

Solomon Islands

Primary Science

LEARNER'S RESOURCE BOOK

Year 2



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Solomon Islands Curriculum Development Division

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Our senses

In this chapter, you will:

- name the five sense organs of the body
- state what the sense organs do
- identify things using different senses
- explain how some animals behave when they sense danger
- state the sense organs that help animals escape danger.

The five senses

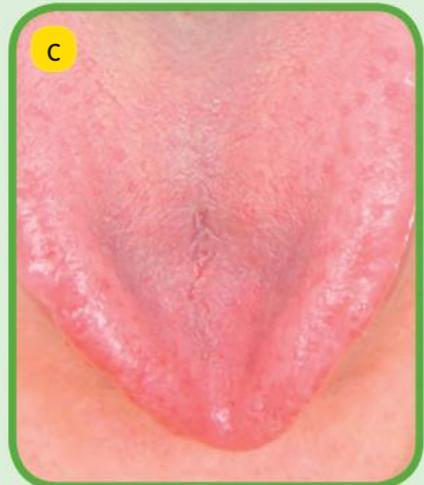
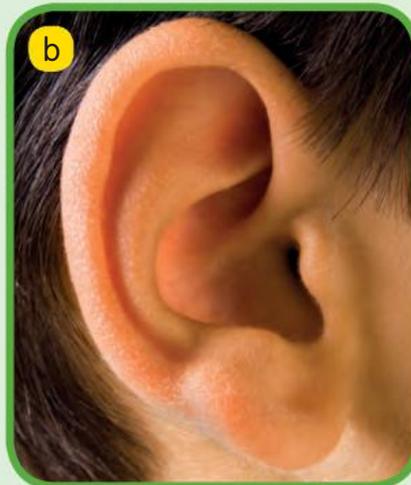
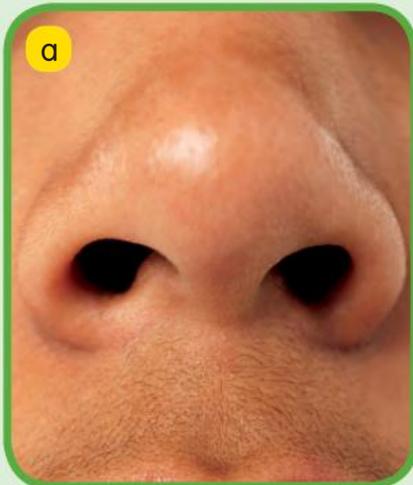
We have five different senses:

- hearing
- touch
- taste
- smell
- sight or seeing.



Activity 1

Look at the pictures. Which sense goes with each picture?
Tell your teacher.



Hearing

Hands-on Activity



Activity 2

- 1 Put on a blindfold. Your friends will make a circle around you. Different friends will clap their hands. Point to where you think the sound came from. They will tell you if you are correct.
- 2 Each of your friends will take a turn with the blindfold.



- 3 Which part of your body did you use to help you hear the clapping? Tell your teacher.

Activity 3

Fieldwork Activity



- 1 Go into the schoolyard with your teacher. Stand very quietly with your eyes closed. Listen carefully to all the sounds you hear.
- 2 Go back into the classroom. Tell your teacher all the sounds that you heard.
- 3 Now draw some of the things that you heard when you were outside.

Activity 4

Look at these pictures. If you were in the pictures, what sounds would you hear?



We use our **ears** to **hear** things such as music and loud bangs.

Some people cannot hear because they are **deaf**. This can make life very hard.

Touch



Activity 5

- 1 Your teacher will give you a bowl of water. Dip your fingers in. How does the water feel? Tell your teacher.



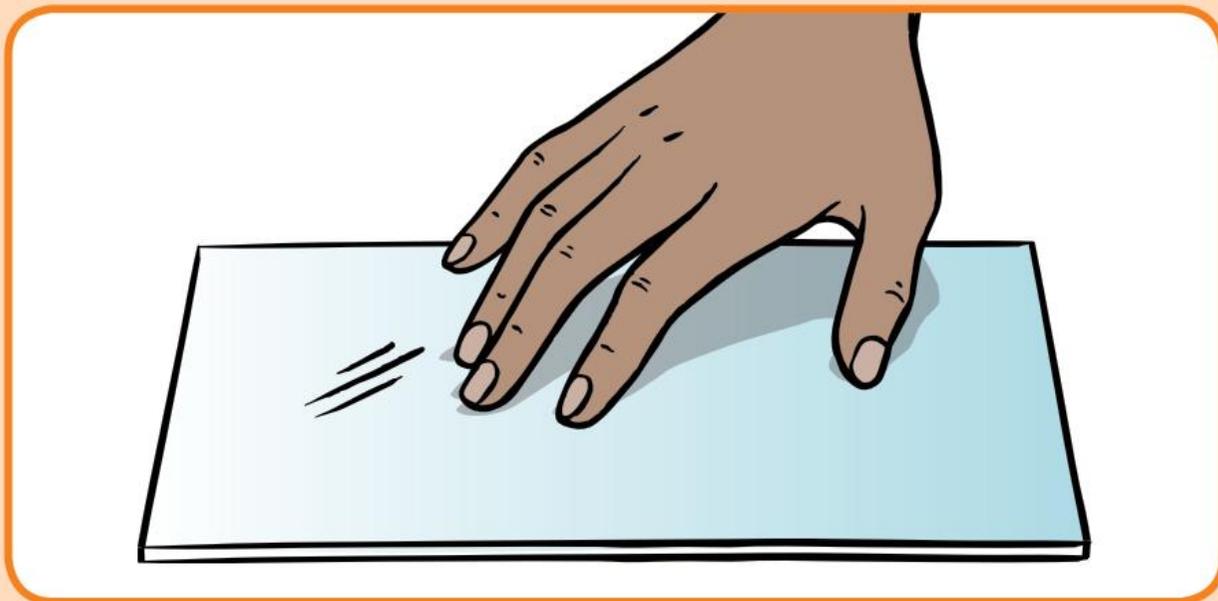
- 2 Your teacher will give you an ice cube to hold. How does it feel? Tell your teacher.



The water feels **cool** or **warm**. The ice cube feels very **cold**.
Our **fingers** can tell us if things are warm or cold.

Activity 6

- 1 Move your fingers over a glass window. How does it feel? Tell your teacher.



- 2 Your teacher will give you a large stone. Move your fingers over the large stone. How does it feel? Tell your teacher.



The glass is **smooth** and the stone is **rough**. We use our fingers to touch things. We can feel if they are smooth or rough.

Activity 7

Your teacher will give you a bag with something in it. Do not look in the bag. Use your fingers and guess what it is. Tell your teacher what is in the bag.



We use our fingers to feel the **shape** of different objects.

Taste



Activity 8

- 1 Your teacher will give you three liquids. Use a spoon to put a little bit of each liquid on to your tongue. Tell your teacher what you taste.
- 2 Which liquid did you like best?



One liquid is **sweet** because it has sugar in it. One is **salty** because it has salt in it, and one is **sour** because it has lime juice in it.

We use our **tongue** to taste things. It can tell us if things are sweet, salty or sour.

What will this boy taste, something sweet, something salty or something sour?



Smell



Activity 9

Put on a blindfold. Your teacher will ask you to smell some things. Tell your teacher and the rest of the class what you smell.



We use our **nose** to **smell** things such as flowers, soap and onions. It can tell us if things smell good or bad. Tell your teacher about some things that smell good and some that smell bad.

Sight or seeing

We use our eyes to see everything around us.



Activity 10



- 1 Go into the schoolyard with your teacher. Use your eyes to look around. You will see lots of different things and lots of different colours.
- 2 Go back into the classroom. Tell your teacher about three things you saw.
- 3 Now draw these three things in your exercise book and colour them.

Some people cannot see because they are **blind**. This can make life very hard.

Activity 11



Work with a friend. Put on a blindfold so that you cannot see. Now ask your friend to tell you where to walk so that you can cross the classroom without hitting desks or chairs. Is this easy to do?

Activity 12

Look at the pictures. Which sense does each organ use? Match each picture with the word for its sense. Remember not to write in the book.



Taste



Hear



Smell



See



Touch

Animal senses

Humans have five senses. Other animals have senses too.



Activity 13

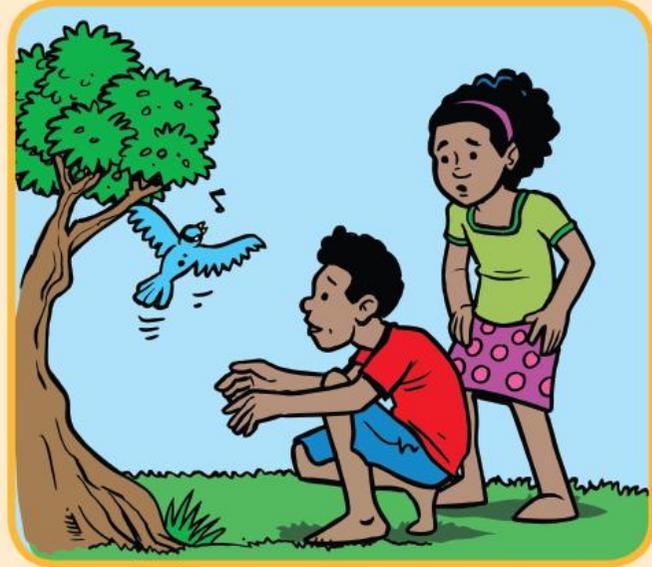
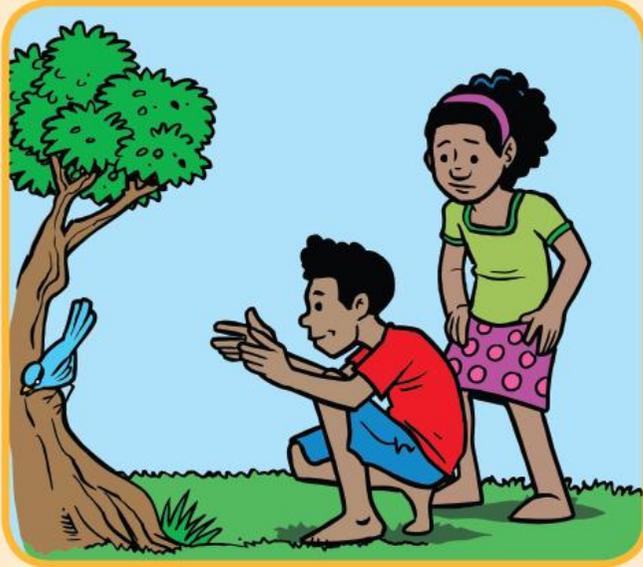
Look at these pictures of animals. Point to their eyes, ears and noses.



