar characteristics. Frogs, newts and salamanders are examples of amphibians.

Living Places

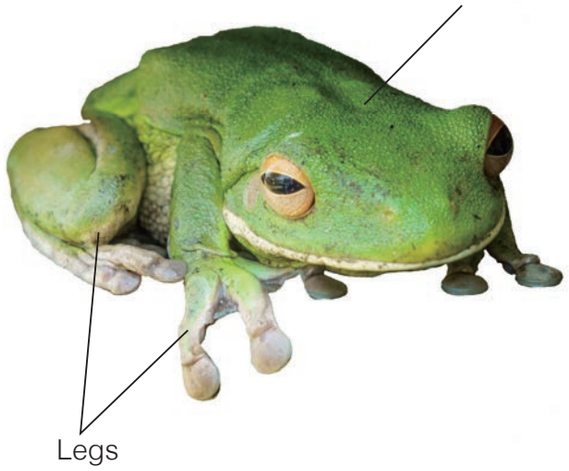
Amphibians can live in water and on land.

Breathing

The body of an amphibian is covered with moist skin. Moist skin help amphibians breathe in water. They also breathe air on land.

Legs

Amphibians have four legs. Their legs help them to move in water and on land.



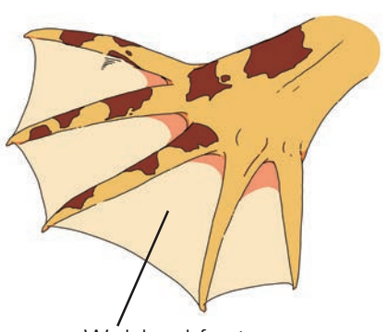
Newt

Salamander

Discussion

How do the webbed feet help frog?

1. Look at the picture shown on the right.
2. Think about the following question.
   - "Frogs have webbed feet. How do webbed feet help frogs?"
3. Discuss your ideas with your classmates.



Lesson 5: "Observing Reptiles"

Reptiles are one of the animal groups. Lizards, crocodiles and turtles are examples of reptiles. How are they alike?

What characteristics do reptiles have in common?

Activity : Observing lizard and crocodile

What to Do:

1. Make a table like the one shown below.

Reptiles	Characteristics of Lizard	Characteristics of Crocodile
What is it covered with?		
What parts does it use to move?		
What are other characteristics?		

2. Observe the pictures of a lizard and a crocodile shown below. Write their characteristics in the table.
3. Share your ideas with your classmates. Talk about the common characteristics of lizards and crocodiles.

Lizard

Let's observe their body parts! What parts do they use to move?

Crocodile

Sometimes we can find crocodiles in water. Can they breathe in water like fish?

Summary

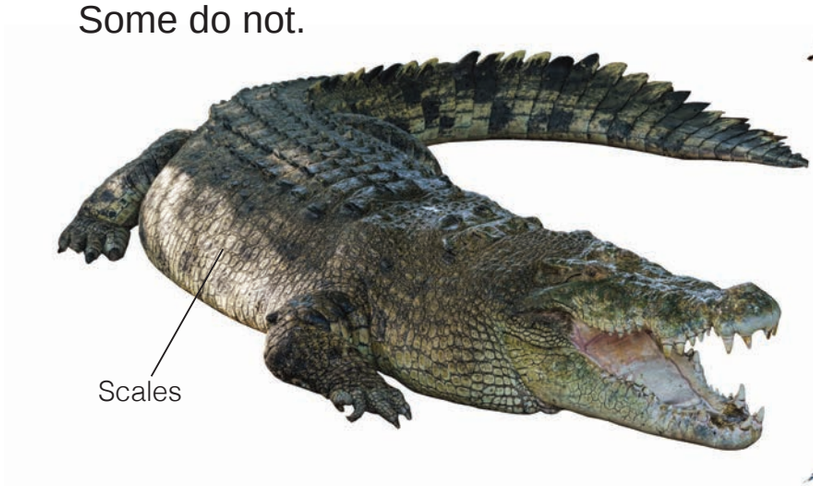
All animals in the group of reptiles have some similar characteristics.

Breathing

All reptiles breathe air. Some reptiles live in water but they cannot breathe underwater.

