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# Oxford International Primary Science



## Enhanced e-book



Oxford International Primary for enquiring minds

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# Oxford International Primary Science

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# How to be a Scientist

Scientists wonder how things work. They try to find out about the world around them. They do this by using scientific enquiry.

The diagram shows the important ideas about scientific enquiry.



An example investigation:

Which material is best for keeping cotton wool dry?

2

**Asking questions**

How can you ask questions?

Start your questions with words like 'which', 'what', 'do' and 'does'.

- Which material is the most waterproof?
- What will happen when I put the material into water?
- Does the material keep the cotton wool dry?

**I think that ...**

This is when you say what you think will happen in your investigation.

Here is an example of a question and a prediction.

#### Question

Which material will keep the cotton wool dry for the longest time?

#### Prediction

The plastic bag.

**I am going to ...**

This is when you plan what you are going to do.

What will you keep the same?

What will you change?

**I am looking for ...**

You will measure time.

You will feel which objects are wet or dry.

**I have found that ...**

There are many ways to record results.

A good way is to complete a table. A table keeps all of your results neat and tidy. It can help you to see patterns.

**This means that ...**

At the end of your investigation you must look at your results.

You are comparing the materials.

You then select the most waterproof. Was your prediction correct?

# 1 Ourselves



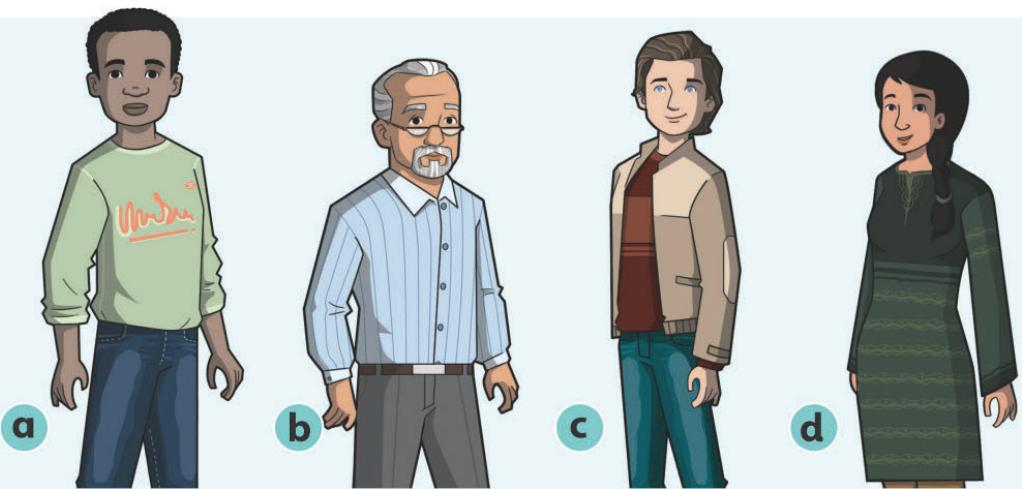
## In this module you will:

- find out how we are all the same and all different
- name the parts of the body
- learn about our senses.

animal                          human  
compare                          senses  
                                        grow  
                                        look

**Word Cloud**



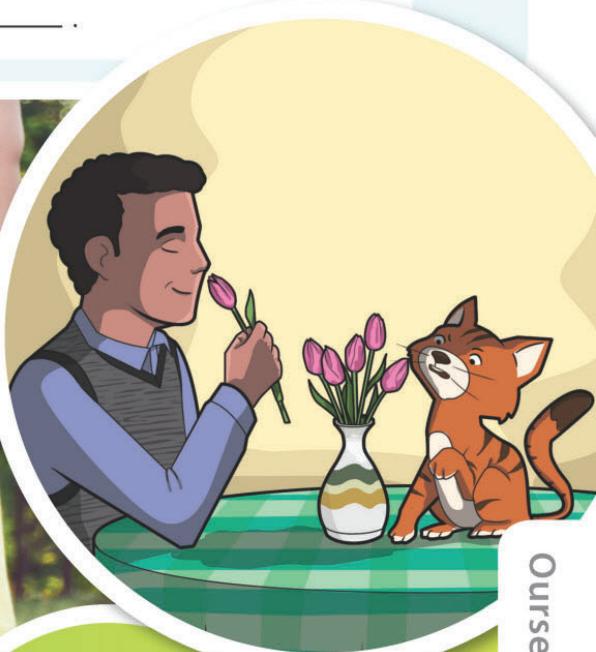


Look at the picture.

What is the same about these people? What is different about these people?

Write down one thing that is the same about these people.

These people all have \_\_\_\_\_



### Amazing fact

Did you know that a cat's sense of smell is almost 14 times stronger than a human's?

# Same but different

Find out how we are all the same and all different.

## The Big Idea

We are not all the same

Are these people the same?

Every person is different.

We are all **humans** but we all look different.

As we **grow**, we get taller. Our faces and bodies change.



We all have faces!

6

We all have a nose, two eyes, two ears, a mouth and hair. But each face is different. We can **compare** our faces with other people's.

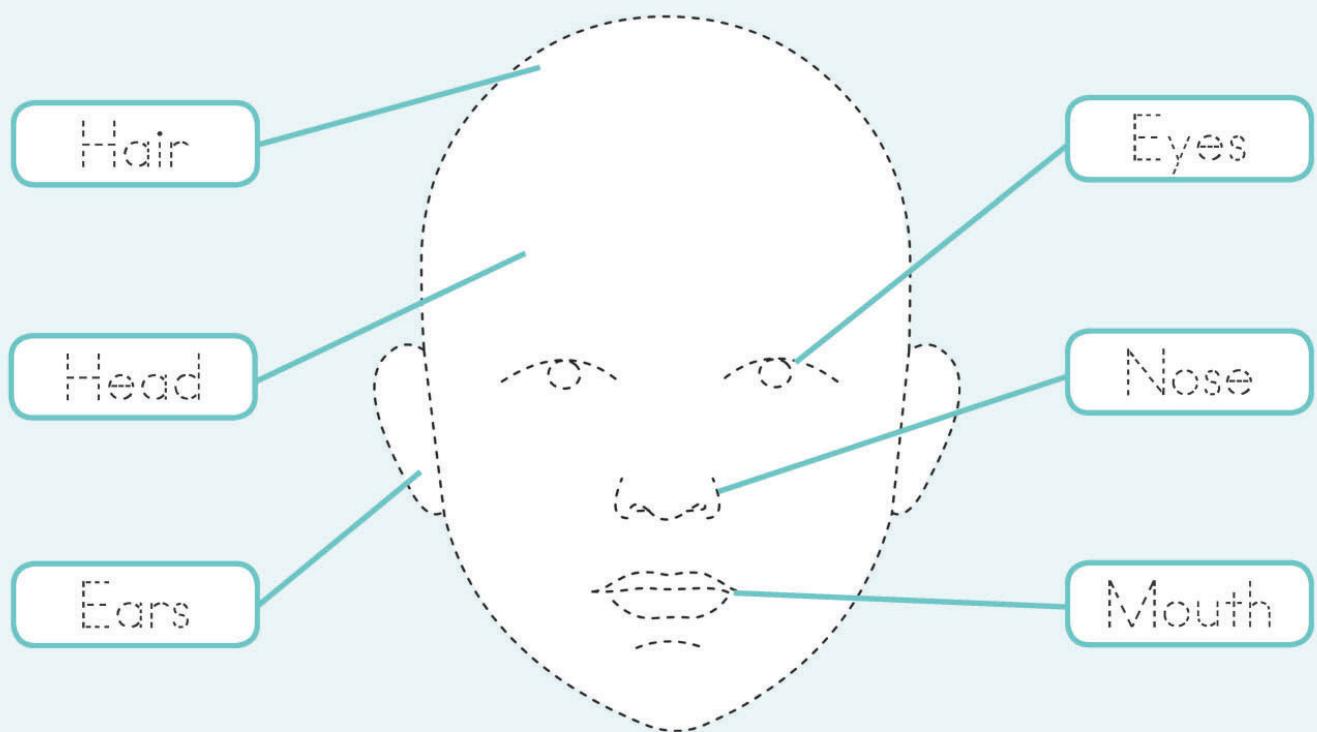
### Think about...

How is your face different from everyone else's?





Draw your face.



Now finish the labels.



Do all your friends like the same things?

We all like different things. This is another way that we are all different.



What is your favourite colour?



What is your favourite animal?



Fill in the missing words.

One has been done for you.

We are all \_\_\_\_\_.

We have some t h i n g s that are the \_\_\_\_\_.

#### Word Bank

different same ~~things~~

Now turn to page 14 to review what you know.

# Our body

Name the parts of the body.

## The Big Idea

We have names for the parts of our body.

 Finish the labels for the parts of the body.

 How many arms have you got?

 How many toes have you got?

 Match each part of the body with the correct word.

arm

head

knee

leg



a



b



c



d



e



f

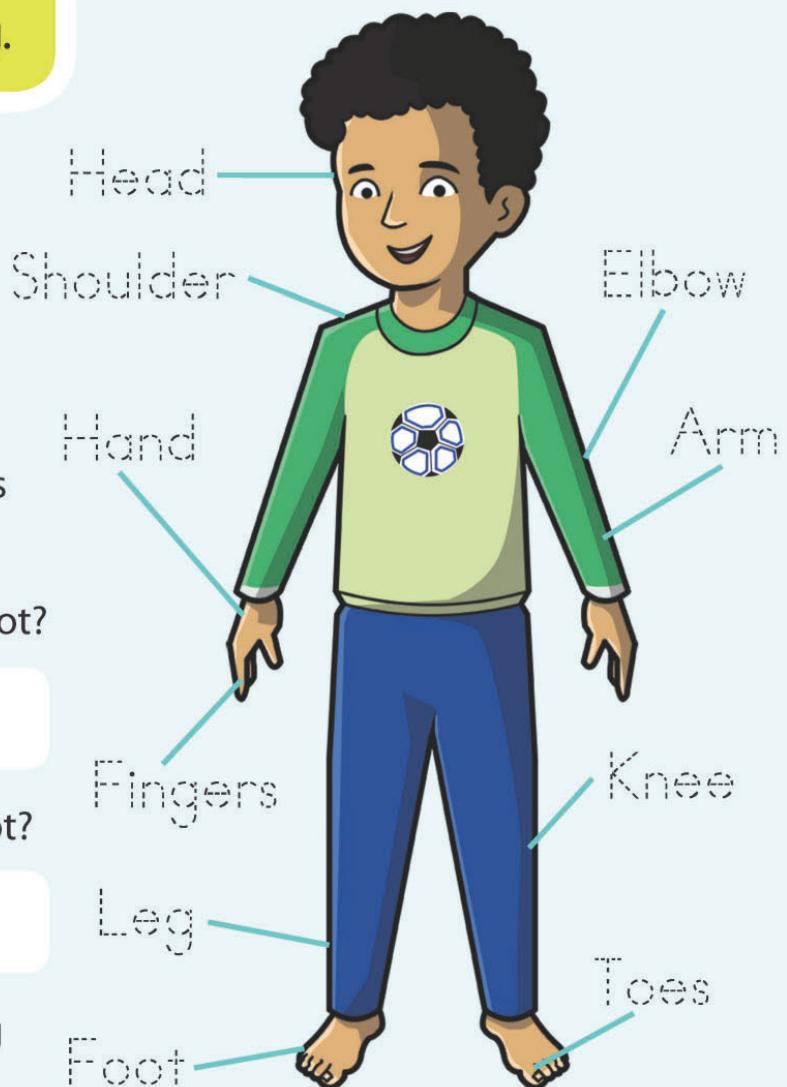


g

elbow

foot

hand





Where are your eyes, ears, nose and mouth?

Draw lines from each word to the correct part of the face.

a eyes

b nose

c ears

d mouth

e hair



Find the words.

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| a | r | m | x | k | n | e | e | s |
| t | o | e | s | k | e | a | r | p |
| f | i | n | g | e | r | s | j | d |
| s | c | n | l | e | g | b | o | k |
| f | e | e | t | l | r | f | c | i |
| d | e | y | j | h | e | a | d | z |
| p | l | t | n | o | s | e | q | w |
| s | h | o | u | l | d | e | r | s |

### Word Bank

arm    leg    knees    head    ear    nose    fingers  
feet    toes    shoulders

Now turn to page 14 to review what you know.

# The five senses

Learn about our senses.

a ears

b eyes

## The Big Idea

Our senses help us find out about our world.

Where are the kitten's ears, eyes, nose and mouth?

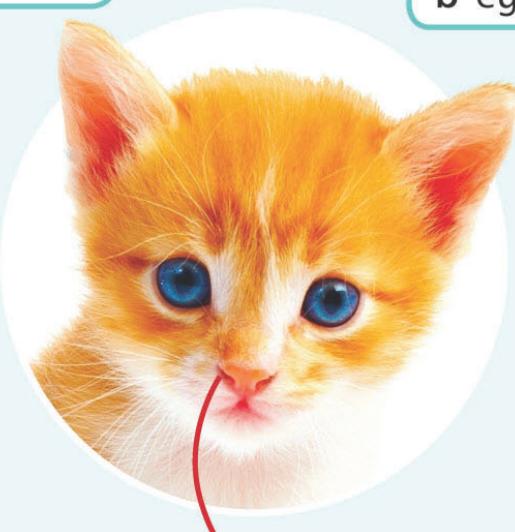
Humans and **animals** have **senses**.

Our senses help us to find out about the world.

c nose

d mouth

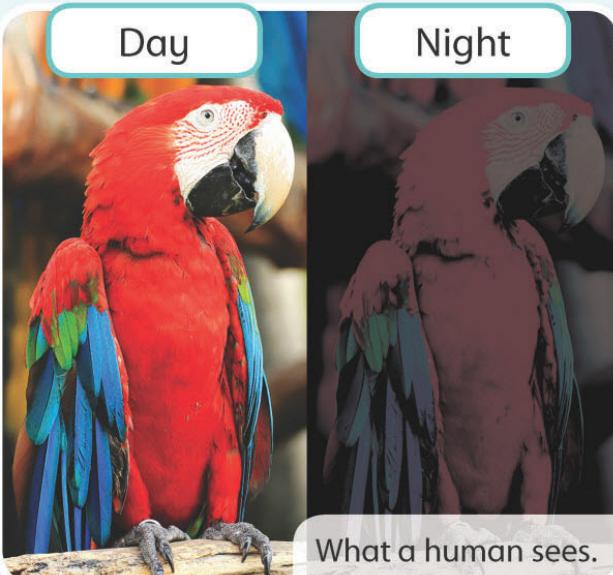
What do we use our eyes for?



Look at the pictures.

Day

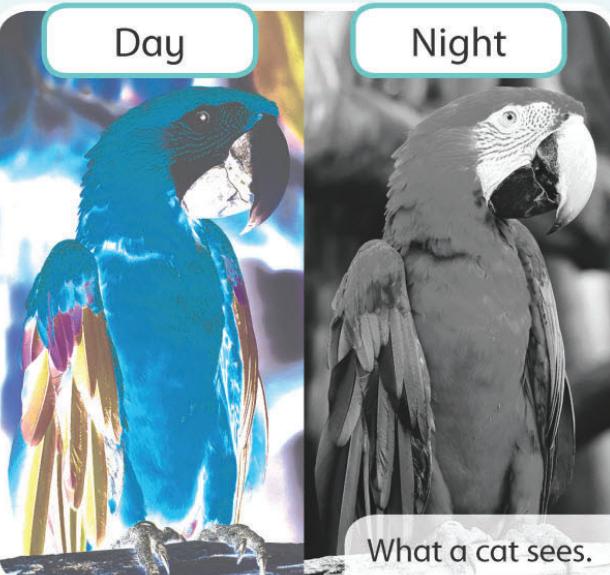
Night



What a human sees.