An animal's eyes help them to see. Their ears help them to hear. Their nose helps them to smell.

Activity 14

- 1 Go into the schoolyard with your teacher. Try to get near a bird. What happens?



- 2 Try to get near an insect such as a grasshopper. What happens?



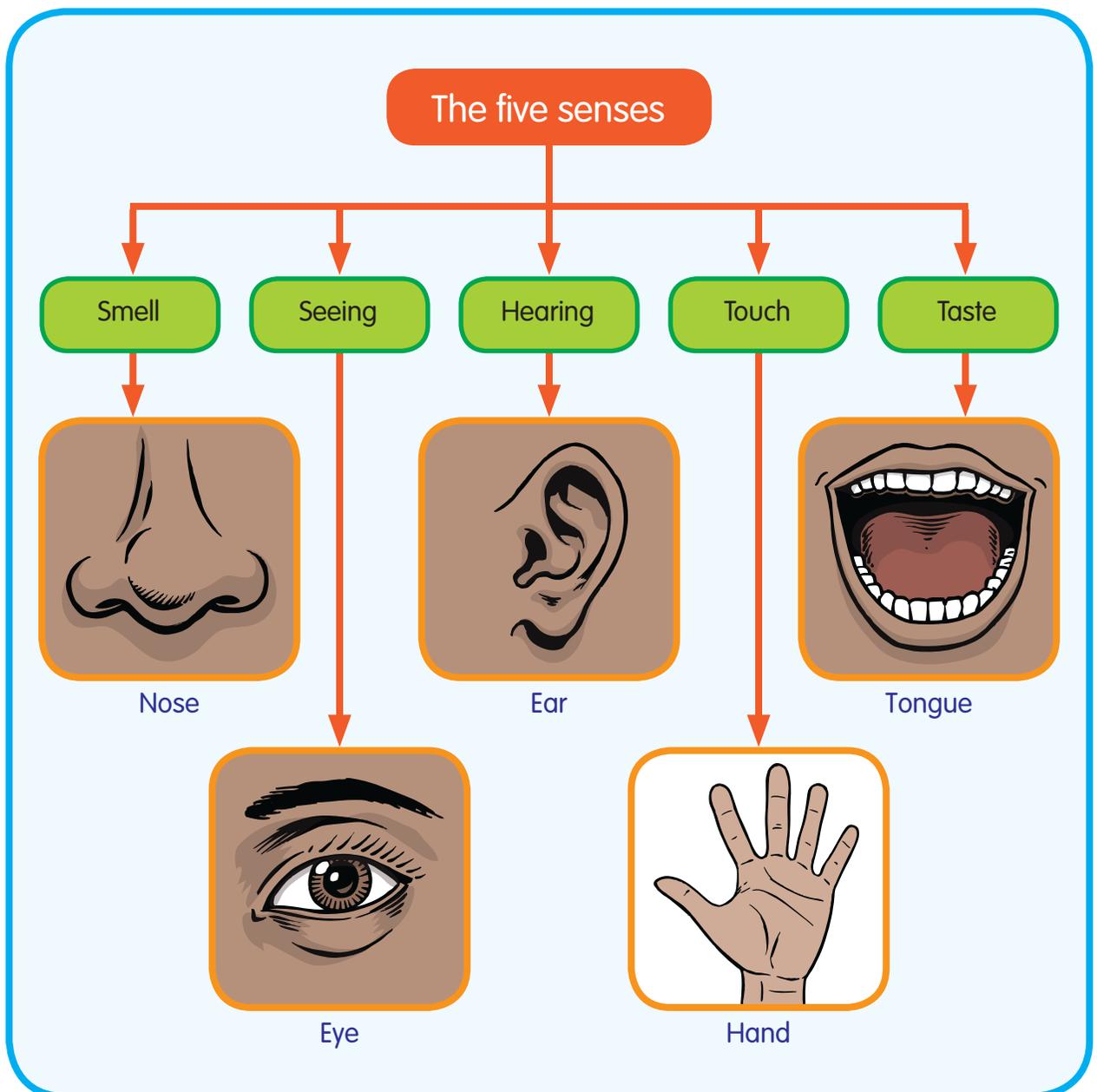
The bird flies away because it can see you and hear you.

The grasshopper jumps away because it can see you and sense you.

Animals use their senses to help them escape from danger.

- 1 We see with our eyes.
- 2 We smell with our nose.
- 3 We hear with our ears.
- 4 We taste with our tongue.
- 5 We touch with our fingers.

Concept map



Copy these sentences into your exercise book. Say the missing word that matches the picture.



1 I see with my _____.



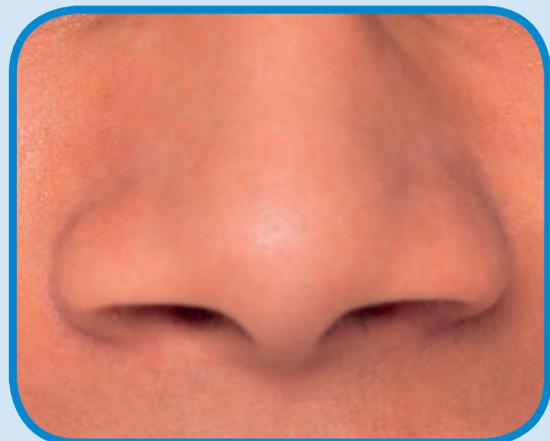
2 I touch with my _____.



4 I hear with my _____.



3 I taste with my _____.



5 I smell with my _____.

Energy

In this chapter, you will:

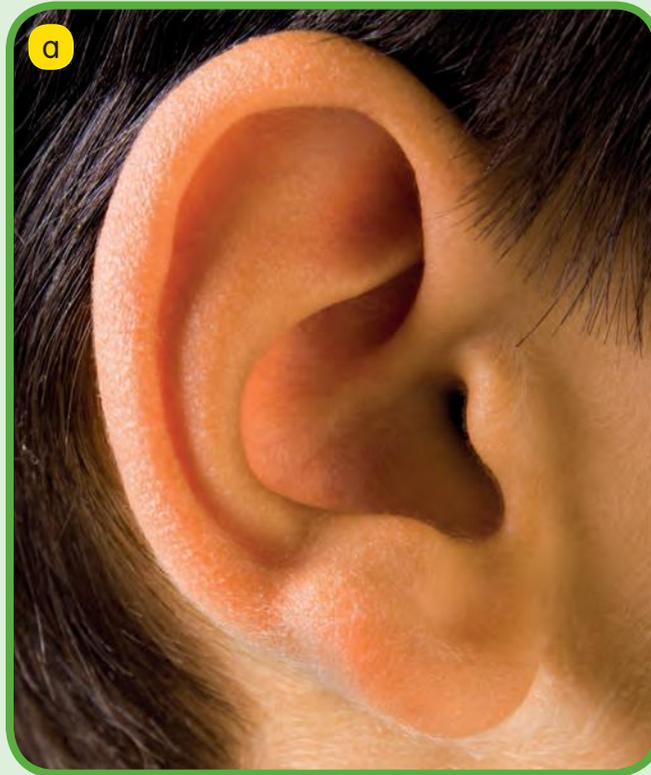
- name the parts of the body we use to see and hear
- name some musical instruments and explain how they make sound
- name one material that does not let light pass through and one that does
- learn that electricity at home can be dangerous
- show what happens to a toy car when you push it gently and when you push it hard.