Legs

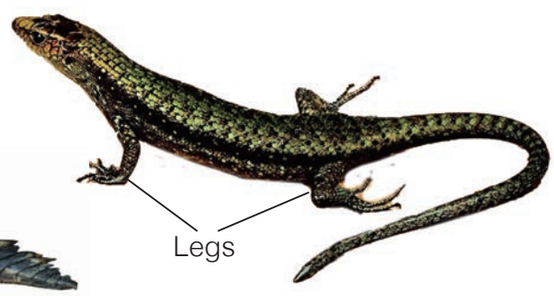
Most reptiles have four legs. Some do not.



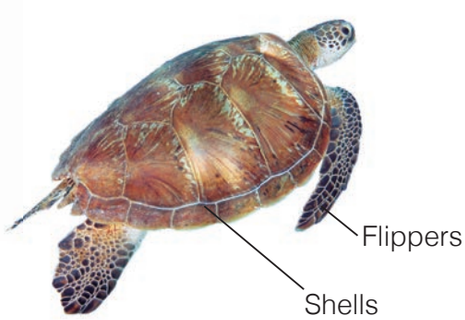
Reptiles have dry skin with scales.

Body Covering

Reptiles have **dry skins** that are usually covered with **scales**. Some reptiles have **shells**.



Most reptiles have four legs.



Sea turtle have shells.

Discussion

How does a snake look different?

1. Think about the following question.
   - "Snakes are reptiles but they look different from other reptiles. How are snakes similar to or different from other reptiles?"
2. Discuss your ideas with your classmates.

Lesson 6: "Observing Birds"

The bird of paradise and the cassowary are examples of birds. How are they alike? What characteristics do they have?

What characteristics do birds have in common?

Activity : Observing birds

What to Do:

1. Make a table like the one shown below.

Birds	Characteristics
What are they covered with?	
What parts do they use to move?	
What are other common characteristics?	

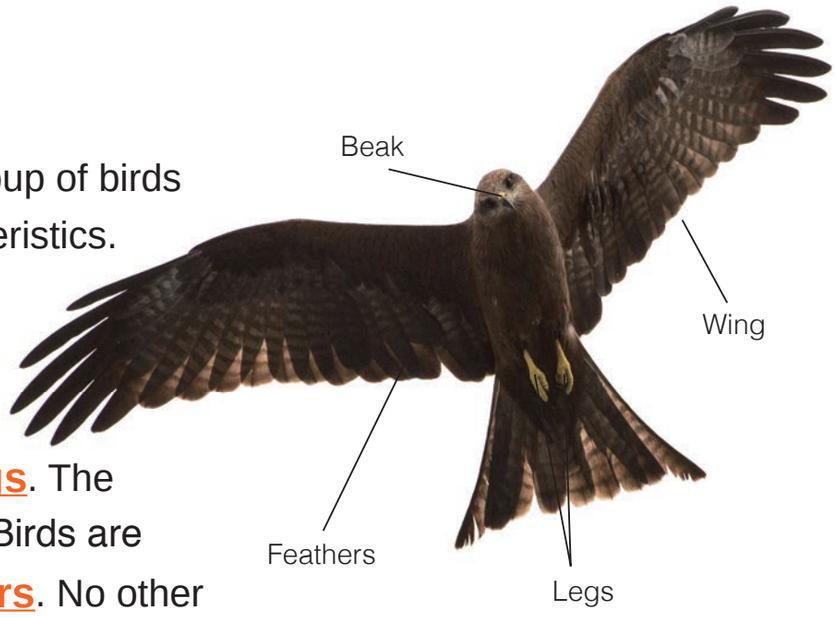
2. Observe the pictures of birds shown below. Find their common characteristics and write your findings in the table.
3. Share your ideas with your classmates. Talk about the common characteristics of birds.

Bird of paradise

Egret

Let's observe the body parts of birds! How do they move? What part do they use for eating?

Summary



All animals in the group of birds have similar characteristics.

Breathing

All birds breathe air.

Wing and Feather

Birds have two **wings**. The wings help birds fly. Birds are covered with **feathers**. No other animal has feathers.

Leg and Beak

Birds have two legs and a **beak**. A bird's beak shows how the bird eats. Some birds have a curved beak that helps them to eat seeds or fruits. Some have a long beak that helps gather nectar from flowers.