Day

Night

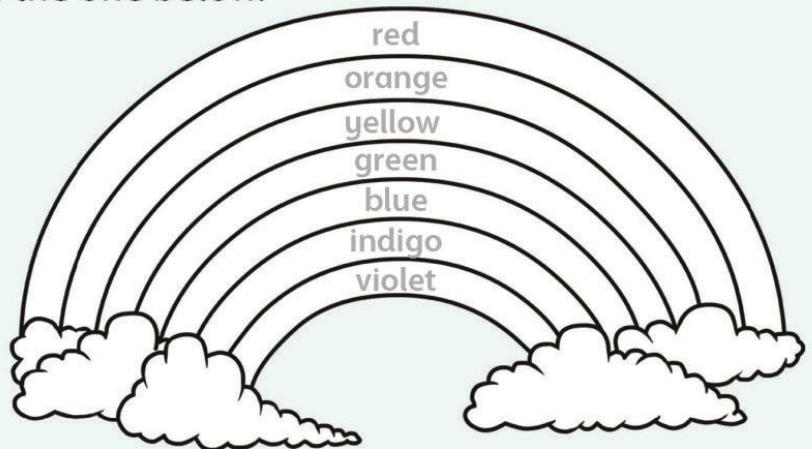
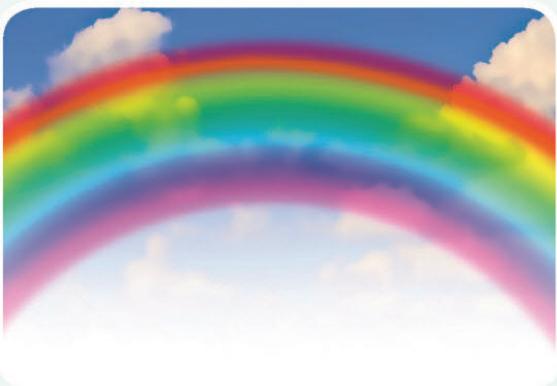


What a cat sees.

Do you think cats can see better than us?

We can see lots of different colours.

-  Draw a rainbow on paper like the one below.  
Colour it in.



-  What do we use our ears for?



Some things make a sound. Some do not.

-  Look at the pictures. Circle the things that make a sound.



Drum



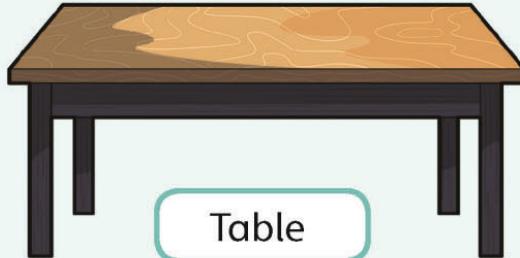
Book



Mouth



Cake



Table



Radio

# The five senses

Learn about our senses.

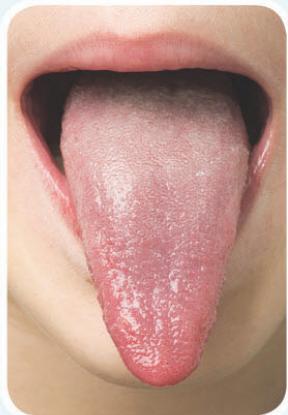
## The Big Idea

We like to eat things that smell good and taste nice.



### Taste

What is your favourite food?



Some food **tastes** salty and some food tastes sweet.

We have taste buds all over our tongue. We use our taste buds to sense the difference between salty and sweet.

Which foods are salty and which foods are sweet?

a



sweet

b



c



d



12

e



f



### Word Bank

salty    sweet

## Smell

**Smell** is used for many things.

 Name one thing that smells good to you.

Some animals use their strong sense of smell to find food to eat.

 Some things do not smell nice. Can you think of any?



Flowers can smell nice.

## Touch

Look at these pictures.

 Which things are safe to touch? Which things are dangerous to touch?



 Fill in the missing words. One has been done for you.

We have f\_i\_v\_e senses.

These are seeing, hearing, \_\_\_\_\_, touch and \_\_\_\_\_.

### Word Bank

~~five~~ taste smell

Now turn to page 15 to review what you know.



# What we have learned about ourselves

## Same but different

Circle the answer that is true for you.

1 Do you look like your brothers or sisters?

Yes      No

2 Do you look like your friends in the class?

Yes      No

3 Who do you look most like?

my friend    my brother    my sister

I understand that we are all different but have some things which are the same.



## Our body

Fill in the correct words.

My **fingers** are connected to my h \_\_\_\_.



My **hand** is connected to my a \_\_\_\_.



My **arm** is connected to my s \_\_\_\_\_.



My **toes** are connected to my f \_\_\_\_.



My **foot** is connected to my l \_\_\_\_.



My **leg** bends at my k \_\_\_\_.



### Word Bank

hand foot arm leg shoulder knee

I can name six parts of the body.



## The five senses

Answer the questions. Choose from the senses in the word bank.

1 Which two senses do you use most to find your way to school?

S \_\_\_\_\_ and \_\_\_\_\_

2 Which three senses tell you that food is bad and not safe to eat?

\_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_

### Word Bank

seeing hearing feeling taste smell

I can name all the five senses.



# 2 What Is It Made Of?



## In this module you will:

- use your senses to explore different materials
- find out what some materials look and feel like
- find out what some materials do
- name some common materials
- sort materials into groups.





Imagine you are holding this toy.  
What does it feel like?



Describe this toy. What does it  
feel like?



Objects that do the same job can look  
and feel different.

Look at the cups. Can you see any differences?



### Amazing fact

Paper can hold up a heavy book!

Try it. Roll up 12 sheets of paper. Stick them  
together to make a tower. Can you balance  
a book on your tower?

# Different materials

Use your senses to explore different materials.

## The Big Idea



Materials look and feel different.

We use our senses to find out about objects.

We look at them.

We feel them.

Look at the objects below. How many objects can you see?



Stone



Wooden spoon



Balloon



Candle



Apple



Paintbrush



Wool

Imagine you are in a dark room. How would you know you were touching the apple and not the wool?

Some objects feel hard. Some objects feel soft.



Look at the photographs again. Circle your answers using different colours.

Which objects feel soft?

Which objects feel hard?

Which object feels soft and hard?



Investigation: What materials can you find?

1 Put your hand inside a bag.

2 Don't look inside. Just feel the objects.

What can you find?

You have used your sense of touch.



Objects are made of different **materials**.

Some materials feel hard.

Other materials feel soft.

Some materials feel smooth.

Other materials feel rough.



Draw a circle around the correct word.

This toy is

soft      hard



# What are materials like?

Find out what some materials look and feel like.

## The Big Idea



Materials have properties.

A property is how a material looks. Or what it feels like.  
Or what it can do.

Look at the objects and words. Each object has a property.

Draw a string from each balloon to the correct object.

a  
soft

b  
hard

c  
rough

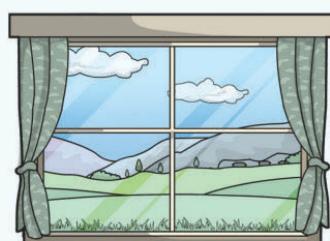
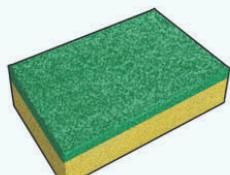
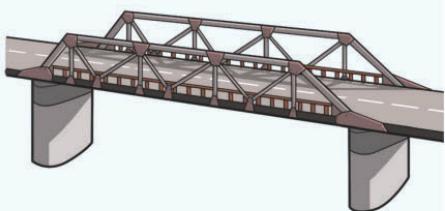
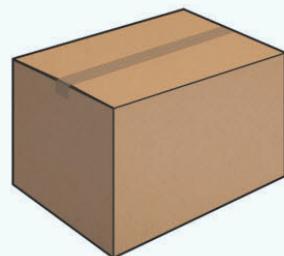
d  
smooth

e  
shiny

f  
dull

g  
see-through

h  
strong





### Investigation: What is the object like?

1 Find objects in the classroom.

2 You can sort the objects into groups.

3 What is each object like?

4 Record what you find in your Investigation Notebook.

5 Are some objects in more than one group?

6 Which object is the hardest?

7 Which object is the shiniest?

8 Which object is the softest?



Fill in the gaps.

Some materials can have more than one \_\_\_\_\_.

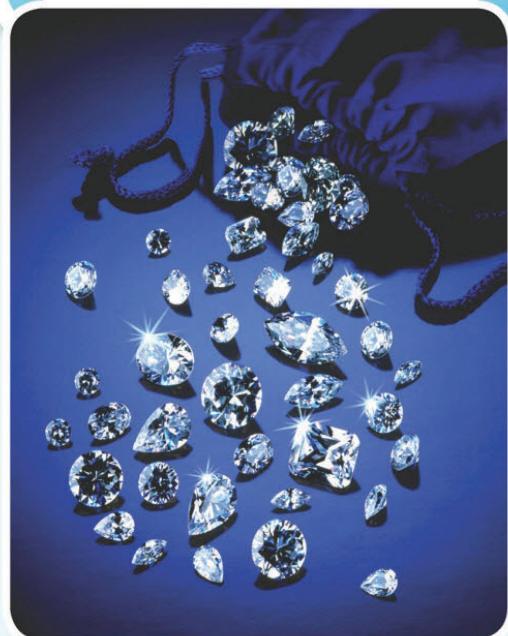
A material can be shiny and \_\_\_\_\_.

### Word Bank

property ~~shiny~~ hard

### Amazing fact

Diamonds are the hardest materials found in nature.



# What can materials do?

Find out what materials do.

## The Big Idea

Some materials keep water out.

The man is dry inside his tent.



If a material keeps water out, it is waterproof.

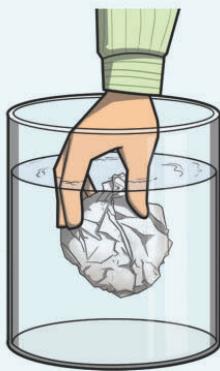
What do you have at home that is waterproof?

Investigation: Which material is best for keeping cotton wool dry?

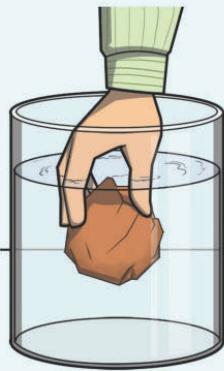
- 1 Wrap some cotton wool in different materials. Predict which material you think will keep the cotton wool dry.

The materials are paper, card, plastic and cloth.

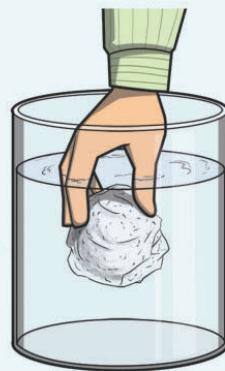
- 2 Then put each material into water.



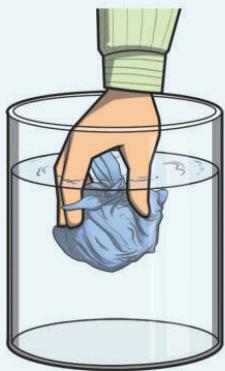
paper



card



plastic



cloth

-  Tick the material you predict is the most waterproof.
-  Which material keeps the cotton wool dry for the longest time?
-  Copy and complete the table. Use your Investigation Notebook.

| Is the cotton wool dry? |       |      |             |       |
|-------------------------|-------|------|-------------|-------|
| Time                    | Paper | Card | Plastic bag | Cloth |
| 5 minutes               | ✗     | ✓    | ✓           | ✗     |
| 10 minutes              |       |      |             |       |
| 15 minutes              |       |      |             |       |

This table will be your results.

-  What did you find out? Fill in the gaps.

We used different m\_a\_t\_e\_r\_i\_a\_l\_s to wrap up the \_\_\_\_\_.

We kept everything else the \_\_\_\_\_.

We found that the \_\_\_\_\_ was the most \_\_\_\_\_ material.

### Word Bank

waterproof   same   ~~materials~~   cotton wool   plastic bag

# What can materials do?

Find out what materials do.

## The Big Idea

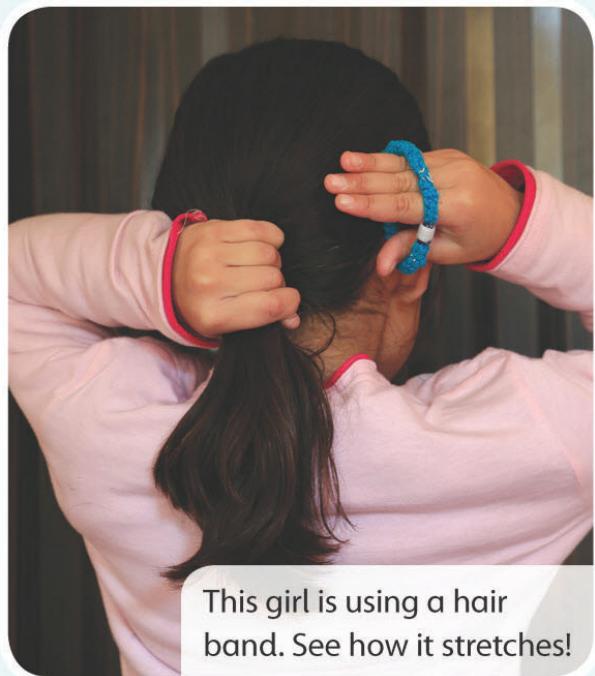


Some materials stretch.

Look at the photograph.  
Talk to your partner about it.

Why does the hair band need  
to stretch?

What material is the hair band  
made of?



This girl is using a hair  
band. See how it stretches!

Investigation: Which materials can stretch?

Which of the materials in the picture will stretch?



1 Your teacher will give you some objects. Find out which objects can stretch. Predict which one will stretch the most.

 How will you test each material?

2 Write your results in your Investigation Notebook.

 Which material stretched the most?

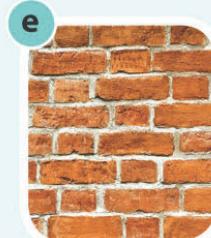
 Which material stretched the least?

## Fabrics

Your clothes are made of **fabric**.

Fabric is another kind of material.

 Look at the pictures. Tick the objects made of fabric.



**Think about....**

Why are clothes made of fabric and not **wood**?



# What can materials do?

Find out what materials do.

## The Big Idea

 Metals can be made into lots of different shapes.



This bracelet is made of metal.

 Which are the properties of the bracelet?  
Circle the correct words.

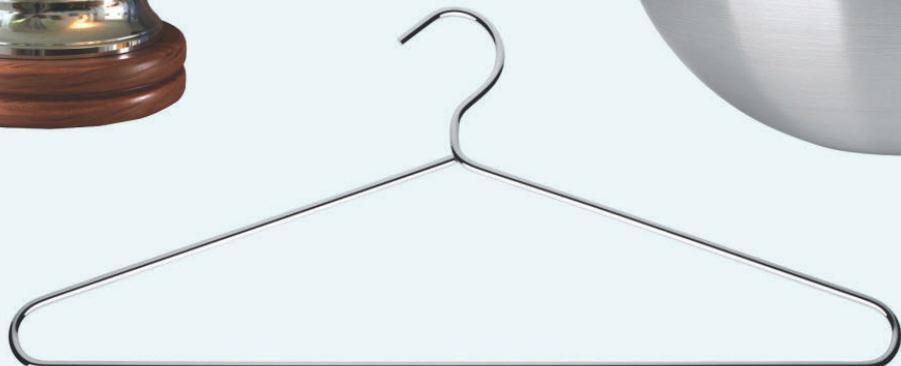
soft      hard      dull      shiny

## What are metals like?

**Metals** are usually hard and shiny.

Metals can be shaped to make different objects.

Metal is heated up until it is soft. It can be hammered to make shapes. Or stretched to make wire.



Metal makes a ringing noise when you hit it.



Why is this pan made of metal?

Investigation: Look for metal objects.

- 1 Look around the classroom.
- 2 Find objects made of metal.
- 3 Record the objects you find. Use your Investigation Notebook.



### Amazing fact

One metal is not hard.  
It is liquid, like water.  
It is called mercury.

What is a property?  
Circle the words that are properties of materials.

hard      soft      paper  
metal      wood      bendy  
waterproof

# Metals and non-metals

Name some common materials.

## The Big Idea

Materials are either metals or non-metals.

If a material is not a metal we call it a non-metal.

Some common non-metals are plastic, wood, **glass**, clay, rubber, stone and fabric.



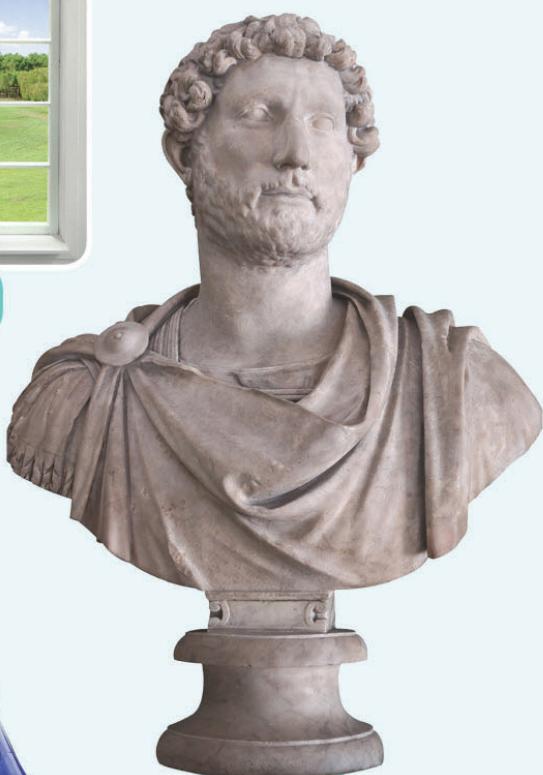
Fabric



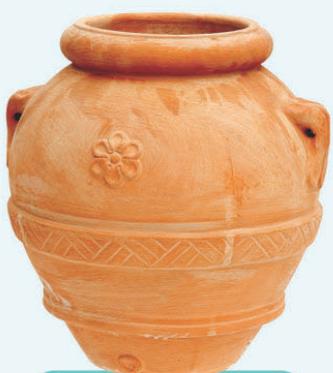
Wood



Glass



Stone



Clay pottery



Plastic



## Investigation: Is it a metal or a non-metal?



Work with a partner.