Seeing and hearing



Activity 1

1 Look at the pictures. Tell your teacher what they show.

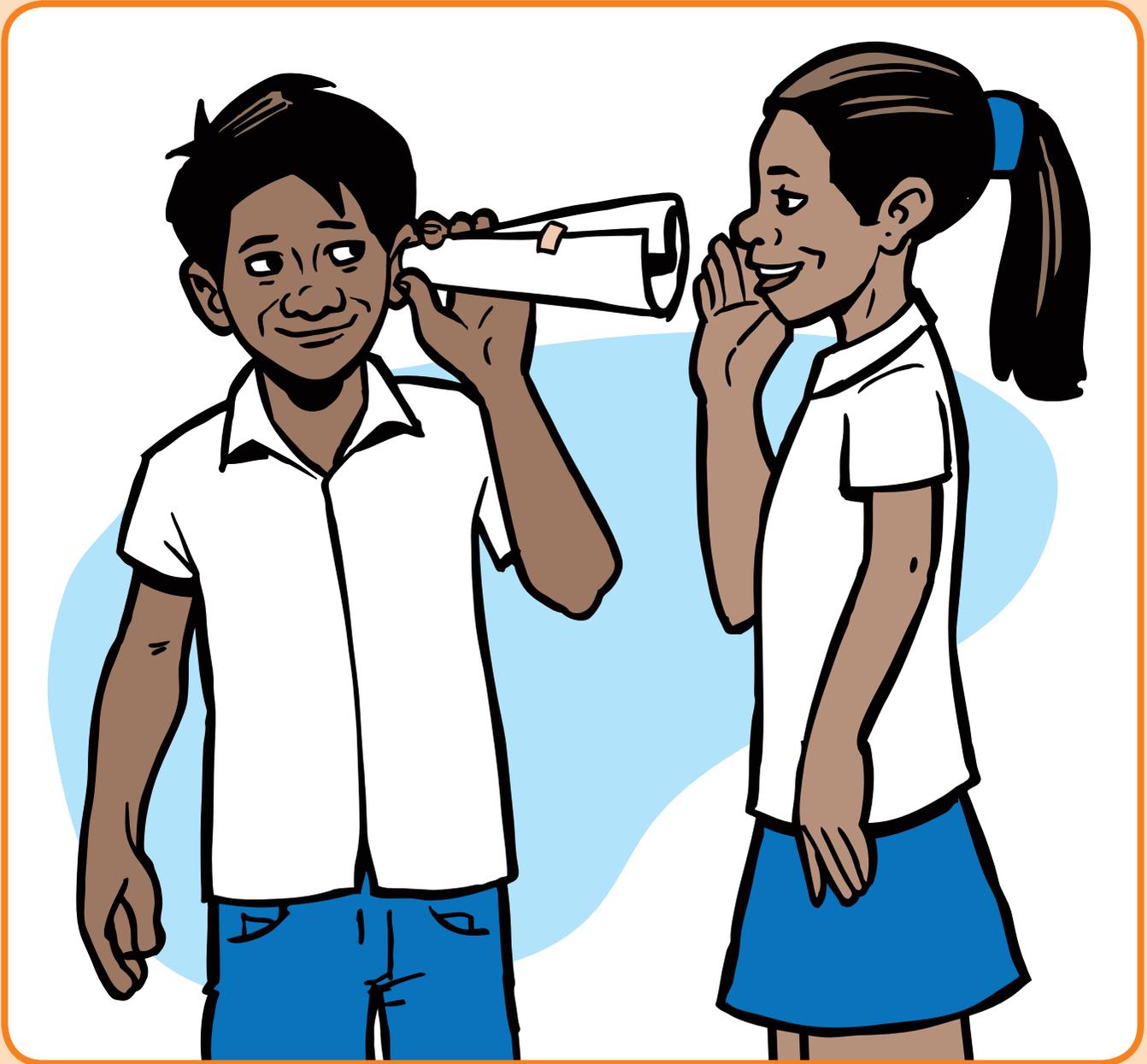


2 Tell your teacher why we need eyes and ears.

Activity 2

Your teacher will help you make an ear trumpet from a sheet of paper.

- 1 Put the trumpet to your ear as in the picture.
- 2 Ask a friend to talk to you. Does the trumpet help you to hear things better?



- 3 Move the trumpet in different directions to hear different sounds.

Activity 3

- 1 Look at the pictures of different animals. Tell your teacher what they are called.

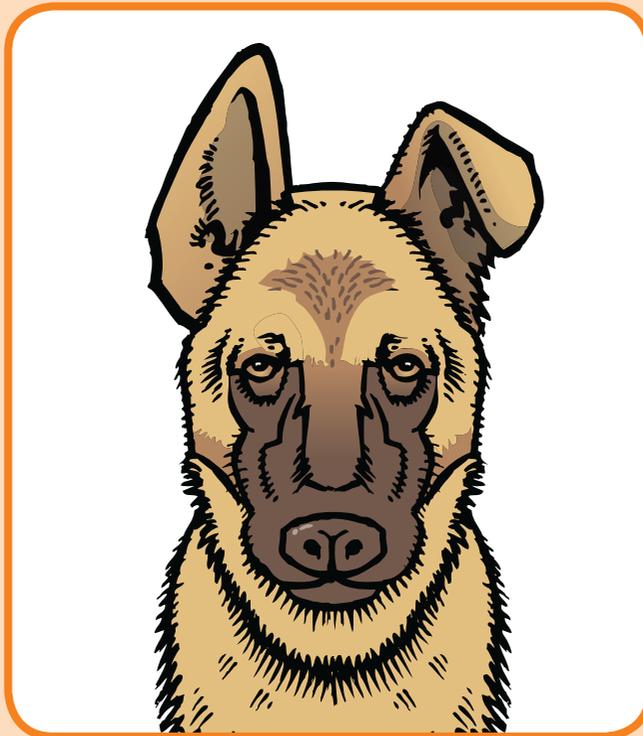
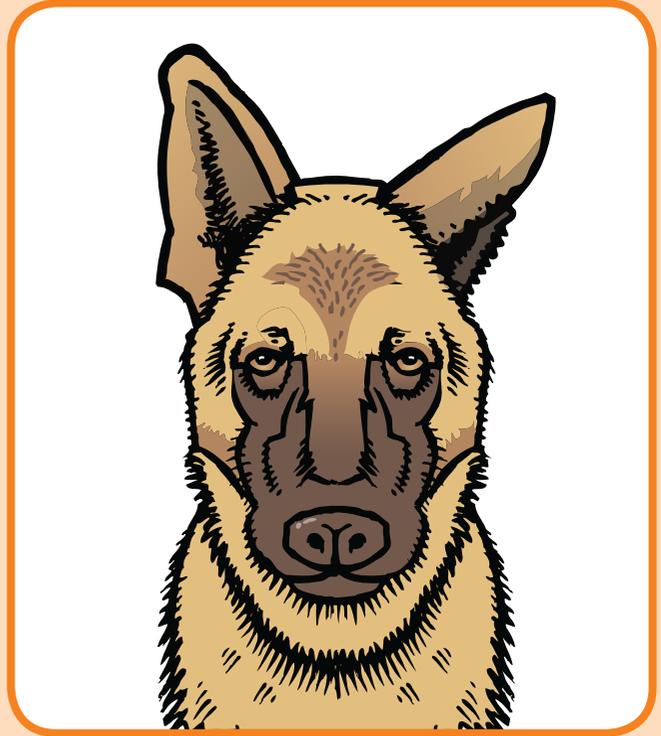
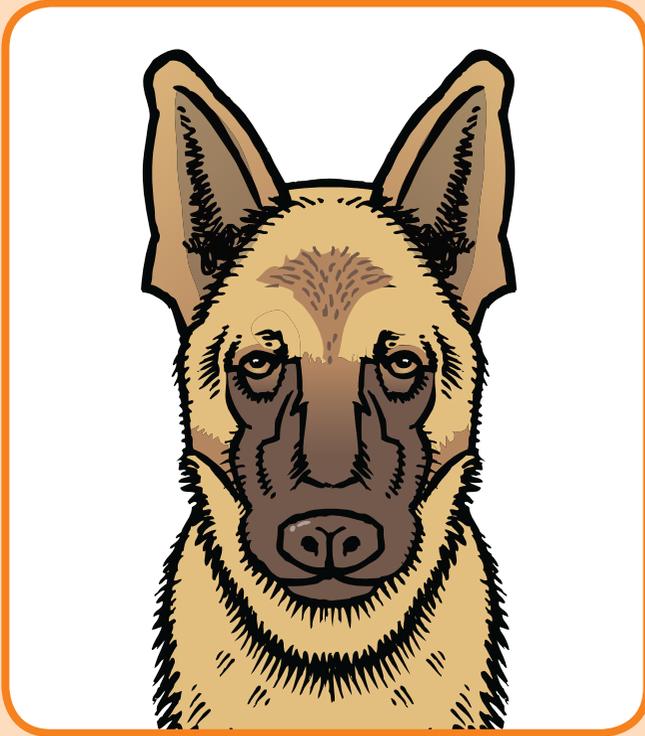


- 2 Look at their ears. How are they different from your ears? Tell your teacher.

These animals have ears of different shapes. They can move their ears so they can hear things better. Many animals can hear much better than humans.

Activity 4

When you are at home, watch a dog or a cat move their ears so that they can hear things better. What did you notice?

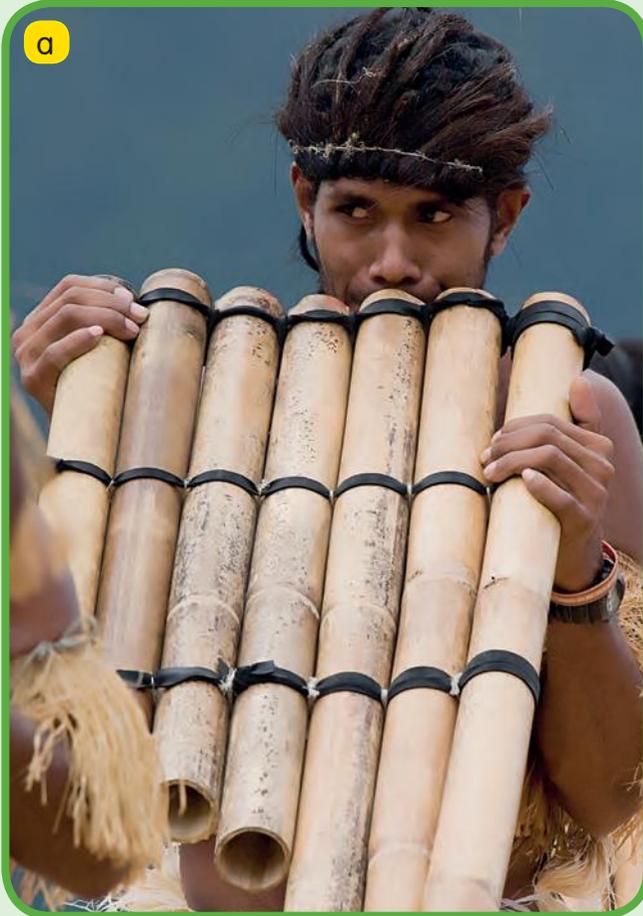


Musical instruments



Activity 5

- 1 Look at the pictures of two musical instruments from the Solomon Islands. Tell your teacher what they are.