Different Types of Beak

Discussion

How does a beak help birds?

1. Think about the following question:
   - "Ducks live in lakes or ponds. They have wide flat beak. How does the beak help ducks?"
2. Share your ideas with your classmates.

A duck has a wide flat beak.

Lesson 7: "Observing Mammals"

Human beings, pigs, dogs and tree kangaroos are some examples of mammals. How are they alike?

What characteristics do mammals have in common?

Activity : Common characteristics of mammals

What to Do:

1. Make a table like the one shown below.

Mammals	Common Characteristics
What are they covered with?	
What parts do they use to move?	
How do they breathe?	
What are other characteristics?	

2. Observe the pictures of some mammals shown below.
3. Find the common characteristics of the mammals and write your findings in the table.
4. Share your ideas with your classmates. Talk about the common characteristics of mammals.

Tree Kangaroo

Wallaby

Cuscus

Summary

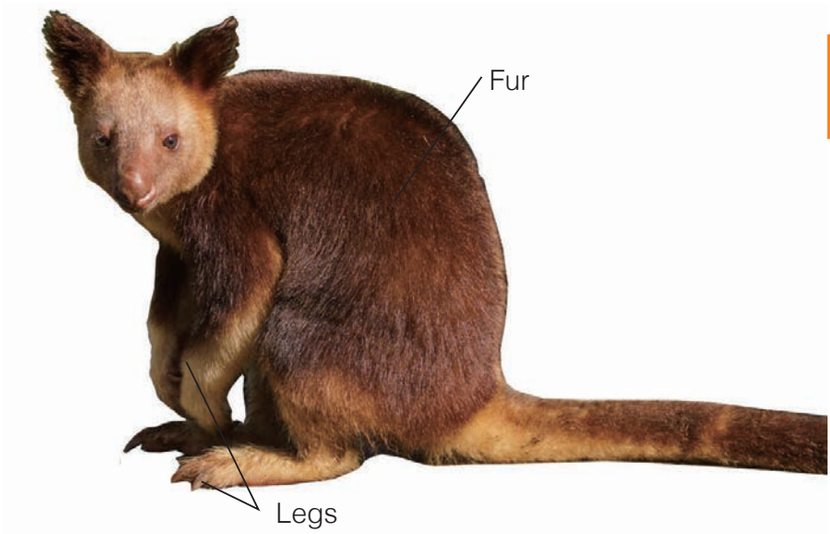
Animals in the group of mammals have some common characteristics.

Body Covering

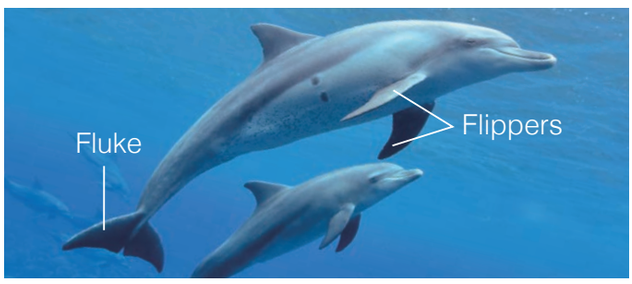
Most mammals have fur. Some mammals have hair.

Body Parts

Most mammals have legs. Some mammals such as dolphins and whales have flippers and flukes instead of legs.



A tree kangaroo has fur and four legs.



A dolphin has flippers and fluke.

A whale is a mammal. It breathes air with lungs.

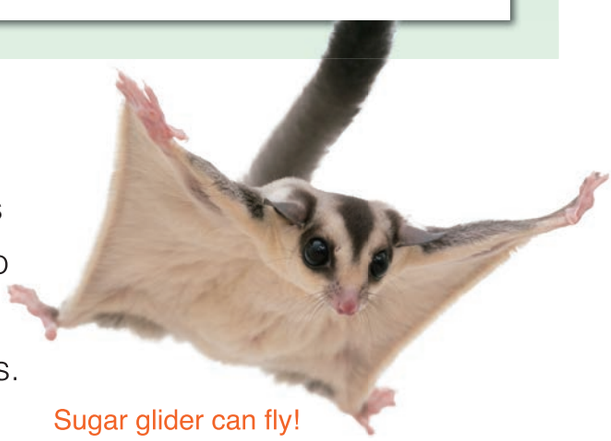
Breathing

All mammals use **lungs** to breathe air. Lungs are body parts used for breathing. Whales and dolphins come to the surface of the ocean to breathe air.