- 1 Look at the object your teacher gives you.

Is the object metal or non-metal?

- 2 Now look for objects around your school.

- 3 Make a list of what you find.

**Tell** your teacher and the other people in your class about your results.

### Think about...

How do you know if an object is made of plastic or wood?



# Metals and non-metals

Name some common materials.

## The Big Idea



Some materials are so important we use them a lot.



Think of some objects you have used this week. What did you use them for? Why?



This model bridge is made of spaghetti.  
Spaghetti is a food made of flour.

We can name some common materials.  
These are the ones that we use the most.

Wood is very common.

Which one of these objects is normally made of wood?

What is the other object normally made of?

### Think about...

Why aren't real bridges made of spaghetti?



Metals are very important.

What are metals? Some common metals are iron, steel, copper, aluminium, gold and silver.



Copper coins



Steel pan



Aluminium can



Gold earrings



Silver bangles



Look at the pictures. Write two things we use metals for.

\_\_\_\_\_ and \_\_\_\_\_.



Circle the correct answer.

Copper is a

non-metal

metal.

Plastics are

non-metals

metals.

If it rings like a bell the  
material is a

metal

non-metal.

Now turn to page 35 to review what you know.

# Sorting objects

Sort materials into groups.

## The Big Idea

We can put materials into groups, like families.

 Write the names of two metals.

\_\_\_\_\_ and \_\_\_\_\_.

 Write the names of two non-metals.

\_\_\_\_\_ and \_\_\_\_\_.

Look at these objects. They are made of rubber.



a Rubber balls



b Rubber boots



c Rubber bands



d Rubber gloves

 Why is rubber used to make these objects?

Rubber can be stretchy or bouncy.

It is always waterproof.

## Amazing fact

Rubber is made by a tree. It can be made into lots of objects.

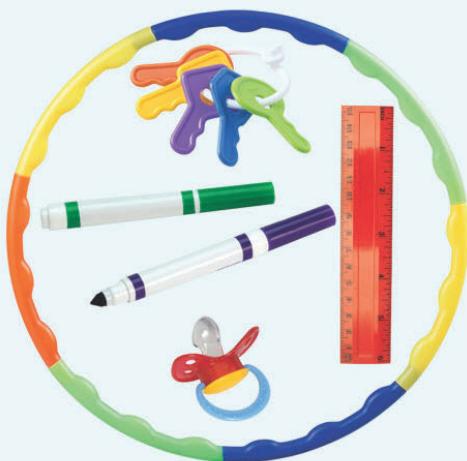




## Investigation: Grouping materials

You are going to sort materials into groups.

- 1 Put each group inside a sorting circle.

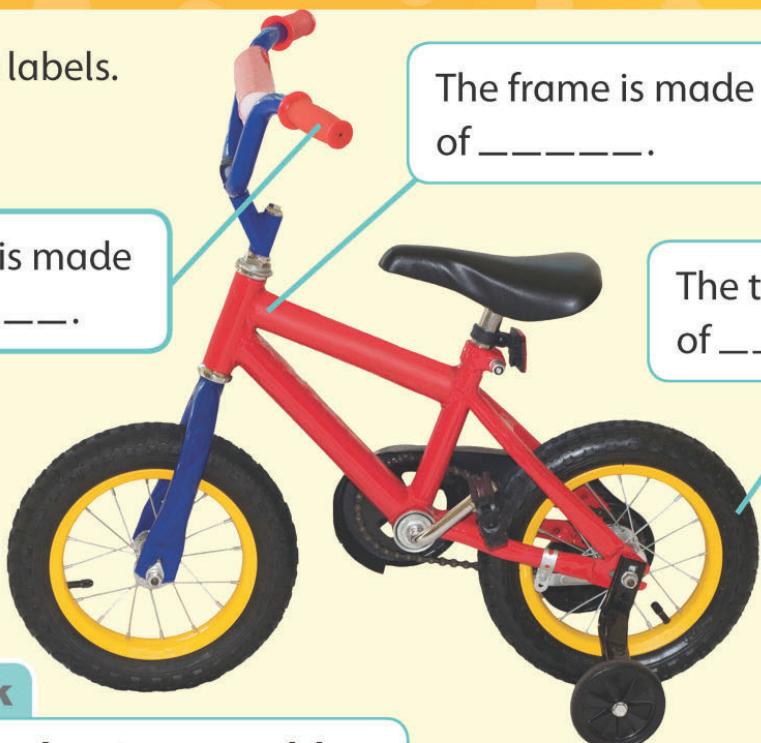


## Think about...

Why is grouping objects by colour not scientific?



Complete the labels.



The frame is made  
of \_\_\_\_\_.

The handle is made  
of \_\_\_\_\_.

The tyre is made  
of \_\_\_\_\_.

### Word Bank

metal      plastic      rubber



# What we have learned about materials

## Different materials

Write the words to complete the sentences.

Toys can feel h\_\_\_\_\_ or s\_\_\_\_\_.

### Word Bank

hard      soft



I can describe materials by looking at them and touching them.



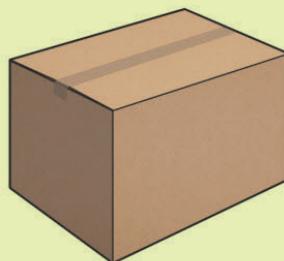
## What are materials like?

Write the words to complete the sentence.

Some things look s\_\_\_\_\_ or d\_\_\_\_\_.

### Word Bank

dull      shiny



I can tell what materials are like by looking and feeling.



## What can materials do?

When it rains I wear ... Circle the correct picture.

I know why we use different materials for different things.



## Metals and non-metals

 Look at these materials. Circle all the non-metals.



I know which materials are metals and which are non-metals.



## Sorting objects

 Can you sort these things into the correct groups?  
Draw lines to link each object to the correct word.



**rubber**

**fabric**



I can sort things into groups by the material they are made of.

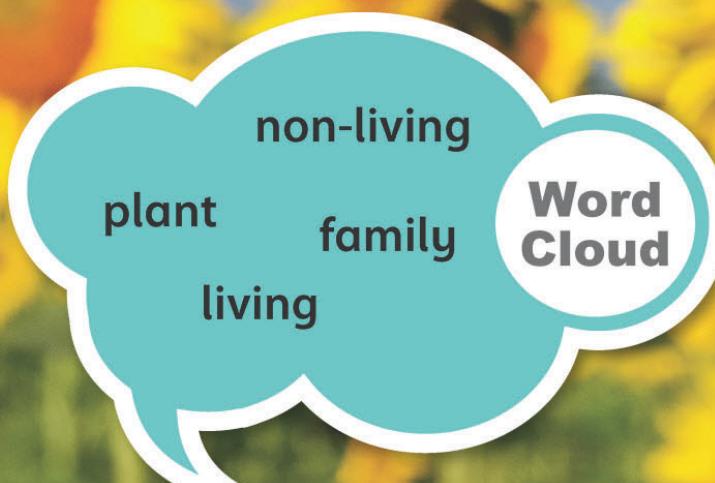


# 3 Living and Growing



## In this module you will:

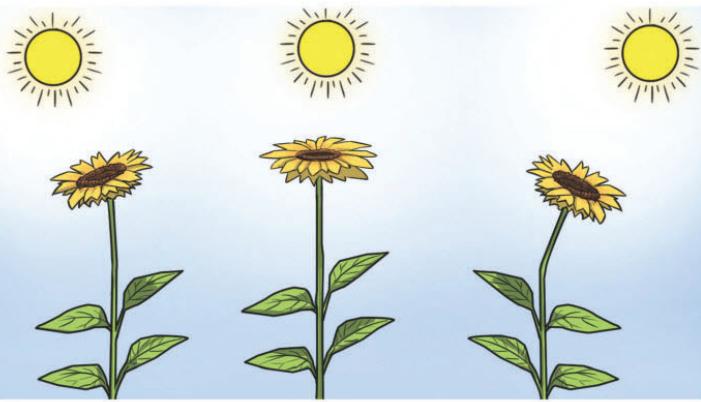
- learn that animals or plants are living things
- find out there are things that have never been alive
- find out about different animals and plants and where they live
- find out why we need a healthy diet
- learn that babies grow into adults
- discover that babies are called offspring.



Look closely at the picture of a sunflower.

What do you notice about the Sun?

Where is the flower pointing?



### Amazing fact

Did you know that we are very similar to plants?  
That is because we are both ALIVE!

# Living or non-living?

Learn that animals or plants are living things.  
Find out there are things that have never been alive.

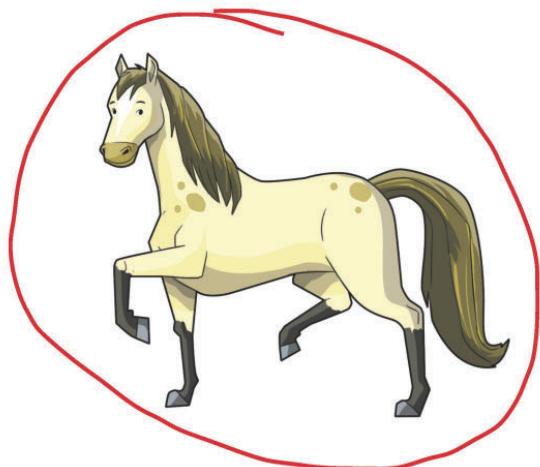
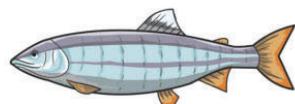
## The Big Idea

We can divide the world into living or non-living things.

 How do we know if something is **living** or has never been alive?

Look at the pictures.

 Draw a circle around the things that are living.

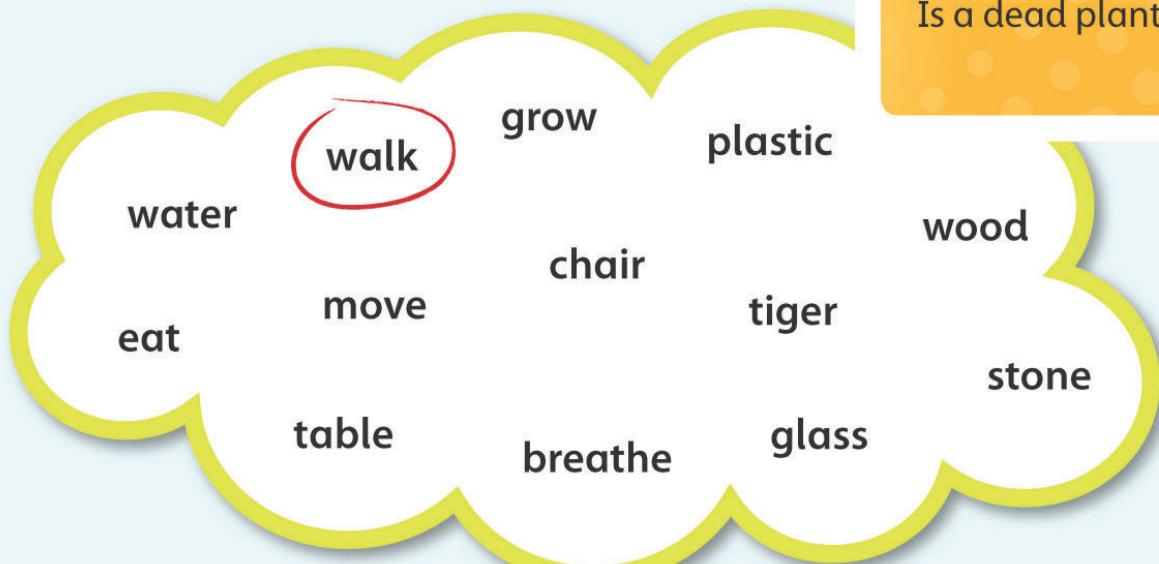


 Why do you think that animals and **plants** are alive?

Living things can breathe, grow, move and eat. **Non-living** things cannot do any of these things.

 Which words are about living things?

Draw a circle around them.



**Think about...**

Is a dead plant alive?



 Fill in the correct word.

Plants and a n i m a l s are living things.

Living things can grow, move and eat.

Buildings and rocks have never been alive.

Things that are not alive cannot grow, move or eat.

### Word Bank

~~animals~~    move    rocks    grow

# Where do animals and plants live?

Find out about different animals and plants and where they live.

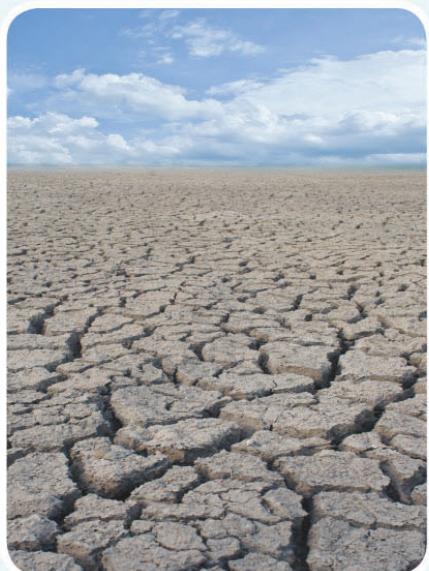
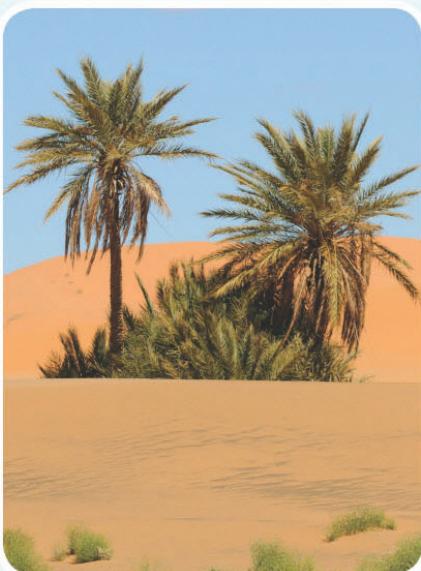
## The Big Idea

Animals and plants like to live in different places.



Why do you live in a building?

Look at the pictures of animals and plants living in different places.



40

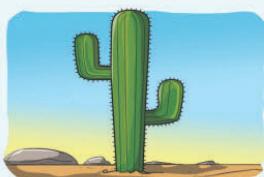
a Why do palm trees grow here?

b Why do antelopes live here?

c Why are there no plants or animals here?



Where do they live? Match the animal or plant to its home.



Fill in the gaps.

Animals and plants need a place to live and g\_r\_o\_w.

Animals need food, water and a place to s\_\_\_\_\_.

Plants need w\_\_\_\_\_ so they can grow.

Some animals and birds m\_\_\_\_\_ a place to sleep.

**Word Bank**

grow    sleep    water    make

Now turn to page 48 to review what you know.

# Eating and drinking

Find out why we need a healthy diet.

## The Big Idea

The right sort of food and drink keep us healthy!



What did you have to eat last night?

Write down what you had to eat last night.

My meal:

What we eat every day is called our diet. We need to eat five kinds of food to stay healthy.

Look at the plate of food. This shows the types of foods needed for a healthy diet.

Fruit and vegetables

Bread and cereals

Meat and fish

Fat and sugar

Milk and dairy products



Our diet helps our body to grow.

We also need lots of water to stay healthy.

We cannot eat just one or two kinds of food.  
This will make us unhealthy.

 Look at the picture of the food plate.  
Make a model of a healthy meal.

 Investigation: Which foods are healthy?

Look at different foods from a shop. Are they good for you?



Why do we need a healthy diet?

 Fill in the correct words.

**Word Bank**

grow    water

We need to eat a healthy diet to g\_\_\_\_\_.

We need to drink lots of \_\_\_\_\_ to keep healthy.

 Circle the answers. There may be more than one!

A healthy diet has **lots of**



It has **some**



It has **a little bit of**



# Families

Learn that babies grow into adults. Discover that babies are called offspring.

## The Big Idea

Some humans have babies who then grow into adults.



How many children are in your **family**?

There are \_\_\_\_\_ children.

Are you the youngest child? Are you the oldest? Are you in the middle? Are you an only child?