- 2 Tell your teacher what you need to do to make a sound with these instruments.

Activity 6



Your teacher will give you some panpipes and a wooden drum. Show a friend how to make sounds with these instruments.

Activity 7

- 1 Your teacher will give you some bottles. Fill them with different amounts of water as in the picture.



- 2 Can you play a tune with this instrument?
- 3 Which instrument in the Solomon Islands is it most like?

Activity 8

- 1 Look at the pictures of musical instruments. Tell your teacher what they are.
- 2 Tell your teacher what you need to do to make a sound with these instruments.



Activity 9

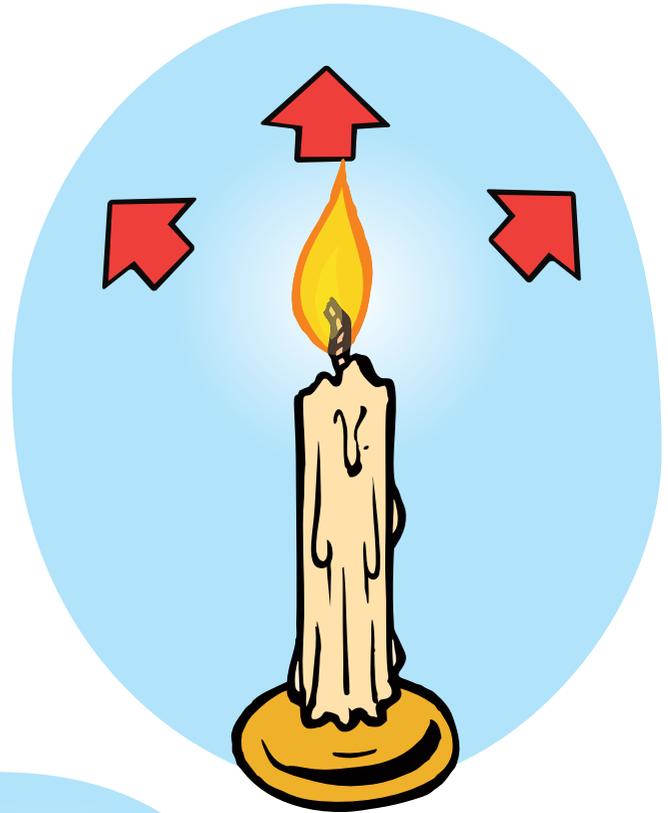
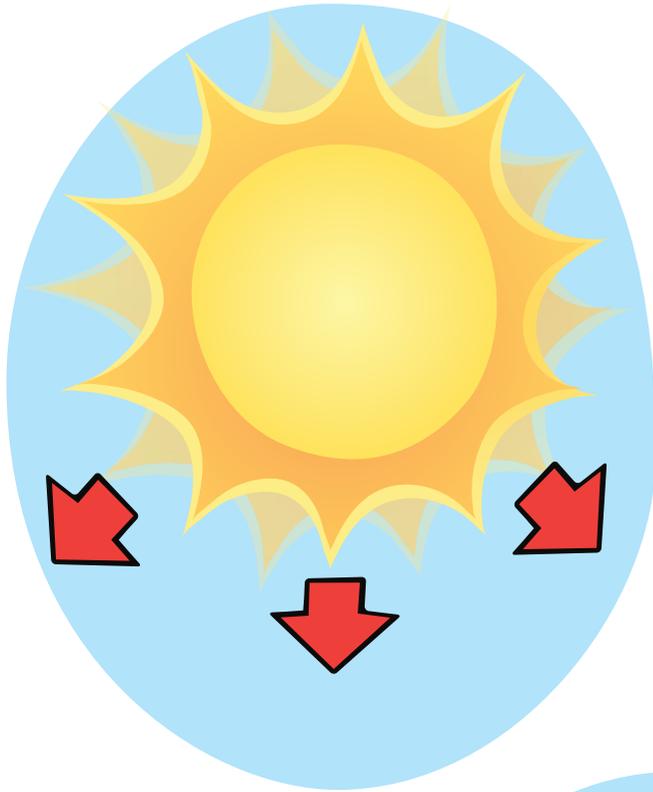
Your teacher will give you a guitar. Show your friends how to make a sound with the guitar.

We play different **instruments** in different ways. We **blow** panpipes, we hit a drum, we **pluck** a guitar string and we **press** a keyboard key.

All these instruments make a good sound. We call this sound **music**. We hear the music with our ears.

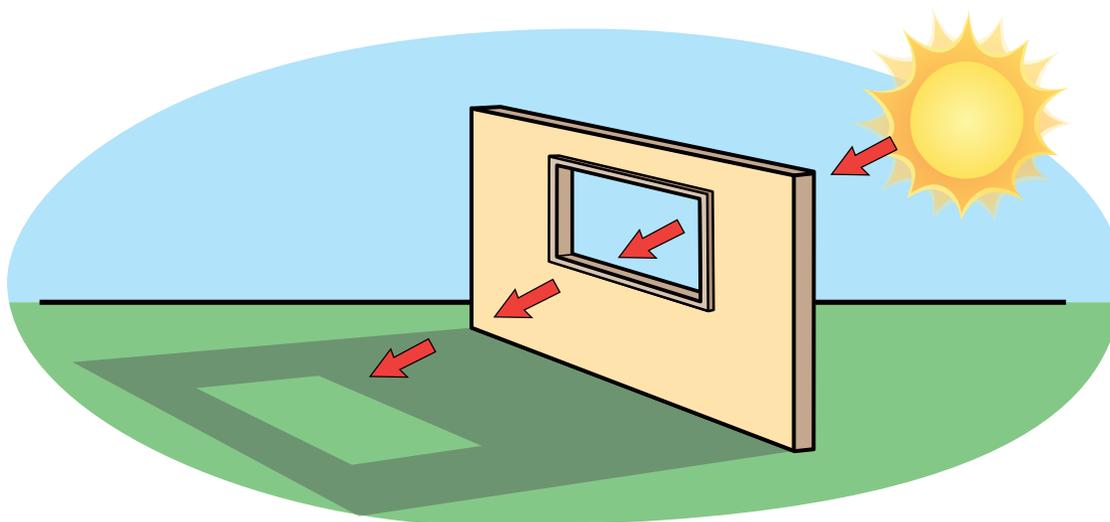
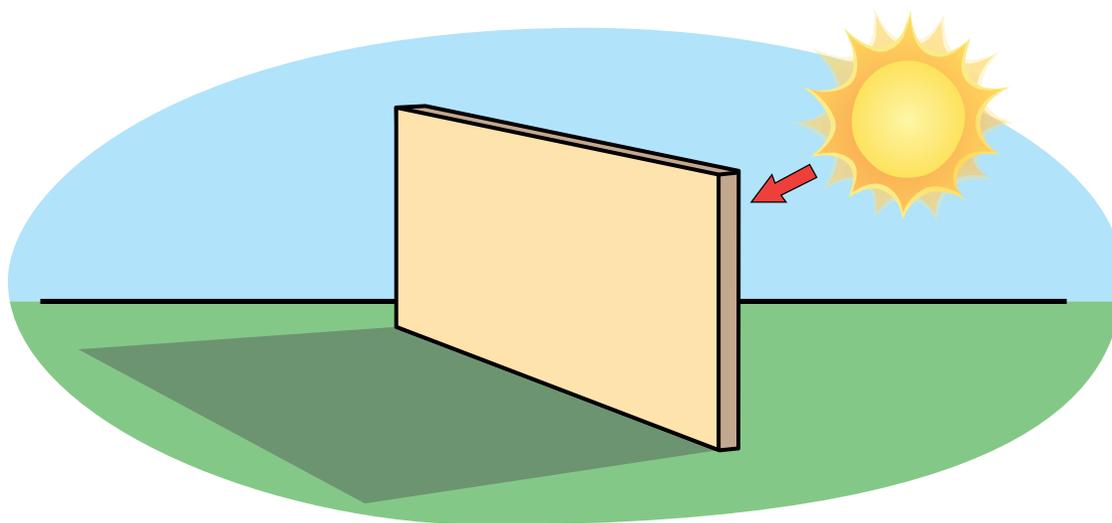
Light

We get light from the Sun and from lamps and candles. We need light to be able to see with our eyes. You will learn much more about light in Chapter 3, but we will also do some light activities in this chapter.



Activity 10

Your teacher will take you around the school. Look for materials that stop light, and materials that let light pass through. Show your teacher a material that stops light and a material that lets light through.