Discussion

Are sugar gliders birds?

1. Think about the following question:
   - "A sugar glider can fly like a bird. Is a sugar glider a bird or not? Why do you think so?"
2. Share your ideas with your classmates.



Sugar glider can fly!

Lesson 8: "Animal Body Parts and Their Uses"

Animals in each animal group have common body parts. Let's summarise animal body parts and study how animal body parts help animals.

How do animals use their body parts?

Activity : Animals using their body parts.

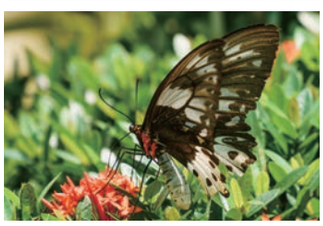
What to Do:

1. Make a table like the one shown below.

	Fish	Amphibian	Reptile	Bird	Mammal
What parts do animals use to move with?					
How do animals move?					
What are animals covered with?					
How do animals use their body covering?					
What parts do animals use to eat with?					
Are there any other uses of animals' coverings?					

2. Think of what you have studied about animals and complete the table.
3. Share your ideas with your classmates.
   Talk about how animals use their body parts.



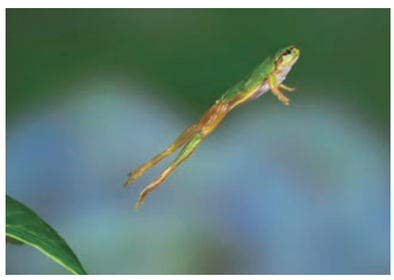

Summary

Animals use their body parts in many ways to survive.

Moving

Animals use their body parts for moving. Most birds use their wings to fly. Fish use their fins to swim. Reptiles, amphibians and mammals have legs that help them walk, run, hop and hold on things.


Birds use wings to fly.


Frogs use legs to hop.


Fish use fins to swim.

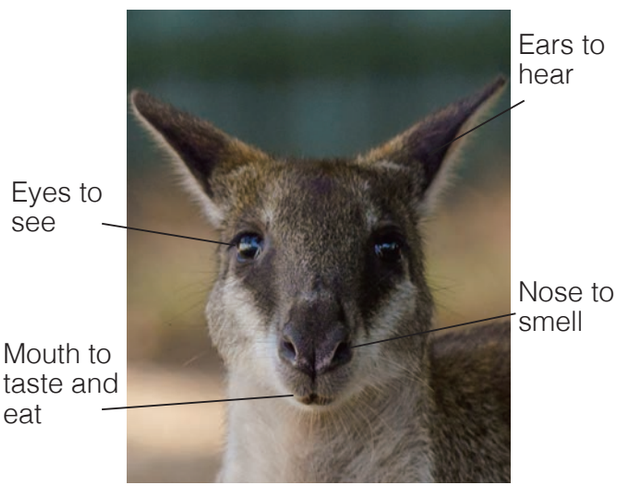
Protections

Animals use their body parts to protect themselves. Some animals have scales or shells that help protect them from other animals. Some animals have feathers, furs or hairs that help keep them warm and dry.

A shell protects turtles from other animals

Senses

Animals have senses that help them feel, smell, hear, see and taste things. These senses help keep animals safe. Animals use noses to smell, ears to hear and eyes to see. Animals use their mouth to taste and eat food. Some animals use antennae to feel.



Senses and body parts

Summary and Exercise

Summary 4.1 Observing Animals

Animals around us

☑ We can find many different kinds of animals around us. Animals can be grouped into insects, fish, amphibians, reptiles, birds and mammals.

Observing animals

☑ Animals in different groups have common characteristics.

	Insects	Fish	Amphibians
			
Breathing	(study later)	Gills	Moist skins and lungs
Legs	Six legs	No legs (fins)	Four legs
Body covering	Hard outer covering	Scales	Moist skins
Other common body part	A pair of antenna		

	Reptiles	Birds	Mammals
			
Breathing	Lungs	Lungs	Lungs
Legs	Four legs (turtles have flippers and snakes have no legs.)	Two legs and two wings	Four legs (dolphins have flippers and fluke.)
Body covering	Scales (some have shells)	Feathers	Fur and hair
Other common body part		A beak	

How animals use body part

☑ Animals use their body parts for moving, protection and for sensing.