I am \_\_\_\_\_.

## Growing

Humans have babies who start small and then grow.

They become children and then adults.



Human life stages

Human babies need lots of help to grow and stay healthy.

 Can you think of two things that babies need help with?

 Do all humans grow to the same size? Yes or no?

 Investigation: Do all humans grow at the same rate?

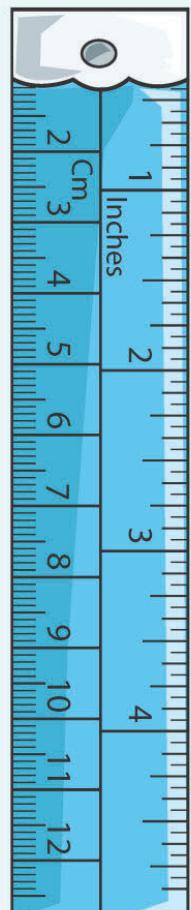
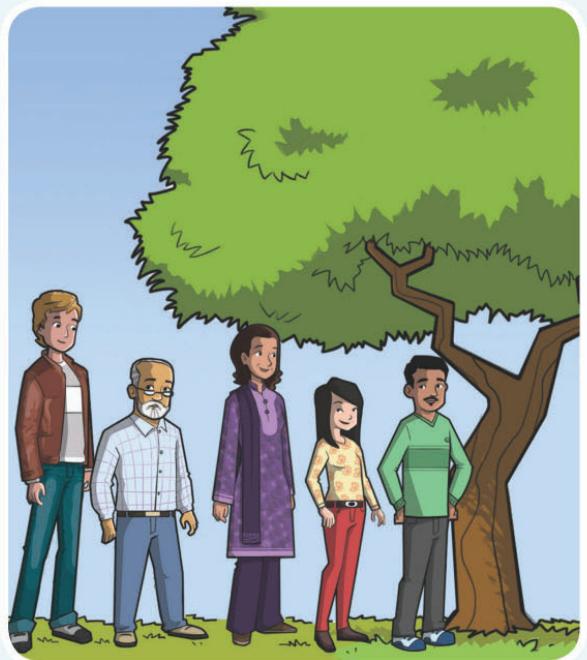
a How tall are you?

b How tall is the tallest student?

c How tall is the shortest student?

d What is the height of most of the students in this class?

 What can we learn from measuring the height of everyone in the class?



# Families

Learn that babies grow into adults.  
Discover that babies are called offspring.

## The Big Idea

Animals make babies, which are called offspring. The offspring grow into adult animals.



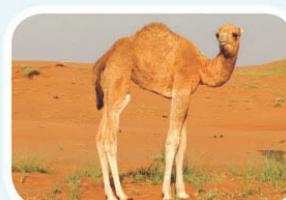
Look at the picture of young tigers.

What is the adult tiger doing?

1    2    3    4

Animals make babies. We call them offspring.

Match the animals to their offspring.



Look at the pictures of these animal families.

What are the differences between the adult and the offspring?



Circle the correct word.



Humans *do/do not* grow to the same size in the same time.



Circle the correct picture.

1 Humans start as a



and grow into an adult.

2 I am



compared to others in my class.

Now turn to page 49 to review what you know.



# What we have learned about living and growing

## Living or non-living?

Which of these things is living and which is non-living?

Write the words in the correct column.



Sheep



Stone

| Living | Non-living |
|--------|------------|
|        |            |

I can name some things that are living and some things that have never been alive.



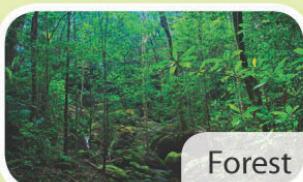
## Where do animals and plants live?

Where do they live?

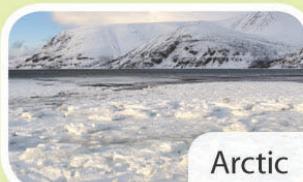
Draw a line from each plant or animal to the place where it lives.



Desert



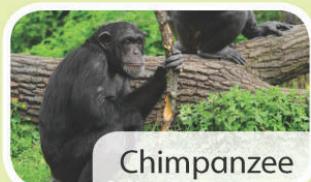
Forest



Arctic



Sea



Chimpanzee



Starfish



Cactus



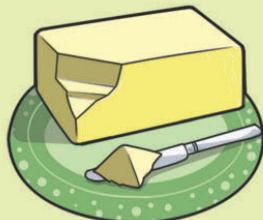
Polar bear

I know that plants and animals can live in different places.



## Eating and drinking

 Which of these foods and drinks do we need a lot of in our diet? Circle the correct pictures.



I can name some foods that make a healthy diet.



## Families

 Number the four life stages in the correct order. Draw a line from each number to the correct picture.



1

2

3

4

I know that humans start as babies and grow into adults.



# 4 Pushes and Pulls



## In this module you will:

- explore pushes and pulls
- understand that pushes and pulls are forces
- learn what makes things speed up, slow down or change direction.



### Amazing fact

A skater can move at 48 kilometres per hour.  
That is as fast as a car!



## Word Cloud

turn  
stop  
fast  
guess  
slow  
find  
swing



- Why is the ball rolling down the hill?
- How will the ball stop?
- How is the swing moving?

# Explore how things move

Explore pushes and pulls.

## The Big Idea

Pushes and pulls are forces.



What is movement?

We cannot see forces. But they make things move.

Investigation: How can you make a ball move?

How will you start the ball moving?

Now pull the ball towards you. What happens to the ball?

You will need to push the ball to make it move forward.

Push is a force that makes things move.

Pull is also a force that makes things move.

Forces are making objects move all the time. How can you prove this?

Investigation: Find places in school where things are moving

Predict where you think you will find things moving in your school.

1 **Find** places where things are moving.

2 Record what you see in a table like the one below. Was this what you predicted?

| Object moving | Describe the movement              |
|---------------|------------------------------------|
| Ball rolling  | The ball is rolling down the hill. |



Some of the cars in the picture are moving.

Some of the cars have stopped.

Forces can make things move.

Forces can stop things.

Can you see any flags moving?

What is making the flags move?

Which way are they moving?

The flags are not going anywhere.

They stay on the flagpole and  
they move backwards and  
forwards in the wind.

### Think about...

Why do some things move  
but others don't?



# Explore how things move

Explore pushes and pulls.

## The Big Idea

 You can make your body move.

 How many different ways can you move your body?

We can move our bodies in many different ways. Think about when you walk. How do your legs move? Some people **swing** their arms when they walk.

 Investigation: What happens when you swing your arms?

Try walking and swinging your arms at the same time.

 Can you swing your arms faster?

 Can you swing your arms very slowly?

 Predict what happens to the speed you walk when your arms slow down?

 What force makes your arms move forward?

 What force makes your arms move backwards?

Pushes and pulls are forces. Forces are part of everything we do.

 Can you **guess** what force you use to pick up a pencil?



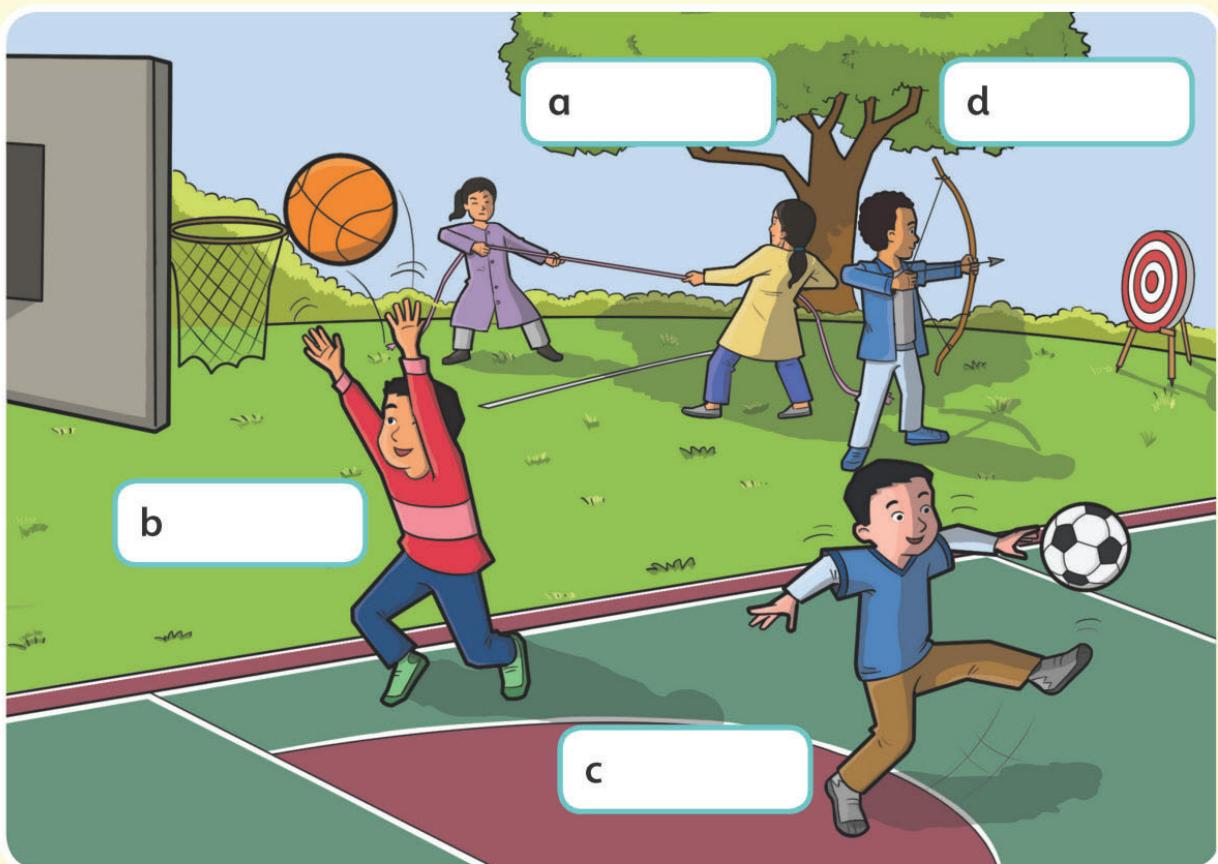


## Investigation: Pushing and pulling games

- 1 Think about all the different movements you have done in this unit.
- 2 Choose some games that you like to play.
- 3 Make sure you have both pushing and pulling games.



Look at the picture of children playing games. Label each person with the correct force.



### Word Bank

**push      pull**

# Making things go faster and slower

Understand that pushes and pulls are forces.

## The Big Idea

Forces can stop things moving.

Some cars move much **slower** than others.



Some cars move much **faster** than others.



What happens to the forces to make the cars move faster?

Look at the toy car.



Investigation: What makes a toy car move?

- 1 Work with a partner.
- 2 Make the toy car move.

How will you move the toy car towards you?

How will you move the toy car away from you?

Do you need to push or pull the toy car to make it move?

3 Make the toy car move faster.

 How did you do it?

 How can you make the toy car move **slower**?

 How can you stop the toy car?

 Investigation: How can you stop a moving toy car?

1 Work with a partner.

Explore how to **stop** a toy car moving.

2 Take turns to push the toy car.



Don't push it very hard or it may hurt someone.

3 The other person has to stop the toy car.

 How did you stop the toy car moving?

### Think about...

What force makes the toy duck move?

Where does it come from?

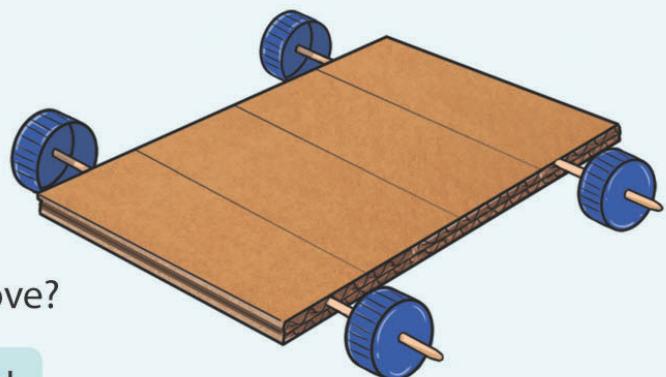


# Making things go faster and slower

Understand that pushes and pulls are forces.

## The Big Idea

We can make moving toys.



What different ways can toys move?

Investigation: Make a moving toy

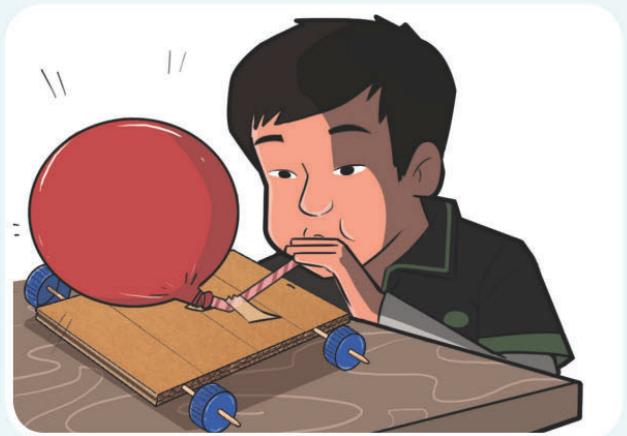
- 1 Work in a small group.
- 2 Make a moving toy from card or wood.

Think about how to make a moving toy.

You might need some wheels.

## Make a balloon toy car

- Fix a balloon to the toy car you made.
- Put the straw in the balloon.
- Hold the end of the straw between your fingers.
- Carefully blow up the balloon.
- When you let go the air from the balloon pushes the toy car forward.



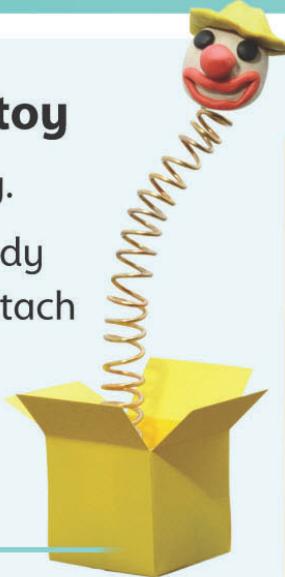
Can you make the wheels move?

What force moves the toy car?

## Make a bouncy toy

You will need a spring.

- Make the face or body of an animal and attach it to the spring.
- Stretch the spring and let it go.



What force moves the bouncy toy?

Some toys use a key to wind the toy up.

What force do you use when you **turn** the key?



Circle the force that is making the objects move.

- 1 To throw a bean bag you need a **push/pull** force.



- 2 Picking up a book uses a **push/pull** force.



- 3 Opening a door towards you uses a **push/pull** force.



Now turn to page 64 to review what you know.

# Look at things moving

Learn what makes things speed up, slow down or change direction.

## The Big Idea

Things move in the wind.

Look at the picture.

Which way is the sand moving?

Why is it moving this way?

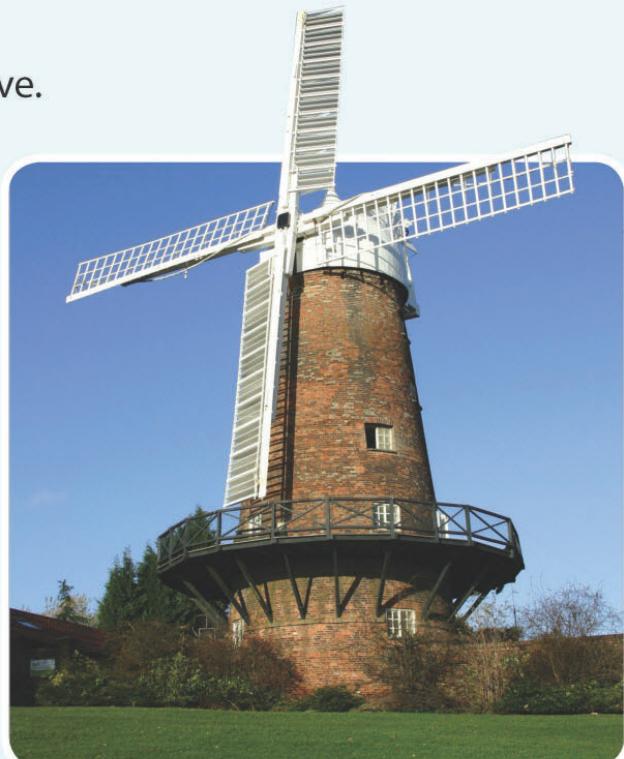
The wind is blowing the sand away from the hand.

## The wind

The wind makes leaves in the trees move.



It makes sailing boats move.



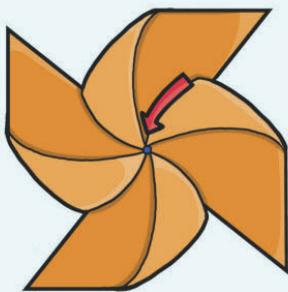
It makes windmills move.