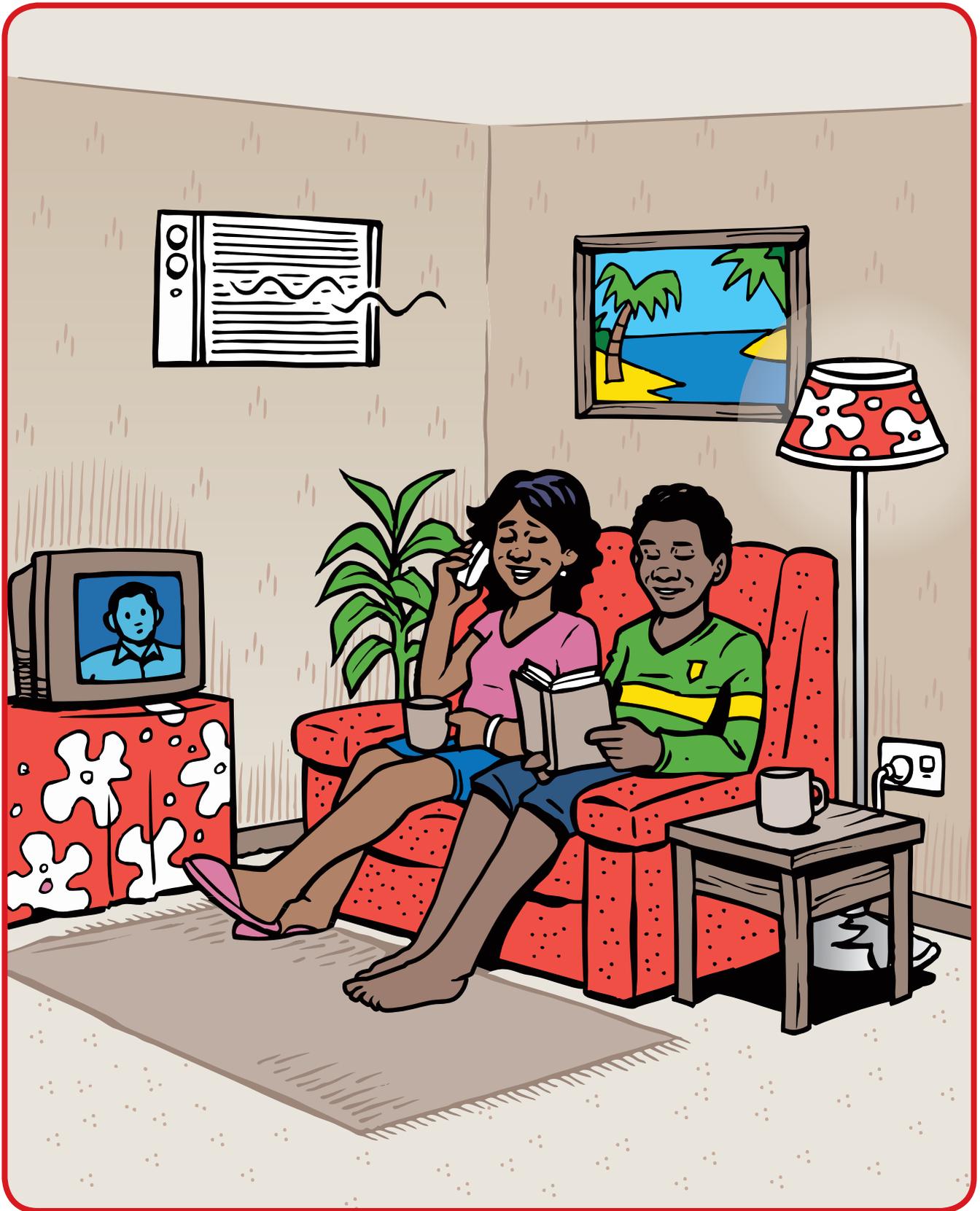


Many materials stop light. Not many materials let light pass through them.

Light can pass through glass, but it cannot pass through a wall. The wall blocks the light and makes a shadow.

Electricity

Many people use electricity all of the time.

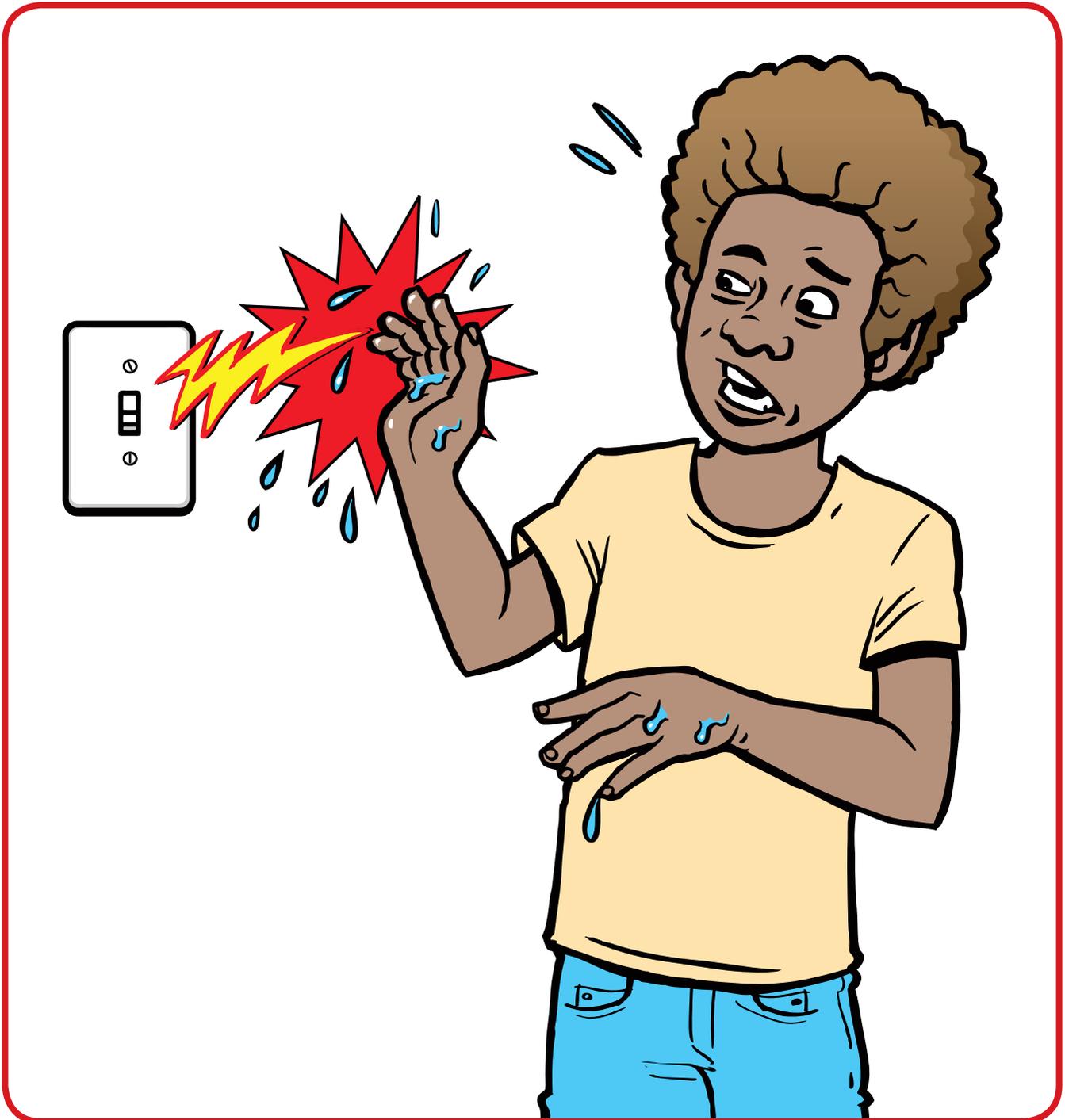


Activity 11



Tell your teacher some things we need electricity for.

Sometimes electricity can be very **dangerous**. You must never touch electric switches when your hands are wet.



Movement energy



Activity 12

Your teacher will give you a toy car. How can you make it move?
If you want the car to go further, what can you do?