Summary and Exercise

Exercise 4.1 Observing Animals

Q1. Complete each sentence with the correct word.

(1) Animals can be grouped into insects, fish, amphibians, reptiles, birds and _____.

(2) An _____ has three pairs of legs.

(3) The body of an _____ is covered with moist skin.

(4) Fish use _____ to swim.

(5) Turtles have shells for _____ from other animals.

Q2. Choose the letter with the correct answer.

Which of following characteristics is wrong about mammals?

A. Most mammals have fur or hair.

B. Most mammals have four legs.

C. All mammals use lungs to breathe.

D. Most mammals have dry scales.

Q3. Answer the following questions.

(1) Write the name of the animal group for each of the pictures below.

					
A. Butterfly	B. Frog	C. Cassowary	D. Crocodile	E. Shark	F. Dolphin

(2) What body parts do animals use for the following.

A. Hearing sound	B. Seeing objects	C. Smelling
D. Tasting and eating	E. Flying	F. Walking

Q4. Fill the blanks in the sentence below.

Pegasus (see picture on the right) is an imaginary creature.

It is not a bird because it has four _____ to run.

It is not a mammal too because it has two _____ with feathers to fly.

Biggest and Smallest in the World

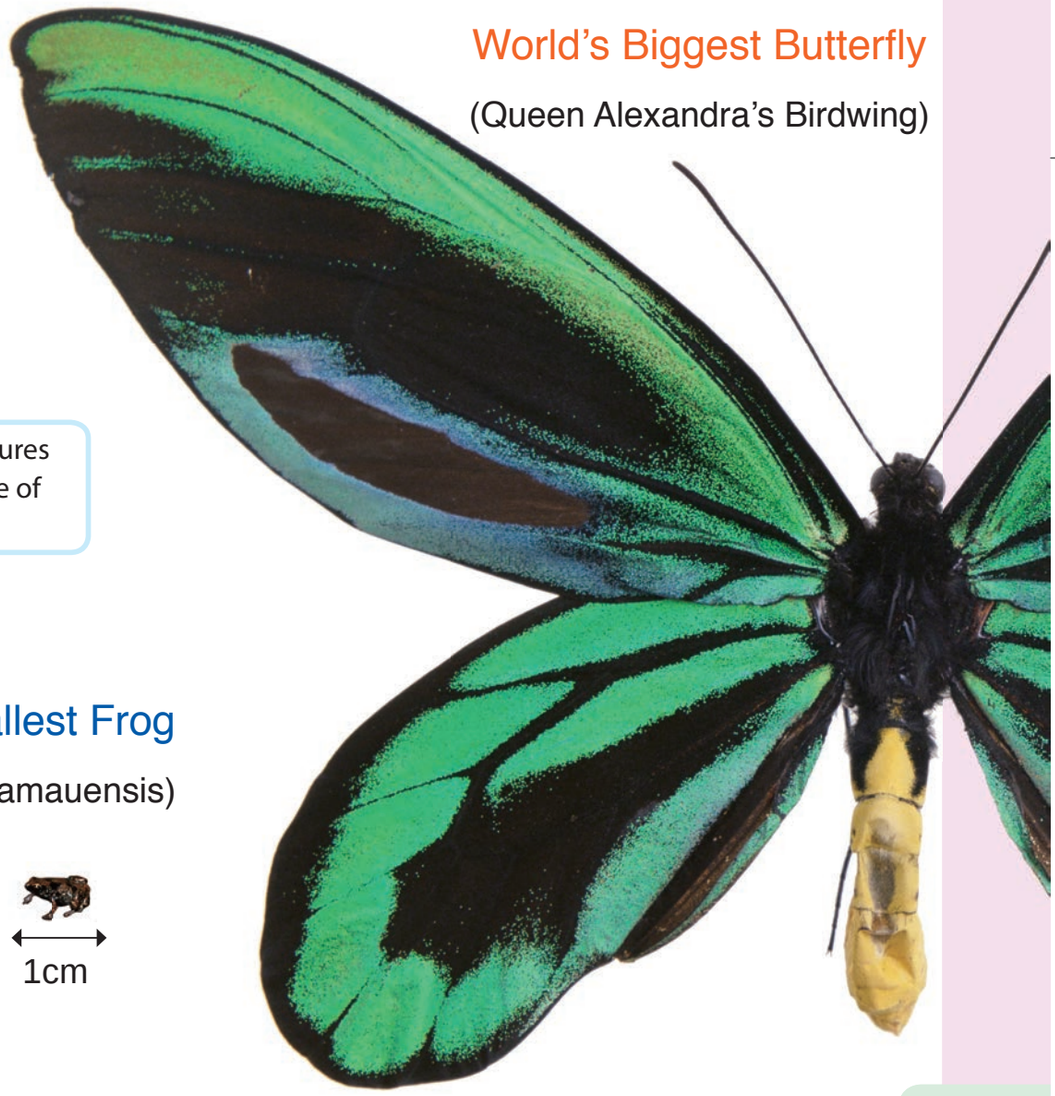
Various kinds of animals live in the forest of our country, Papua New Guinea. The world's biggest butterfly is found in Oro Province. The world's smallest frog was discovered in Abau in Central Province.