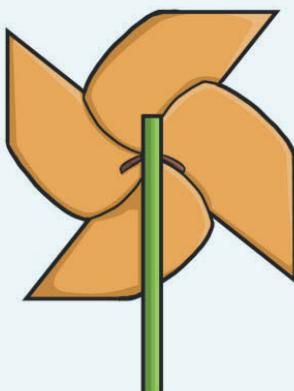
### Investigation: Make a paper windmill

1 Work with a partner and help each other.

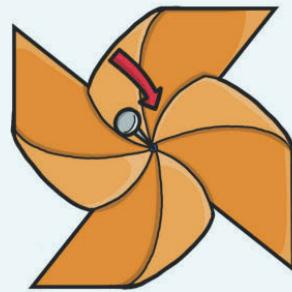
2 Take each corner of the paper and overlap them at the centre hole. Help each other to do this.



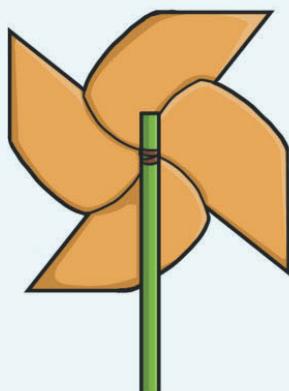
4 Wrap the ends of the paper fastener around the stick.



3 Hold all the corners in place with the paper fastener.



5 Put some tape over the ends. Blow your windmill.



Complete the sentences to describe how your windmill moves.

When I blow hard, the windmill moves faster.

When I blow softly, the windmill moves \_\_\_\_\_.

The windmill \_\_\_\_\_ round and round, but it doesn't move to another \_\_\_\_\_.

#### Word Bank

|        |                   |
|--------|-------------------|
| moves  | <del>faster</del> |
| slower | place             |

# Look at things moving

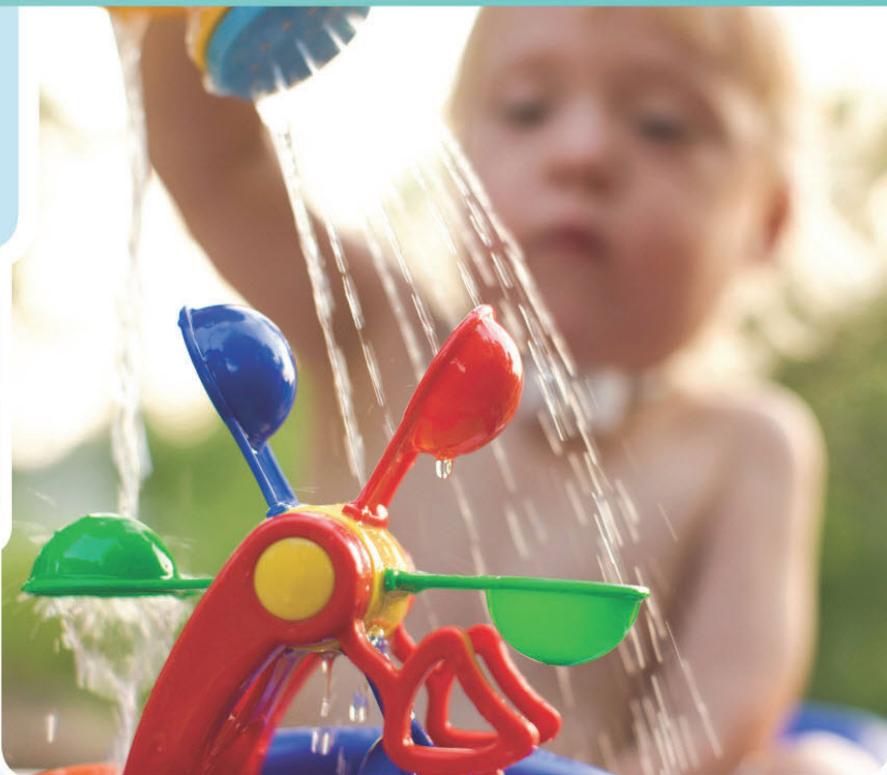
Learn what makes things speed up, slow down or change direction.

## The Big Idea

Water and wind can make things move.

### Water

This boy is pouring some water into the toy waterwheel.



Can you describe how the water is making the wheel move?

What happens when the boy stops pouring the water?

Guess what happens if the boy pours lots of water in.

When the water falls down, it makes the wheel move.

The water pushes the wheel.





### Investigation: How do bubbles move in the wind?

Use some bubble liquid and a wand to blow bubbles. Predict what will happen to the bubbles.



What makes the bubbles move in this way?

Why do the bubbles change direction?

When do they move faster?

When do they slow down?

The wind is making the bubbles change speed and direction.



List two things that you have used to make things move.

What made your windmill move?

What made the waterwheel move?



# What we have learned about pushes and pulls

## Explore how things move

We move our bodies using pushes and pulls.

Here are some ways you can move your body.

Can you match the pictures to the words?



walking



spinning



hopping



swinging

I know that pushes and pulls make things move.

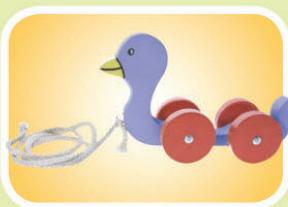


## Making things go faster and slower

How can you make these toys move? Use the word bank.



I can \_\_\_\_\_  
or \_\_\_\_\_ the toy car.



I can \_\_\_\_\_  
the toy duck.



I can \_\_\_\_\_  
the toy robot.



I can \_\_\_\_\_  
the balloon to make  
the toy car move.

### Word Bank

push    pull    wind up    blow up



Circle the correct word.

More push makes things move faster/slower.

I understand how to make things go faster and slower.

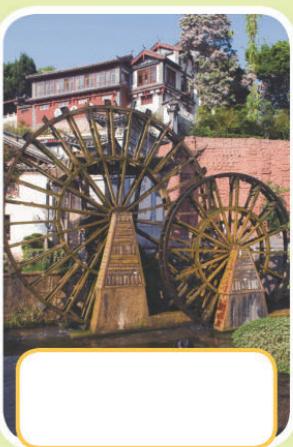


## Looking at things moving



What is moving the things in these pictures?

Write the correct word under each picture.



### Word Bank

wind      water

I know that when something moves, a push or a pull must have made it move.

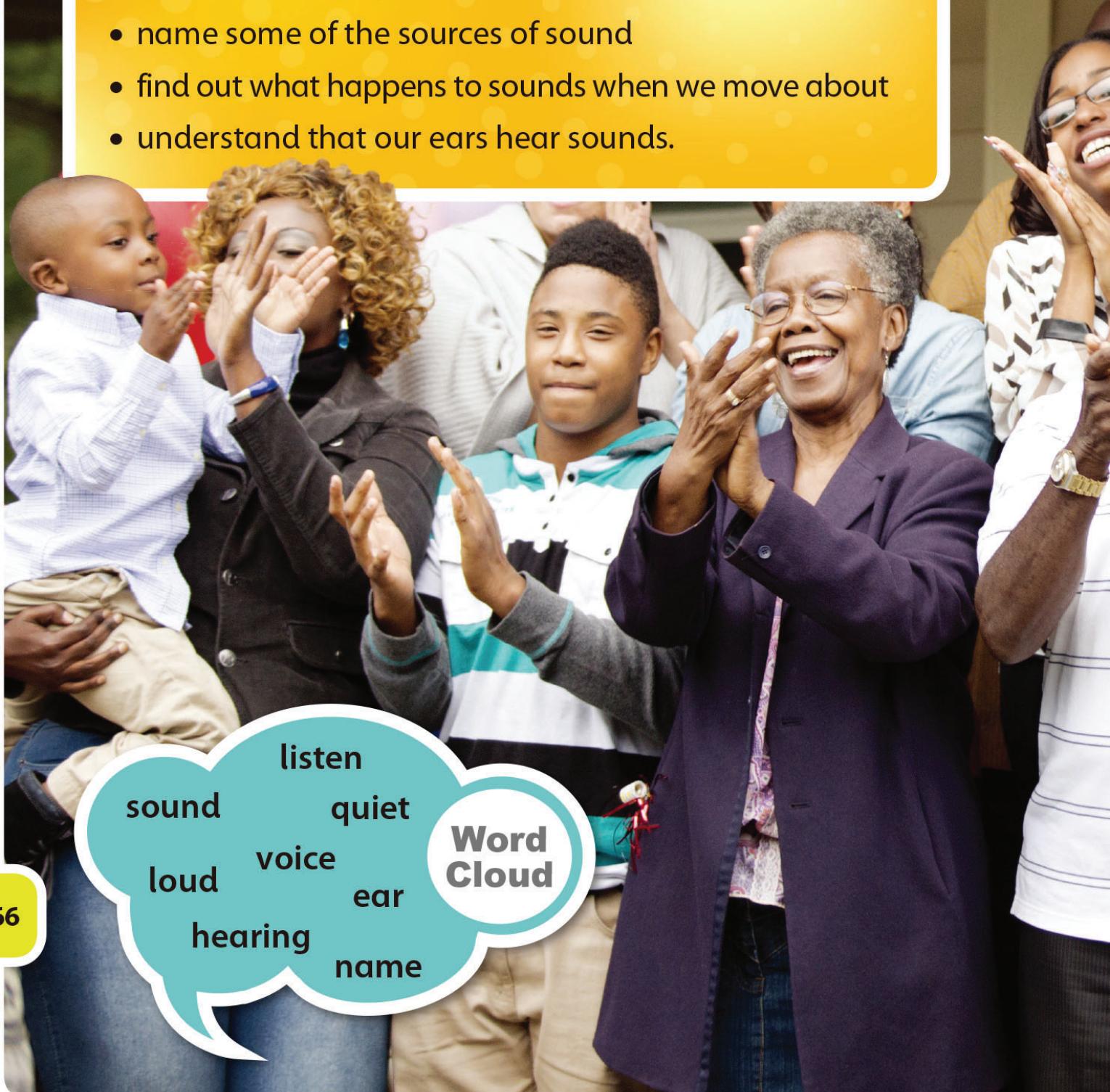


# 5 Making Sounds



## In this module you will:

- name some of the sources of sound
- find out what happens to sounds when we move about
- understand that our ears hear sounds.



How many sounds can you make?

Why do animals make sounds?

What do you think the monkey is saying?

Who is he calling?



### Amazing fact

Some animals, like the sea sponge, do not make any sounds to communicate.



# Talking and listening

Name some of the sources of sound.

## The Big Idea

 Animals talk to each other.

 How many sounds can you make with just your **voice**?

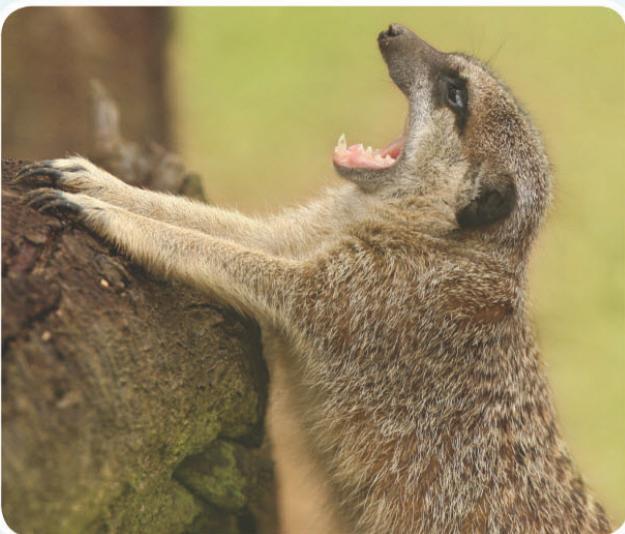
We are animals, and most animals make **sounds**.

 Name an animal that does not make a sound to communicate.

Most animals make sounds to talk to each other.

 Why do we talk?

We talk to each other to share ideas.



Some animals make noises to warn of danger.



Or to frighten other animals that might hurt them.



Humans and other animals can sing.

 Why do we sing?

Birds sing to pass on information.

People sing for lots of different reasons.



# Talking and listening

Name some of the sources of sound.

## The Big Idea

 We use our body to make sounds.

We make lots of other sounds with our body.

 What is the man doing?



 Why do you think people whistle?

Some sportspeople whistle to get the attention of the other players.

Other people whistle because it is good fun.

They whistle along to music.

 Investigation: What sounds can you make?

1 Make lots of different sounds with your body.

2 Try to whistle. Purse your lips together and then gently blow.

Can you whistle a tune?

3 Clap your hands together.

Clap hard and gently to make different sounds.



 What happens when you clap hard?

What happens when you clap gently?

Clapping hard makes a **loud** sound.

Clapping gently makes a **quiet** sound.

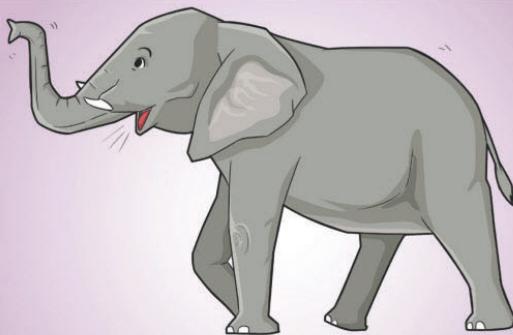
4 Listen to the clapping rhythm your teacher makes.

Can you copy it?

 When can you use a clapping sound?

 Guess what sounds these animals make.

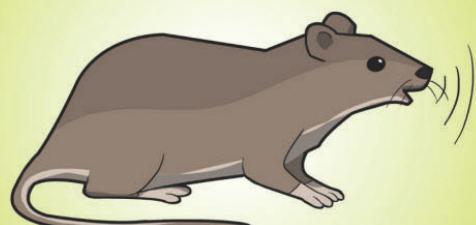
 Write the sounds here.



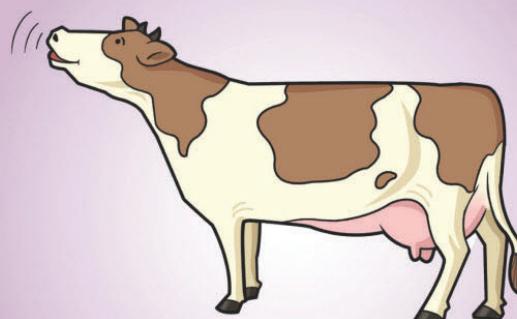
a



b



c



d

# Talking and listening

Name some of the sources of sound.

## The Big Idea



Some animals hear more sounds than humans.

We are very good at listening to sounds and guessing what they are.

List all the sounds that you can **hear** now.

I can hear \_\_\_\_\_

\_\_\_\_\_

We can measure how loud a sound is using a special machine. It is called a sound-level meter.

### Think about...

Imagine how many sounds there are in the world.



### Amazing fact

Humans can only hear some sounds. Moths can hear many more sounds than we can.





### Investigation: Measure the sounds in school

- 1 Go on a listening walk around the school. Predict where you will find the loudest sound.
- 2 Use a sound-level meter to measure the sounds. Write your results in a table.

Did anyone hear anything you didn't?

How many sounds did you hear?



A sound-level meter

Sometimes we make a sound just because we like it.

Music makes people happy.  
They like to **listen** to it.

How many musical instruments do you know?



What sounds can you make with your body? Write four sounds.

# Sounds and moving about

Find out what happens to sounds when we move about.

## The Big Idea

Sounds change when we move closer to them or further away from them.

Listen to your teacher walking away from you.

What happens to the sound when your teacher moves further away?



Do you remember the listening walk?

To hear some of the sounds you had to listen very carefully.



When we move further away from where a sound is made, the sound gets quieter.

You can investigate this by playing a game.



Investigation: What happens to sounds when we get further away from them?



Predict what will happen to a sound when you get further away from it.

1 Go outside into a big open space.

One person stands in the centre with their eyes closed.

They are the Listener.

2 Stand in a circle around the Listener.

Stand as far away as possible.