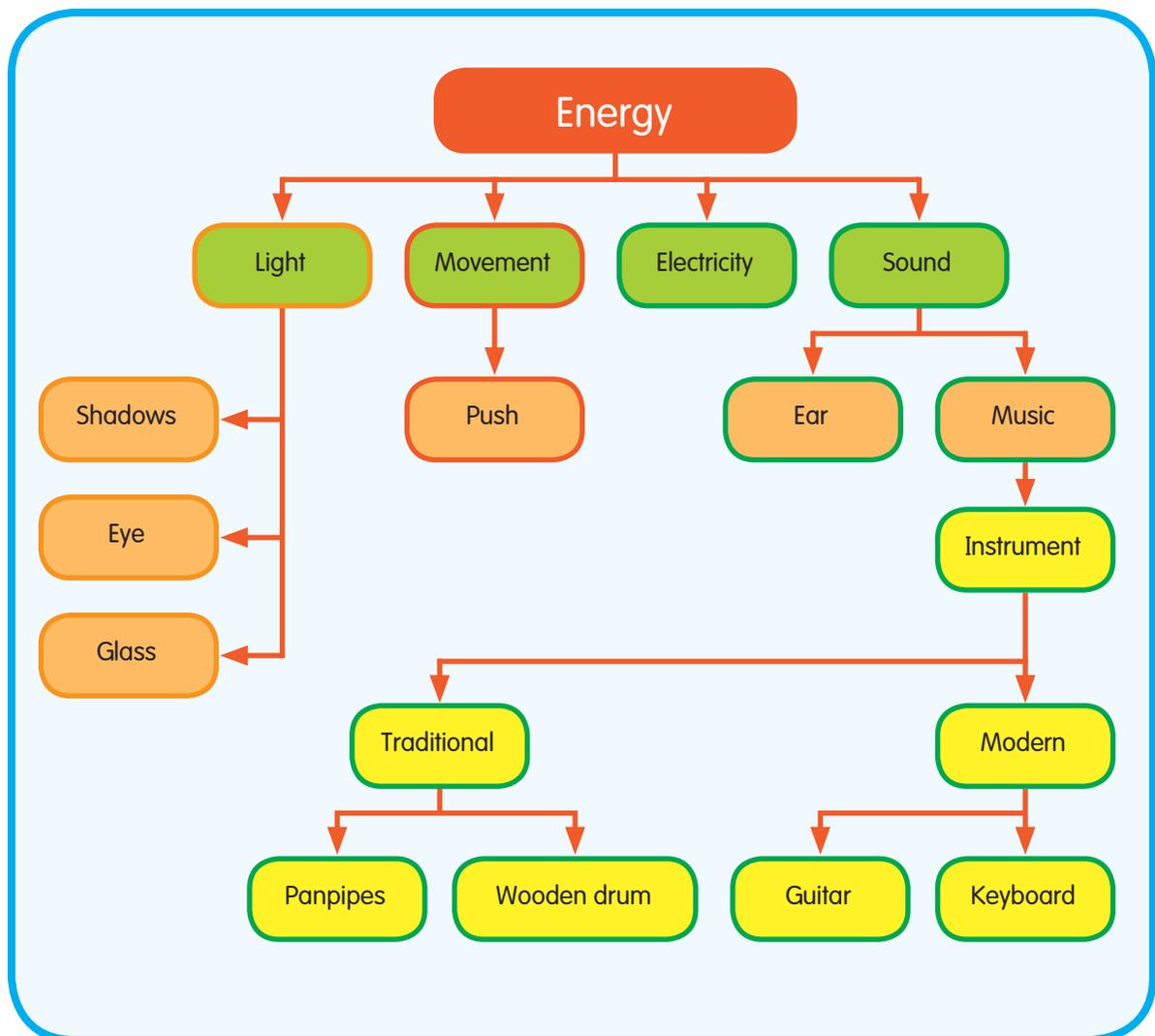


You cause the **movement** of the car.

To move the car you need to push it. The harder you push the car, the further it will go.

- 1 We see with our eyes.
- 2 We need light to see.
- 3 We hear with our ears.
- 4 Some animals can move their ears to hear a sound better.
- 5 Musical instruments make different sounds.
- 6 Glass lets light pass through it.
- 7 A wall stops light and makes a shadow.
- 8 If we push a toy car it will move.

Concept map

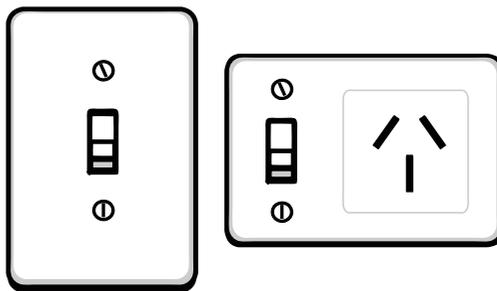


Look at the pictures. Tell your teacher what type of energy is shown.

a



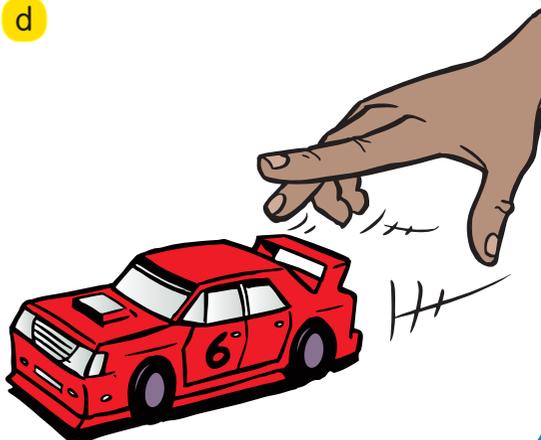
b



c



d



Materials and uses

In this chapter, you will:

- name the materials things are made of
- explain why different materials are used for different things
- investigate different materials.

Materials

There are different materials all around us. Things like wood, metal, plastic, glass, rock, paper and cloth are all materials.

We use different materials for different things. We say that different materials have different **properties**.

Wood is **strong**, glass is **clear** and rock is **hard**. These are all different properties.



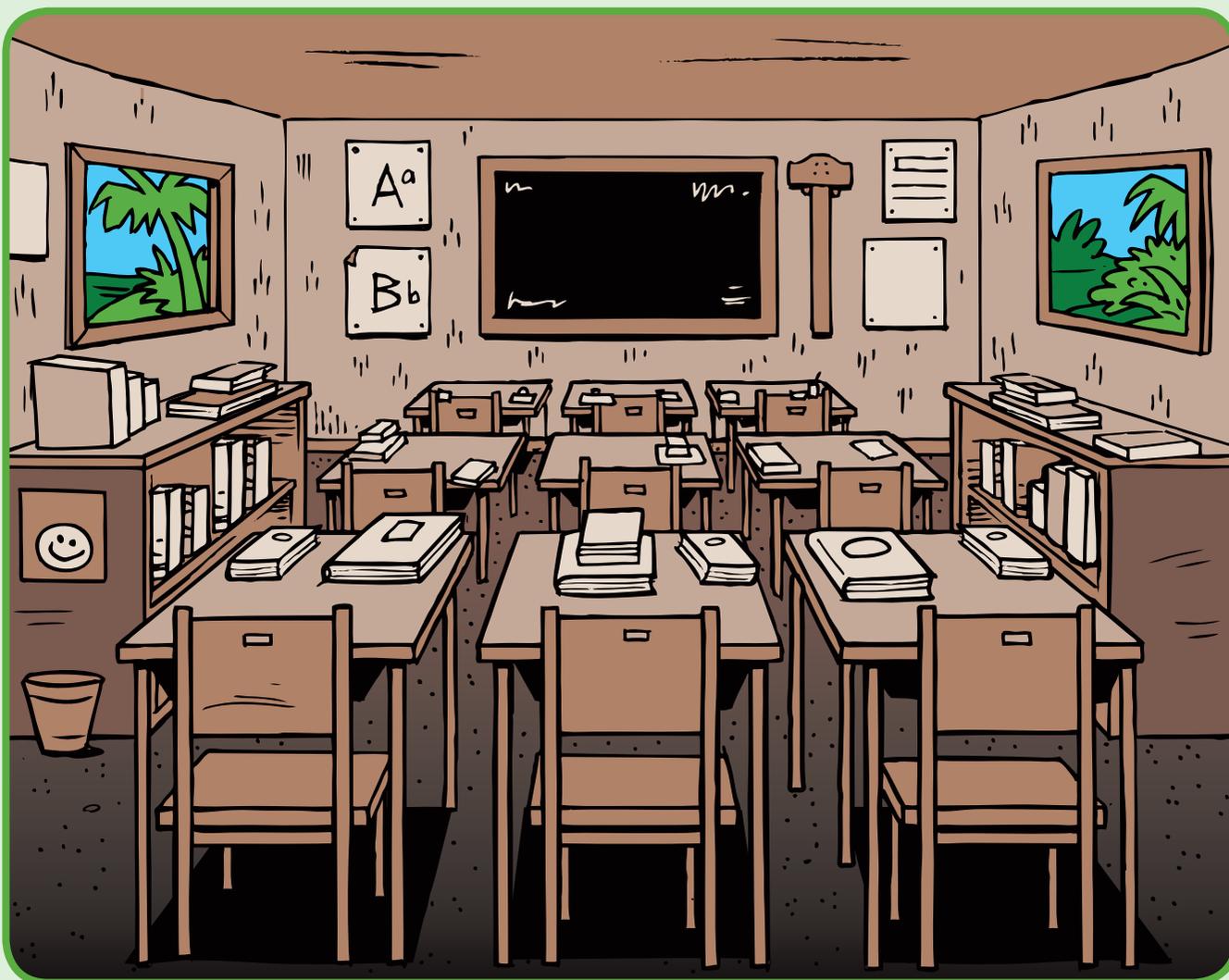
Activity 1

Look at the pictures. Tell your teacher what the objects are and what they are made of.



Activity 2

- 1 Look around the class at all the things you can see. Look at the desks, the chairs, the windows, the floor, the walls and the books. Tell your teacher what they are made of.
- 2 Draw some of these things in your exercise book.



Activity 3

Your teacher will give you some objects. Look at the objects. Tell your teacher what they are and what they are made of.

Materials and uses

We use different materials for different things.



Activity 4

- 1 Look at the pictures. Tell your teacher what the objects are and what they do.
- 2 Tell your teacher what material the objects are made from and why this material was used.