The world's biggest butterfly's wingspan can reach up to 28cm, which would be larger than your face. On the other hand, the world's smallest frog is less than 1cm, the same size as your finger nail. Both animals are only found in our country.

The size of this pictures is near to actual size of the animals.

World's Biggest Butterfly

(Queen Alexandra's Birdwing)



World's Smallest Frog

(Paedophryne amauensis)

1cm

Chapter Test

4. Characteristics of Animals

Q1

Complete each sentence with the correct word.

(1) Animals can be grouped as insects, fish, reptiles, birds, mammals and _____.

(2) An animal that has skin covered with dry scales is called _____.

(3) An animal that has hair or fur and four legs is called _____.

(4) An animal that has wings, feathers and beak is called _____.

(5) Toads belong to _____ because they have moist skin.

Q2

Choose the letter with the correct answer.

(1) Which of the following characteristic is wrong about fish?

A. Covered with scales on their body for protection.

B. Use their lungs to help them breathe in water.

C. Live in fresh and salt water.

D. Has fins instead of legs.

(2) Which of the following characteristic is correct about Amphibians?

A. Their soft moist skins help them breathe in water and on land.

B. Tortoise is amphibian because it lives in water and on land.

C. Amphibian has fins to swim in water.

D. Frog, salamander and snake are Amphibians.

(3) Which of the following characteristic is correct about birds?

A. Birds breathe air by gills.

B. Birds have a pair of antenna to fly.

C. Shape of bird's beak varies depending on how a bird eats.

D. Sugar glider is a kind of bird because it can fly in the sky.

(4) Which of the following groups of animals would come under insects?

A. turtle, crocodile, cuscus, frog

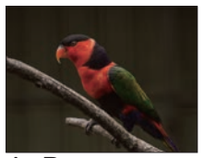
B. grasshopper, butterfly, mosquito, spider

C. sardine, snake, prawn, crab

D. ants, beetle, bees, dragonfly

Q3

Study the animals shown in the box below and answer the questions.

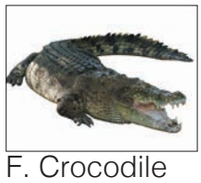

A. Parrot

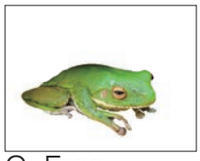

B. Anemone fish


C. Cat


D. Dolphin

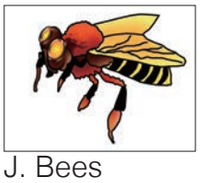

E. Shark


F. Crocodile


G. Frog


H. Cuscus


I. Bird of Paradise


J. Bees

(1) Name the animals that belong to “Fish” and “Amphibian” from the picture above and describe the differences between them.

_____

_____

_____

(2) A dolphin has been under water for a long time. Predict what will happen.

_____

(3) Classify the above animals into 3 groups according to their way of moving. Use the table below to classify them.

Way of moving and used body parts	Name of Animals

Q4

(1) Look at the picture of a crab on the right:
Is a crab an insect? Give your reason.

_____

_____

_____

(2) What would you need to think about to care for a pet frog?

_____

_____