3 Tiptoe very quietly towards the Listener.

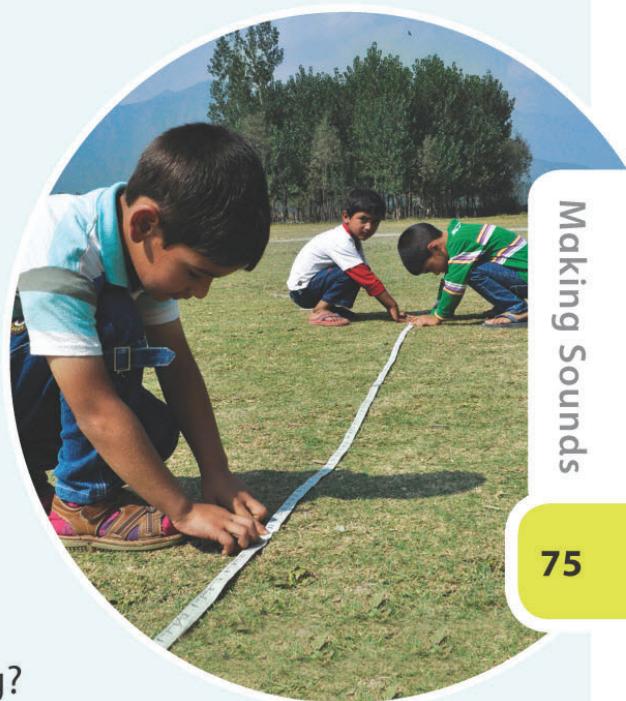
The Listener listens very carefully.

If they hear a sound they turn around quickly.

If they see you moving you are out. See who gets to the centre first.

Measure how far away you are when the Listener hears you.

Were some of you quieter than others? Why?



# Sounds and moving about

Find out what happens to sounds when we move about.

## The Big Idea

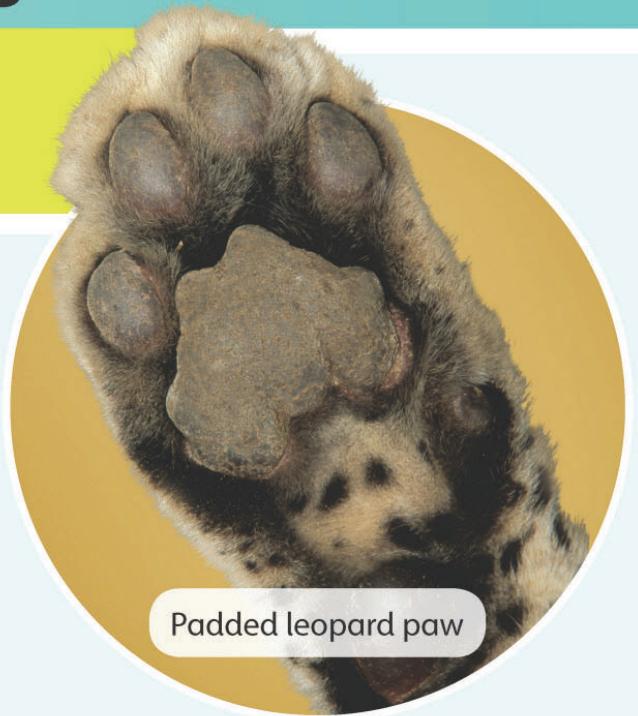
Animals can be very quiet.

Imagine you are in the wild. You want to creep up to an animal. What shoes do you wear?

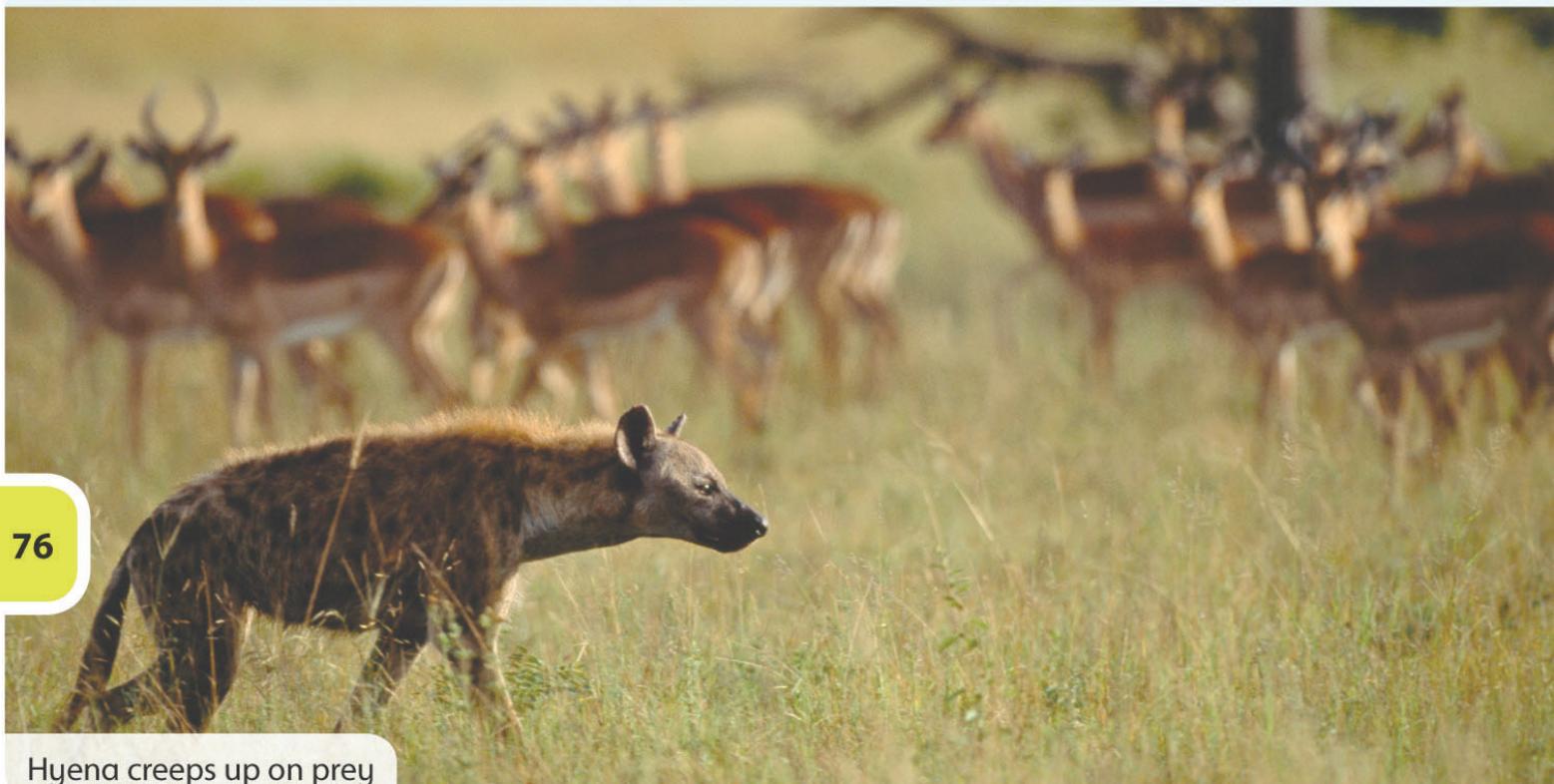
Wild animals have quiet feet.

Animals that hunt have very quiet feet! Their feet have soft pads. This is so they can creep up on other animals.

They try to get as close as they can before the other animal hears them. Just like you did in the game.



Padded leopard paw



When you did your listening walk, did you hear any emergency-vehicle sirens?

 What emergency vehicles do you know? Can you **name** them?

### Think about...

How does the sound travel from the emergency vehicle to us?



 Why do these vehicles need sirens?

The sirens let people know that there could be danger.

They also let people know that help is coming.

On busy roads other drivers hear the siren and can move out of the way.

 Write two reasons why emergency vehicles have sirens.

Why do hunting animals have padded feet?

# Comparing sounds

Understand that our ears hear sounds.

## The Big Idea

We use our ears to hear sounds.

How do we hear things?  
Which part of the body do  
we use to hear things?

Sound travels from the place  
where it is made into our **ears**.

We hear when sound travels into  
the ear.

We have two ears to help us hear  
sounds all around us.



### Amazing fact

The praying mantis  
only has one ear.





## Investigation: Can you hear with only one ear?

- 1 Sit quietly and close your eyes.
- 2 Put your hand over one ear. Listen.
- 3 Now take your hand away from your ear. Listen again.



- Can you hear the same sounds?
- 4 Cover your other ear and listen.
- Are two ears better than one?
- Do your eyes help you to hear?



Our eyes and ears work together to help us keep safe.

Imagine you have to cross a busy road.

- Make a road-safety poster. Tell people how to use their eyes and ears when they are crossing the road.



How do we hear? Circle your answers.

Sound travels into our eyes.

True

False

Two ears help us to hear better than one.

True

False

Using our eyes and ears helps us to cross the road safely.

True

False

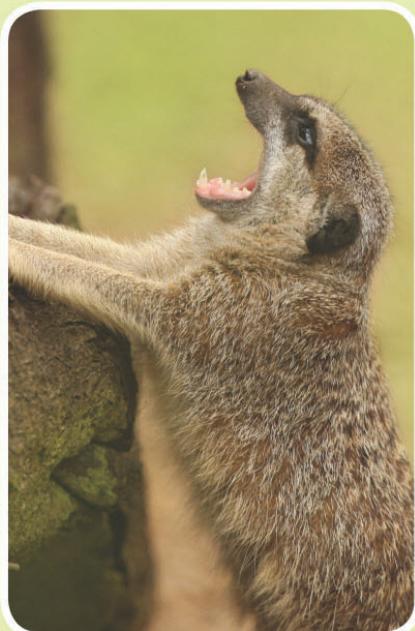


# What we have learned about making sounds

## Talking and listening



Animals make sounds for lots of reasons. Here are some of the reasons. Can you fill in the blanks?



To \_\_\_\_\_ of danger

To \_\_\_\_\_ other animals

To \_\_\_\_\_ information

### Word Bank

**warn      pass on      frighten**



People and animals make sounds. What other things make sounds? Write two things.

I know that there are many things that make sounds.

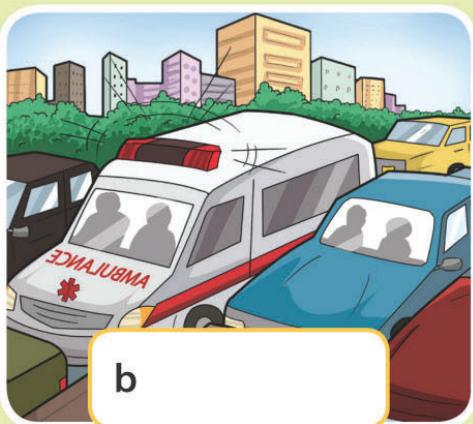


## Sounds and moving about

 Ambulances have sirens. Which ambulance sounds loud and which one sounds quiet?



a



b

### Word Bank

loud quiet

I know that when sounds move away from us they get quieter.



## Comparing sounds

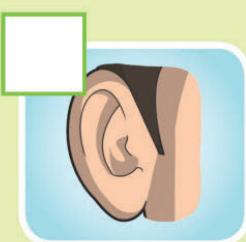
 Which two senses are most important when we cross the road? Tick the correct senses.



a smell



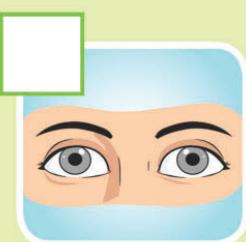
b taste



c hearing



d touch



e seeing

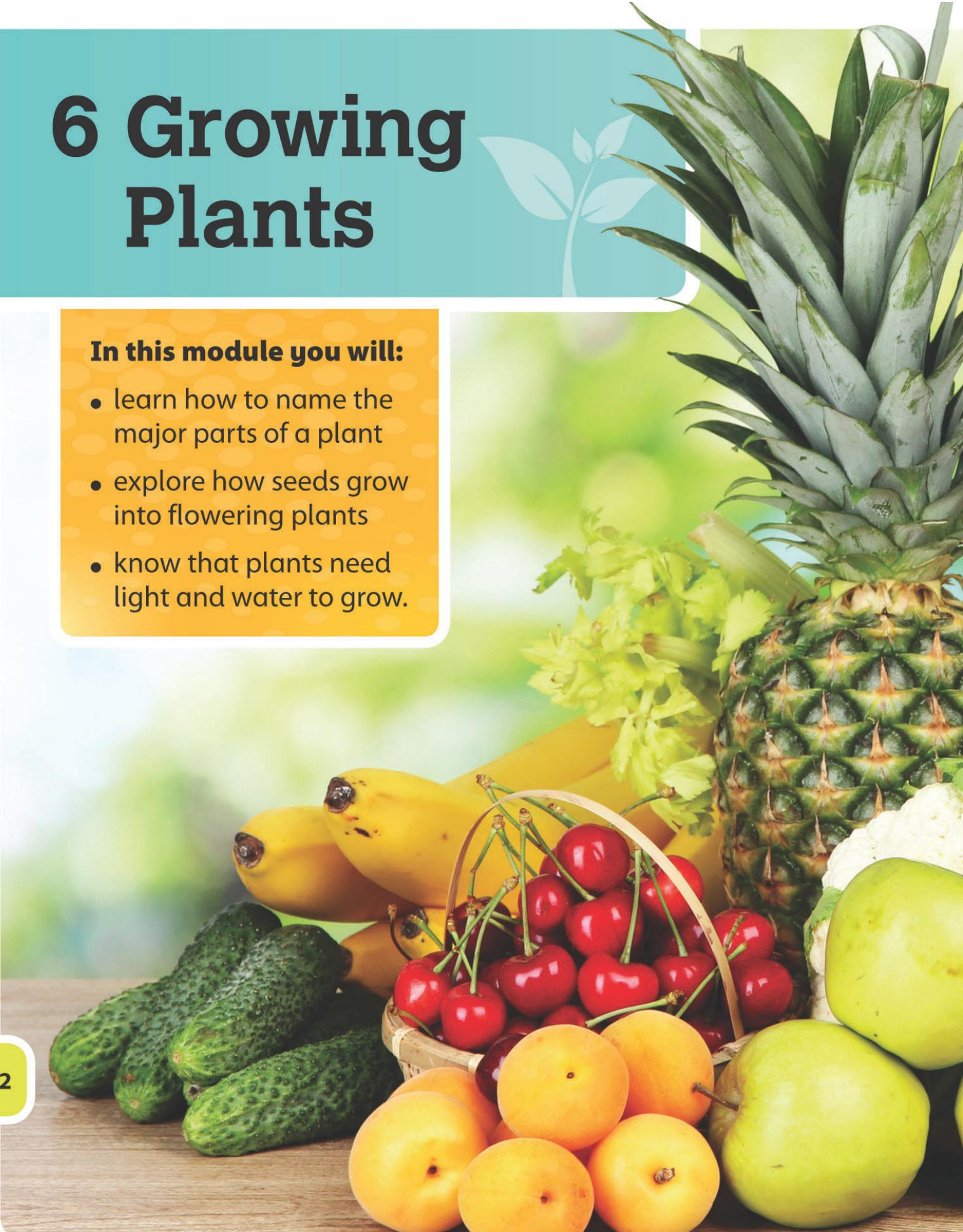
I know that we use our ears to hear sounds.



# 6 Growing Plants

## In this module you will:

- learn how to name the major parts of a plant
- explore how seeds grow into flowering plants
- know that plants need light and water to grow.





Did you know that we grow many plants for food?

Look at the pictures.

 Name one vegetable.

Name one fruit.

leaf  
fair test      root  
seed      talk about      stem  
flower

**Word Cloud**

# Parts of a plant

Learn how to name the major parts of a plant.

## The Big Idea

We can eat some parts of a plant.

Plants have four main parts:

- the **roots**
- the **stem**
- the **leaves**
- the **flower**.

Look at this plant.

 Colour in the plant.

Colour the flower yellow.