Activity 5

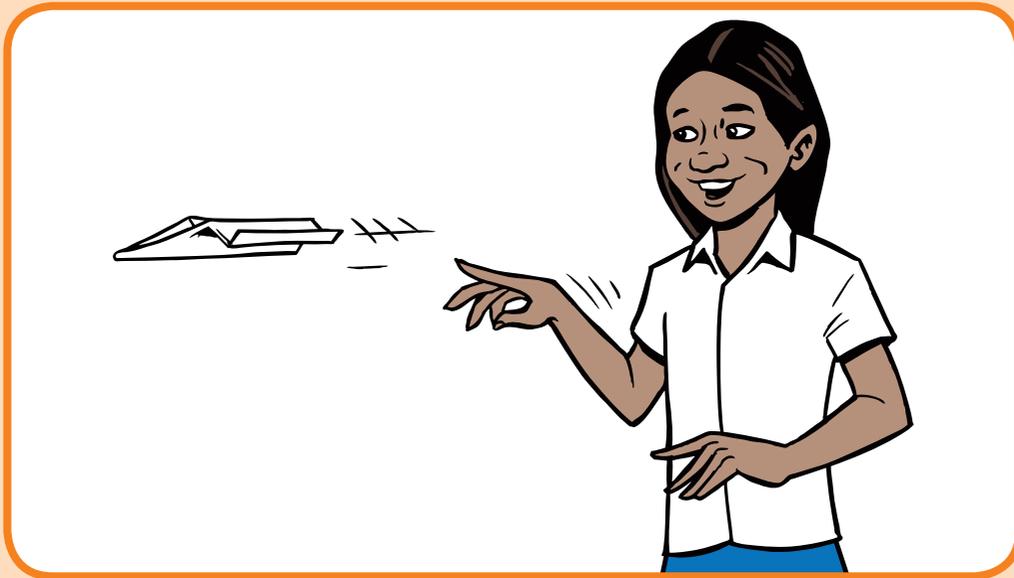
- 1 Why is wood used to build boats? Your teacher will give you some pieces of wood, some stones and a bucket of water. Drop the wood and the stones into the water. What happens?
- 2 Would it be better to build boats with wood or stone? Tell your teacher why one is better than the other.



Wood is good for making **boats** because it **floats**.
Stones do not float because they are **heavy**.

Activity 6

- 1 Your teacher will help you to make a paper plane. Take the plane into the schoolyard and fly it. See how far it will go.
- 2 Why is paper good for making this toy plane? Do we make planes that carry people from paper? Why not?



Paper is good for making a toy **plane** because paper is **light**.



Large planes are made from metal because metal is strong. Planes need very strong engines to make them fly.



Activity 7

- 1 Look at the plastic bucket that your teacher has given your group. What do we use a plastic bucket for?
- 2 Why is plastic good for making a bucket?



Plastic is good for making buckets because it is light and strong and it holds the water.



Activity 8

- 1 Teddy wanted to visit his friend, but it was raining hard. We need to make a coat for Teddy to keep his fur dry. Should we make Teddy's coat from paper or plastic? Let's do some tests to see if paper or plastic would be better. Your teacher will help you.
- 2 Draw a picture of Teddy in his new coat. With your group, make up a story about Teddy visiting his friend in the rain and tell it to your teacher.



Plastic is better for Teddy's new coat because it keeps the water out and it is stronger than paper.

Materials in the Solomon Islands

Activity 9

- 1 Look at this roof. What is it made from?
- 2 Why is this material good for making roofs?



The roof is made from sago palm leaves. Sago palm leaves are good for making roofs because they are strong and light and we can find them everywhere in the Solomon Islands.

Activity 10

- 1 Look at this roof. What is it made from?
- 2 Why is this material good for making roofs?



This roof is metal. Metal is good for making roofs because it is strong and lasts a long time. But it is not like sago palm because we have to pay money to buy metal.

Activity 11

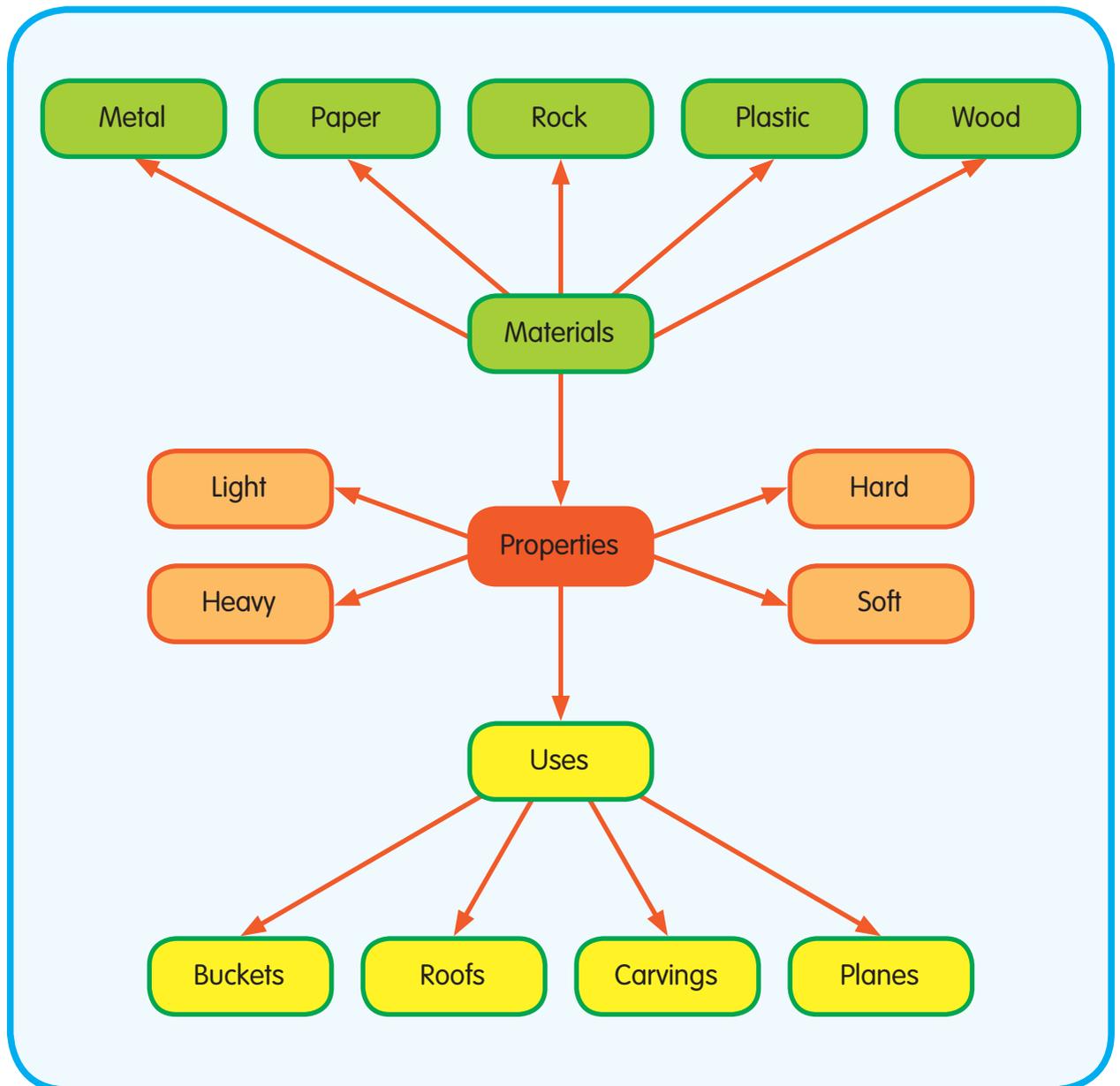
- 1 Look at this carving. What is it made from?
- 2 Why are these materials used to make carvings?



The carving is made from wood and shells. We can carve wood into different shapes and the shells make the carving look nice.

- 1 There are materials everywhere.
- 2 Materials are used to make things.
- 3 We choose materials to make things because of their properties.
- 4 Materials can be hard or soft, heavy or light. These are all properties.

Concept map



Revision

Look at the pictures. Tell your teacher what each thing is, what it is made from and why it is made from that material.



Gardening

In this chapter, you will:

- name three things needed for successful gardening
- learn about adding compost to improve soil
- name three tools used for gardening
- explain how to care for some gardening tools
- name three examples of planting materials.

Good gardening

A garden is a place outdoors for planting food crops and flowers. A good garden needs three things:

- good soil
- water
- sunlight.

Good soil

Good soil is very important for a successful garden.

Good soil has three things mixed together: some **clay**, some **sand** and lots of **humus**. This type of soil is called “loam soil”. It is the best for gardening.



Activity 1



- 1 Collect some soil from the schoolyard or school garden.
- 2 Put the soil in a jar or bottle. Add water and shake it. Then let it stand for two hours.
- 3 After two hours look at the jar. Your teacher will tell you what has happened to the soil. Draw a picture.



The sand and small stones sink to the bottom.

Water

Water is also important for growing plants in a garden.



Activity 2

Your teacher will take you to the school garden and show you how to water the vegetables.



Activity 3

- 1 Your teacher will help you plant some seeds in good soil in a tray.
- 2 Your group should water the seeds a little every day and watch how they grow.
- 3 When they are big enough your teacher will help you move them to the school garden and you can keep watering them.
- 4 Every couple of months you can draw a picture of your plants.



Sunlight

Plants need sunlight to help them make food.



Compost

Compost helps to make soil better for growing. We can make compost and add it to soil.

Activity 4

- 1 Your teacher will help you to make a compost bin for the school garden.
- 2 If you bring in vegetable and fruit scraps each day, you can put them in the bin.
- 3 Mix the compost with the soil to make it better for growing things.



After a long time the vegetables and fruit scraps become compost. You can add newspaper to a compost bin, but never add plastics or metal.

Gardening tools

To garden well, you need good tools like the ones below.