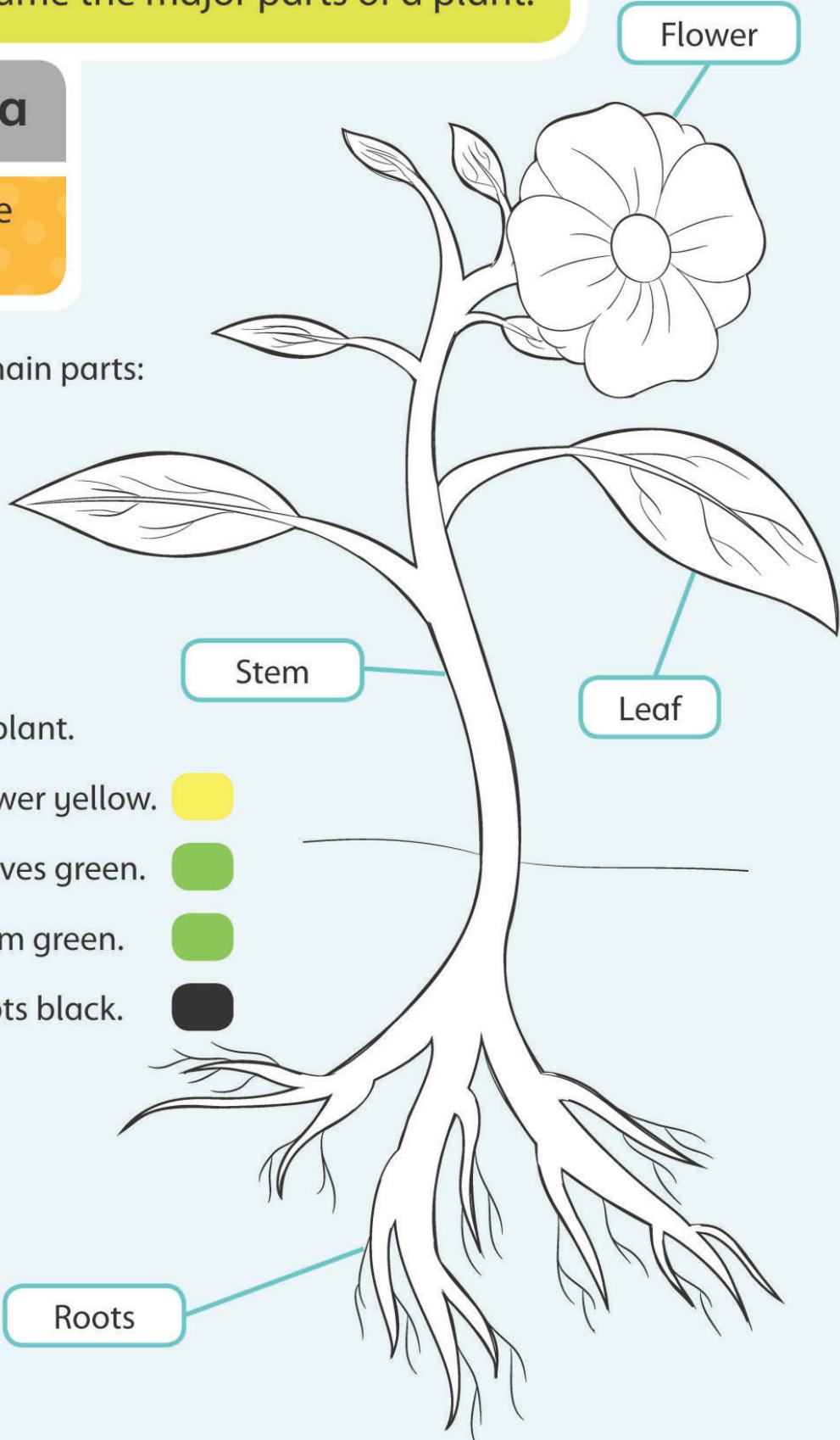
Colour the leaves green.



Colour the stem green.



Colour the roots black.



We can eat parts of plants.

Look at these pictures.



Lettuce



Carrots



Celery



Saffron flower

Match the words to the pictures.

When we eat lettuce we are eating the



flower.

When we eat carrots we are eating the



leaves.

When we eat celery we are eating the



roots.

When we eat saffron we are eating part of the



stem.

Many plants are good to eat because they help to keep us healthy.



Some plants can make us very ill. They are not good to eat.



True or false? Circle your answers.

Some plants are good to eat.

True      False

All plants have roots.

True      False

When we eat carrots we are eating the flowers.

True      False

Now turn to page 98 to review what you know.

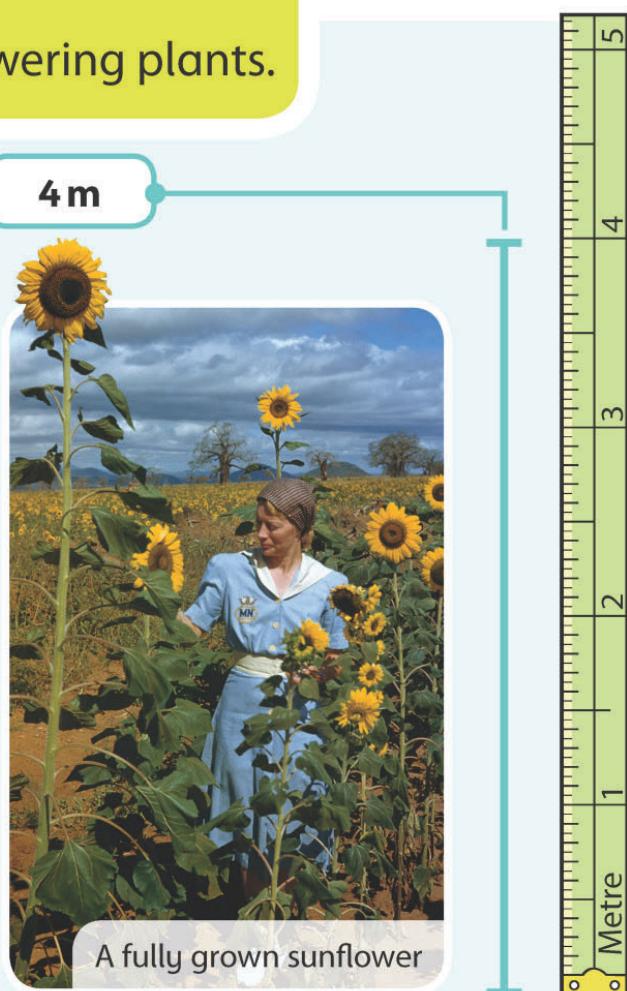
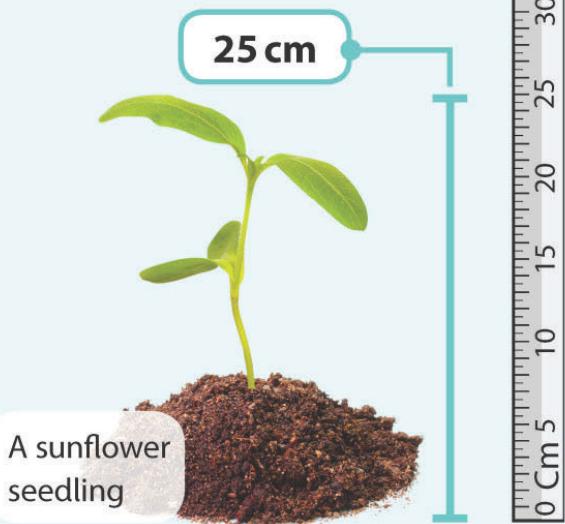
# Growing plants

Explore how seeds grow into flowering plants.

## The Big Idea

We can help seeds to grow.

Look at these pictures



What do you notice about these two plants?

How tall is the smallest plant?

How tall is the tallest plant?

86

The plants in the pictures are sunflowers.

Sunflowers grow very tall. Sunflowers grow from **seeds** that look like this.





### Investigation: How to grow sunflowers

1 Get a pot. Put some pebbles in the bottom of the pot.



2 Fill the pot with compost.

3 Plant two sunflower seeds. Add some water.



Wash your hands after you have planted the seeds.

4 Check the pot every day.

After 3–8 days you will see something growing.



How many days passed before you saw seedlings?

How can you look after the seedlings now?

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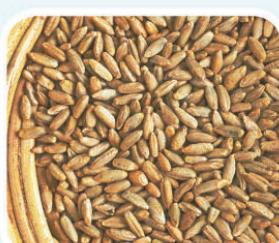
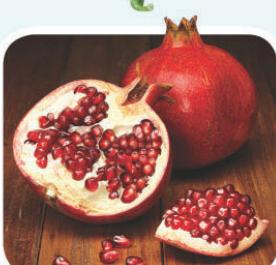
# Growing plants

Explore how seeds grow into flowering plants.

## The Big Idea

We cannot see plants growing.

Look at these pictures.



What do you think will happen if we plant these seeds?



Name two seeds that are good to eat.

We cannot see seeds growing because it happens slowly.

We know that they grow because we can measure how much a plant has grown.

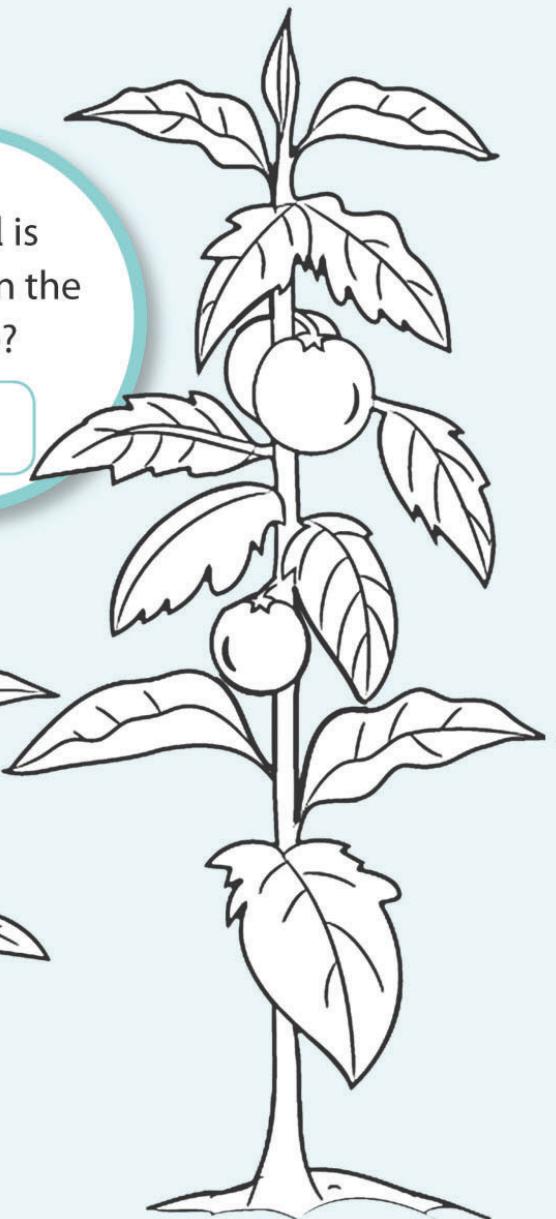
 Use the picture of the ruler. Measure the heights of the plants.

How tall  
is the tallest  
plant?

How tall is  
the plant in the  
middle?

How tall  
is the smallest  
plant?

10 cm



Colour in the plants.

# Growing plants

Explore how seeds grow into flowering plants.

## The Big Idea

In science, we measure and record things.

 Fill in the missing words. Use the word bank.

We cannot see plants g r o w i n g.

Plants grow very \_\_\_\_\_.

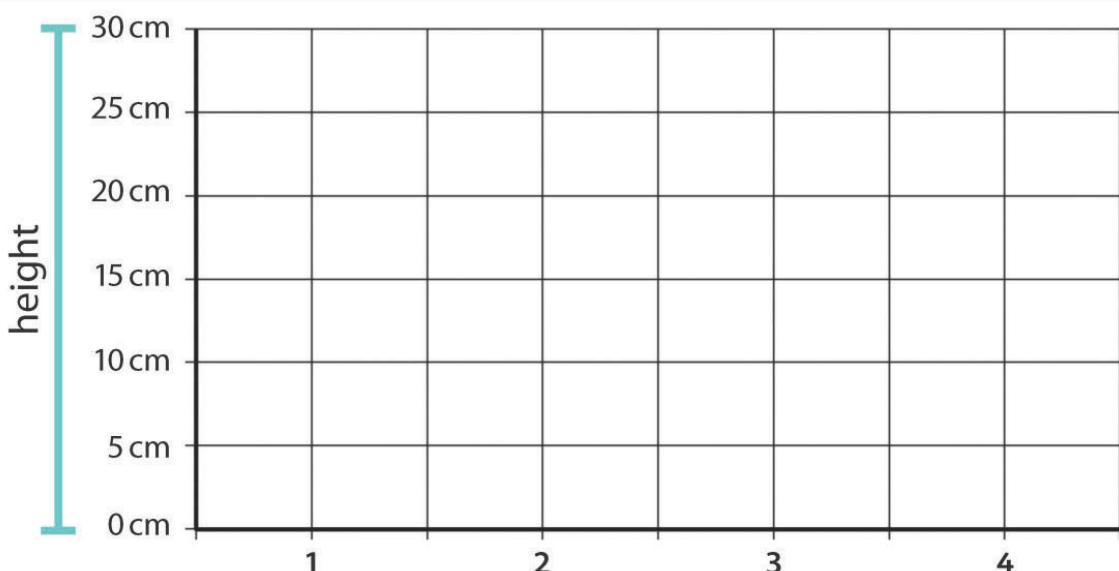
We know that plants grow because we can \_\_\_\_\_ them.

### Word Bank

~~growing~~      measure      slowly

 Measuring plants

Measure four plants in centimetres. Record your measurements on the bar chart.



We know that plants can be large or small.

 Draw your own plant. It can be any size, shape or colour.

 Scientists do more than just measure and record things. Circle the scientific words.

guess                    **pot**                    name  
                        **compare**                 pizza  
**car**                    coffee

### Think about...

What do you think is the tallest plant in the world?



# Growing plants

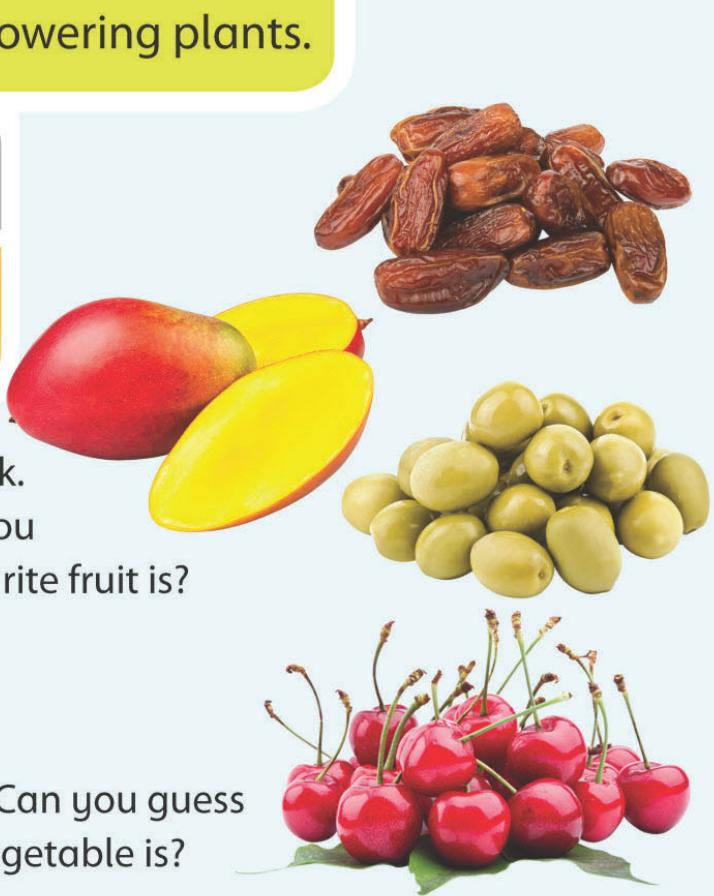
Explore how seeds grow into flowering plants.

## The Big Idea

We need to eat fruit and vegetables to keep us healthy.

 Use your Investigation Notebook.  
Draw your favourite fruit. Can you guess what your partner's favourite fruit is?

It is



 Draw your favourite vegetable. Can you guess what your partner's favourite vegetable is?

It is

 Why do we grow plants?

We grow some plants because they provide food to eat.



Humans and animals eat the food provided by plants.

92

We also grow some plants because they look pretty and smell sweet.





Draw a circle around the reasons why we grow plants.

To play with

They smell nice

To take for a walk

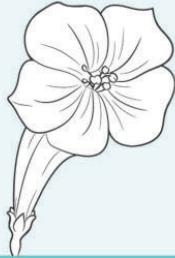
They are good to eat

**They look nice**

To give as a gift



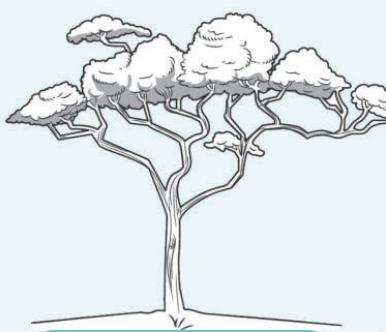
Colour in the plants we can eat.



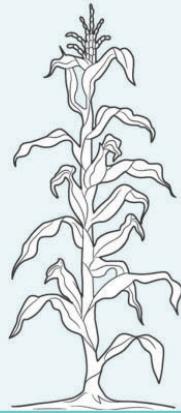
Petunia



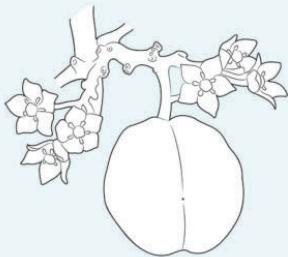
Carrot plant



Acacia tree



Corn plant



Milkweed



Apple tree



Complete the sentences. Use the word bank.

We grow many plants for \_\_\_\_\_.

We need to eat fruit and ve g e t a b l e s to keep us \_\_\_\_\_.

We cannot see plants growing, but we can \_\_\_\_\_ how much they have grown.

#### Word Bank

food ~~vegetables~~ healthy measure

# What plants need to grow

Know that plants need light and water to grow.

## The Big Idea

Plants do not grow well in the dark.



Look at the picture.

What can you see?

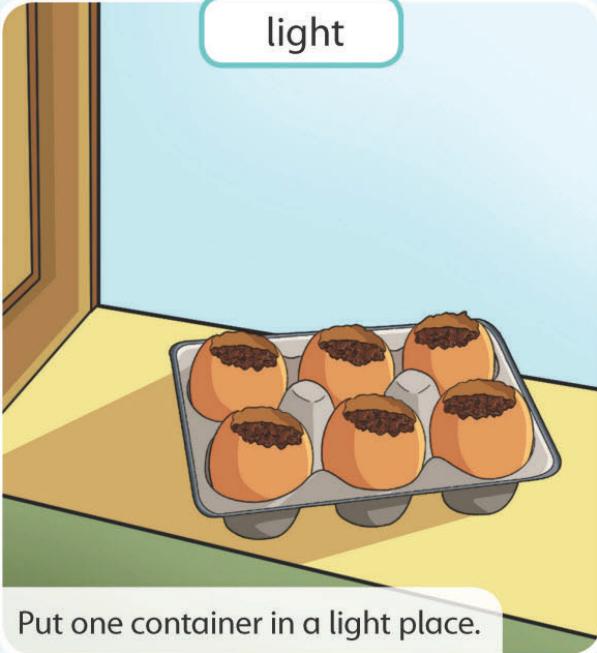
Investigation: Do plants need light to grow?

You will find out if plants need light to grow. You need two containers to grow cress seeds.

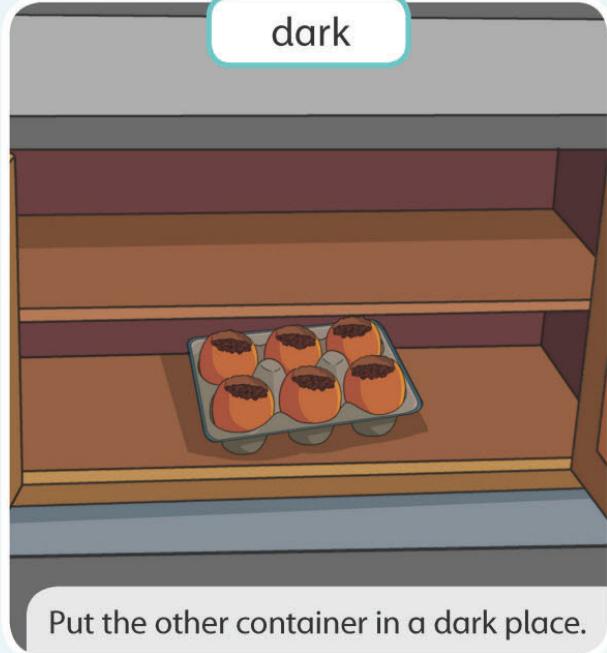
- 1 Decorate your containers.
- 2 Put some cotton wool in the bottom of each container.
- 3 Add a little water and put the seeds on top.

Predict which seedlings will grow the best.

How can you make your investigation **fair**?



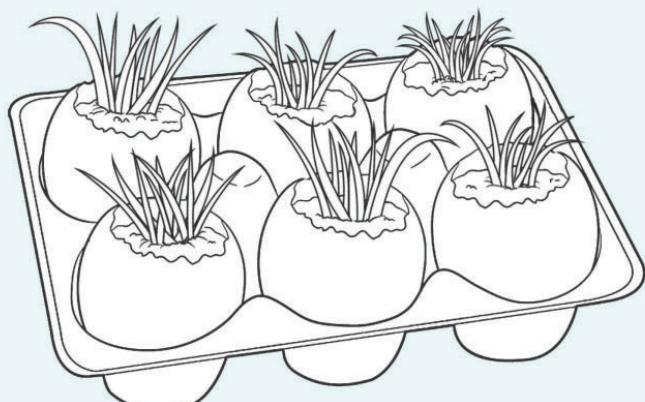
Put one container in a light place.



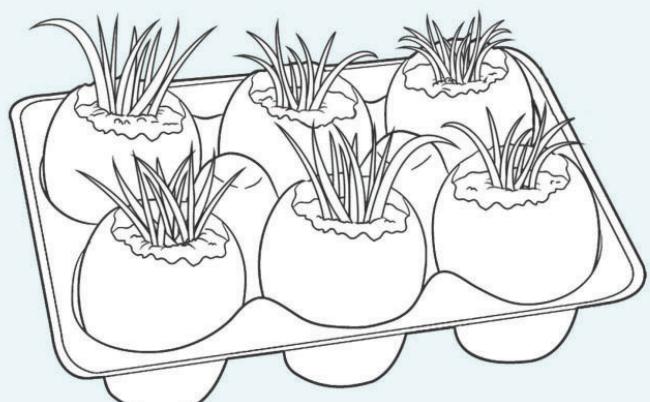
Put the other container in a dark place.



Colour in these pictures to show what you think will happen.



Grown in the light



Grown in the dark

### Think about...

Do you think you can eat plants that grow in the dark?



# What plants need to grow

Know that plants need light and water to grow.

## The Big Idea

If a plant does not get enough water it will wilt and die.

Look at the picture.

### Talk about

what you can see in the pictures.

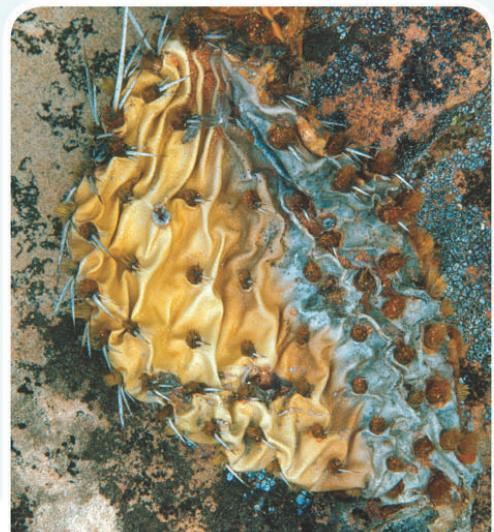
Have you ever eaten celery that is not fresh?

If you have, you know that celery is not crisp when it is not fresh.

This is because there is a lot of water in fresh celery.

Without water the celery **wilts**.

Cacti do not need much water, but they still need some water.





## Investigation: Do plants need water to grow?

- 1 Get a plant that needs to be watered.
- 2 Each day give the plant some water.
- 3 See what happens.



Draw your plant at the start and at the end of the investigation.

Start

End



Fill in the gaps. Use the word bank.

Plants need light and w\_a\_t\_e\_r to grow.

If a plant has no light the leaves go \_\_\_\_\_.

If a plant has no water the leaves \_\_\_\_\_.

### Word Bank

~~water~~      wilt      yellow



# What we have learned about growing plants

## Parts of a plant

Circle the words for the four parts of a plant. Then draw a line from each word to the correct part of the plant.

Hand

Flower

Stem

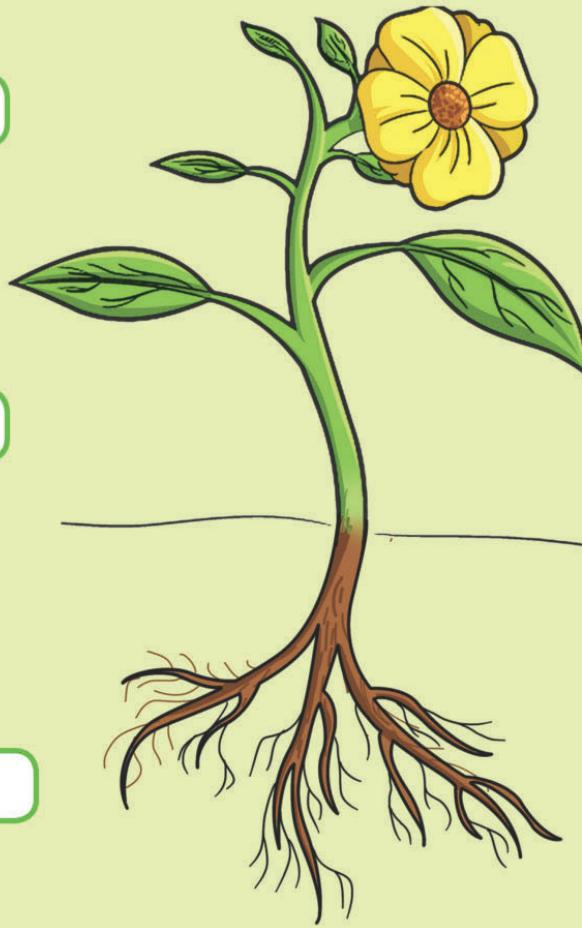
Leaf

Glass

Roots

Voice

Family



I know the names of the four parts  
of a plant.



## Growing plants

 Grow some sunflowers. Match the sentences to the pictures.

1 Get a pot.  
Put some  
pebbles in it.

2 Fill the pot with  
compost. Water  
the compost.

3 Plant two  
sunflower  
seeds.

4 Water the  
seedlings.



I know that seeds grow into plants  
and trees.



## What plants need to grow

 Look at the pictures of plants and read  
the sentences. Circle the correct words.

a This plant has / does not have enough water.



b This plant has / does not have enough water.



c This plant has been grown in  
the light / dark.



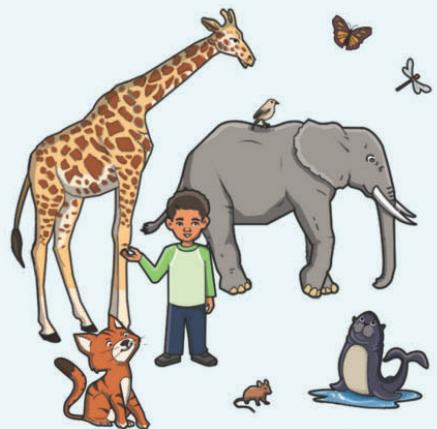
I know that plants need light and water  
to grow well.



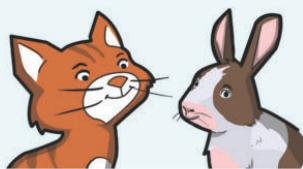
# Glossary

Key words

**animal**



**compare**

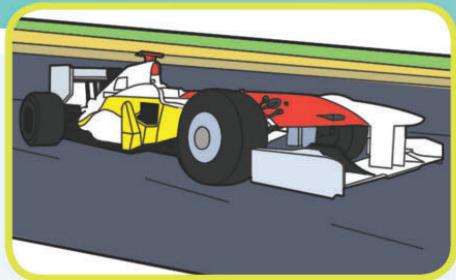


**ear**

**fair test**



**family**



**fast**

**find**

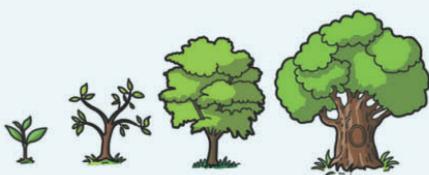


**flower**



**glass**

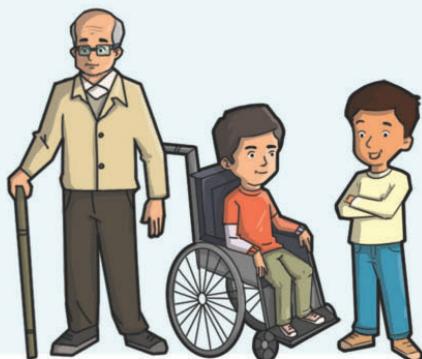
**grow**



**guess**



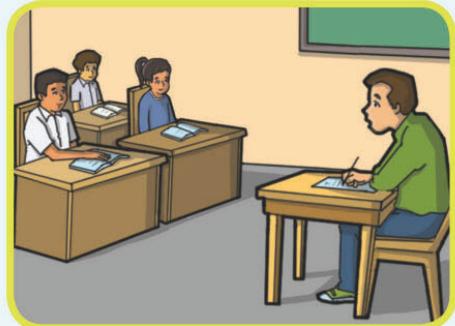
**hearing**



**human**



**leaf**



**listen**



**living**

**look**



**loud**

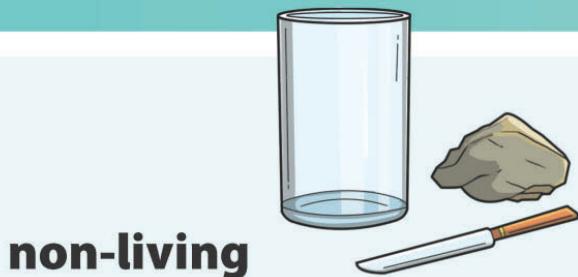


**material**

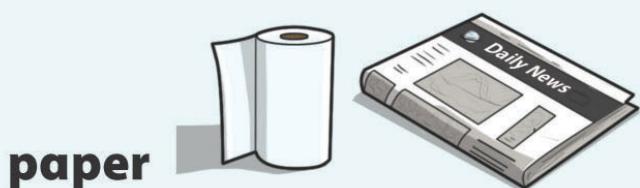


**metal**

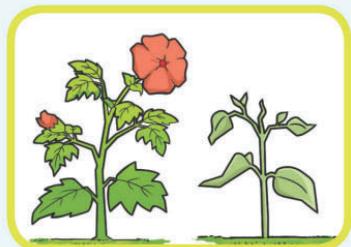
**name**



**non-living**



**paper**



**plant**

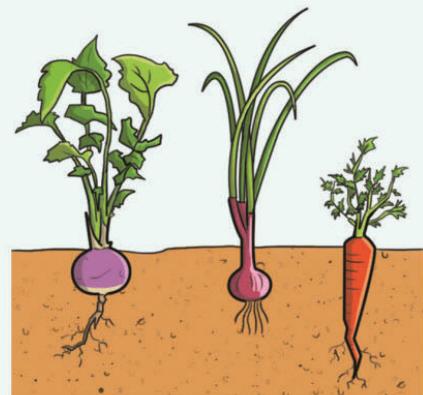


**plastic**

**quiet**



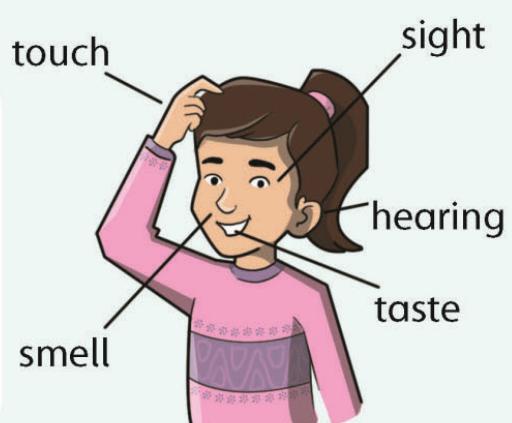
**root**



**seed**



**senses**





**slow**



**sound**



**stem**

**stop**



**swing**

**talk about**

**tell**

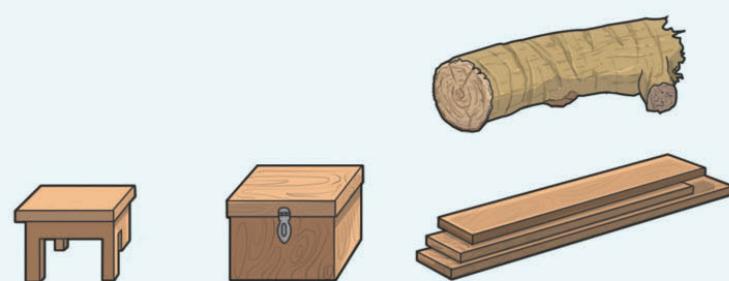
**turn**



**voice**



**wood**



# Oxford International Primary Science

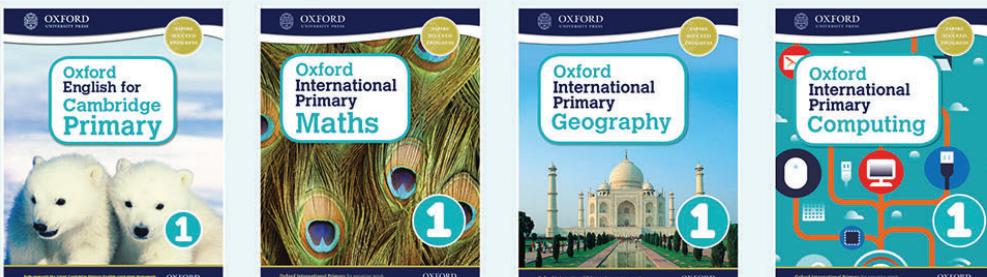
1

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