Activity 5

1 Look at the pictures of the tools. Tell your teacher what they are called.



2 What are they used for in the garden?

Activity 6

Your teacher will show you three tools that are important for gardening. Look at them carefully. Tell your teacher the name of each tool and what it is used for.

Care for garden tools

It is important to keep garden tools clean. Each time a tool is used it should be cleaned properly and stored in a dry place. Put some oil on moving parts to stop them from rusting.



Activity 7

- 1 Your teacher will take you to a local garden. The farmer will show you the tools used in the garden and how to care for them.
- 2 When you get back to the classroom, draw a picture of some tools you have seen. Tell your teacher what they are used for.

Growing new plants

We can grow new plants in different ways.

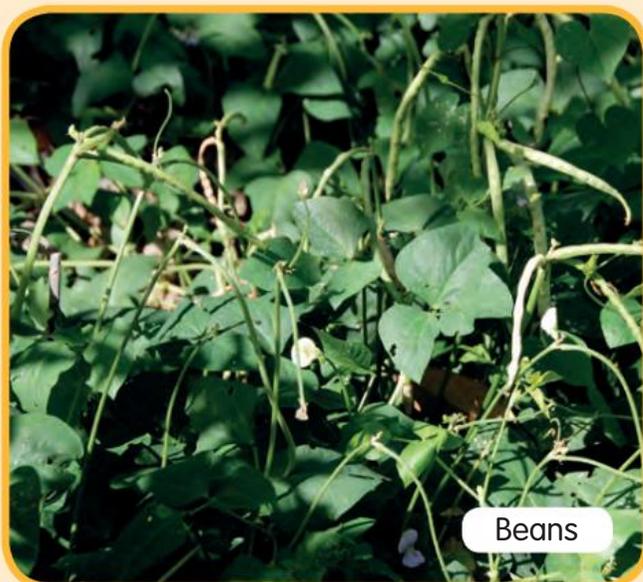
- We can use seeds to grow new plants like corn or beans.
- We can grow new plants, like cassava or sugar cane, from stems.
- We can grow new plants, like kumara, from roots.



Activity 8

- 1 Your teacher will take you to the school garden.
- 2 Each group will plant some peanuts or beans, some cassava and kumara.
- 3 Your teacher will explain how to plant each crop and how to look after it once it has been planted.

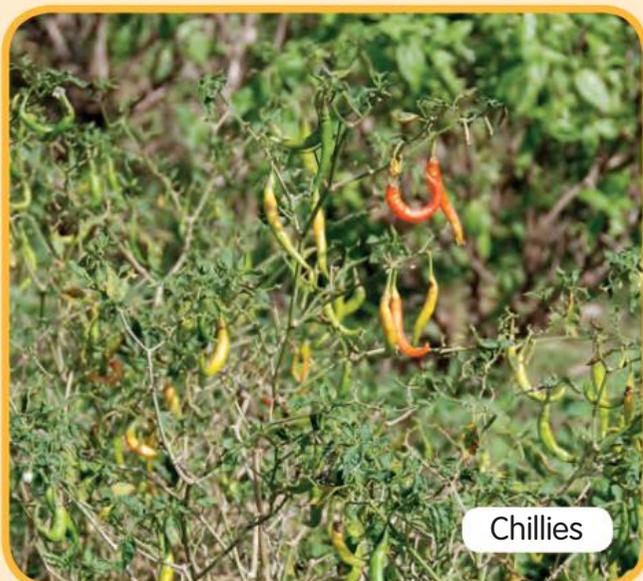
The pictures show good gardens. The vegetables can be sold to make money or eaten to keep you healthy.



Beans



Corn



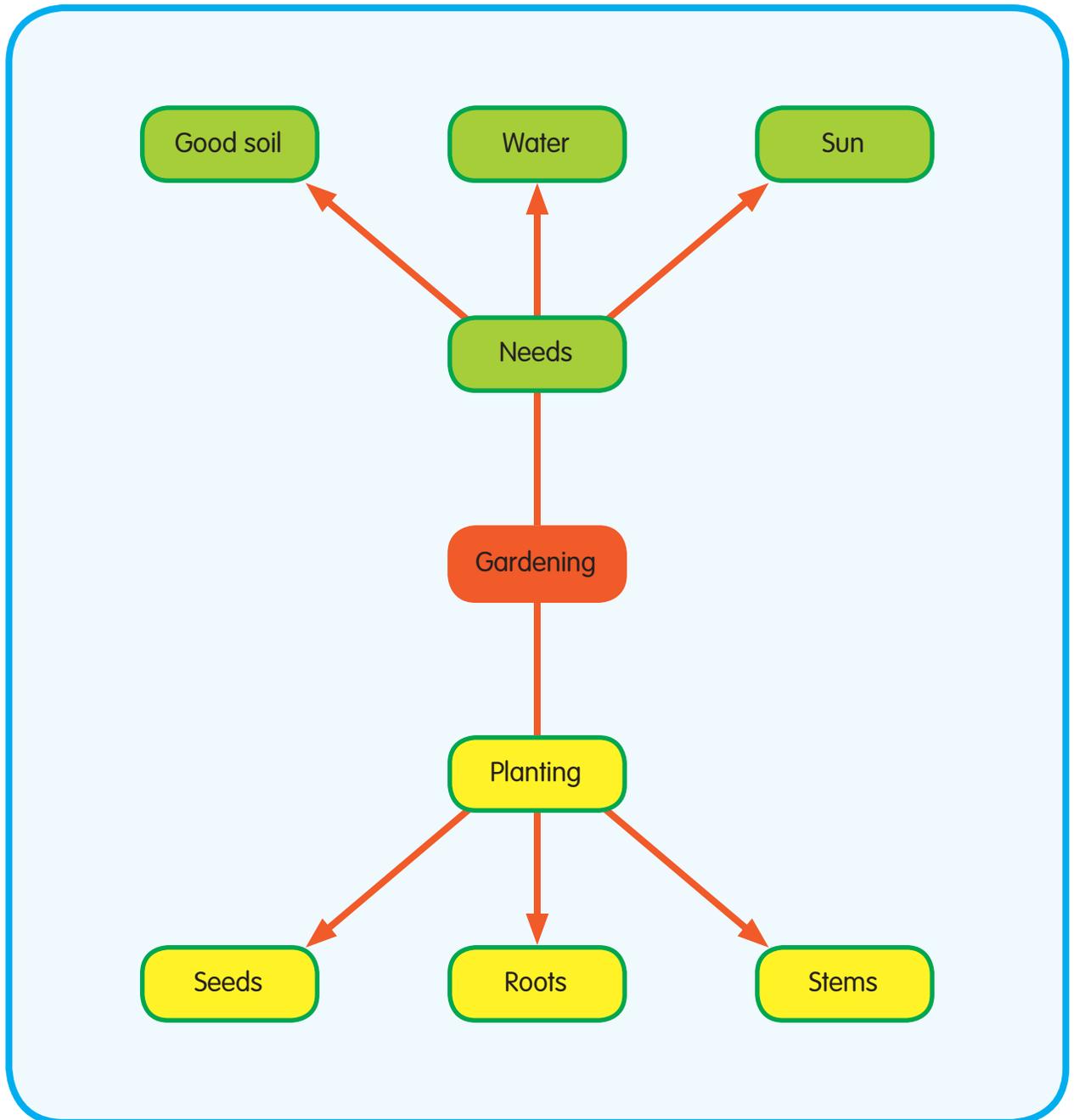
Chillies



Cassava

- 1 Gardens need good soil, water and sunlight to grow.
- 2 We can make the soil better with compost.
- 3 We need to keep garden tools clean.
- 4 We can grow new plants from seeds, stems and roots.

Concept map



Revision

- 1 Tell your teacher some things plants need to grow.
- 2 What can we use to grow new plants?
- 3 Why do we need to clean garden tools?

Shadows

In this chapter, you will:

- explain how shadows change during the day
- use a shadow stick
- describe how the Sun moves.

Shadows

A shadow is made when we stop the sunlight or the light from a torch, a lamp or a candle.



Activity 1

Your teacher will take you outside. If it is sunny you will see your shadow. Look at your shadow.

- 1 Does it have eyes?
- 2 Is it touching your feet?
- 3 What colour is it?



Activity 2

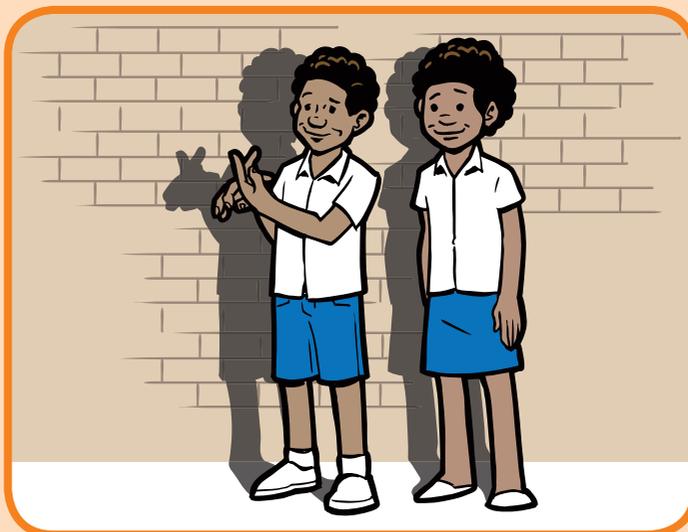
When it is sunny you can go outside and make shadow shapes with your body like the ones in the pictures.





Activity 3

- 1 When it is sunny you can make shadow shapes with your hands. You can also use a torch to do this with a friend.



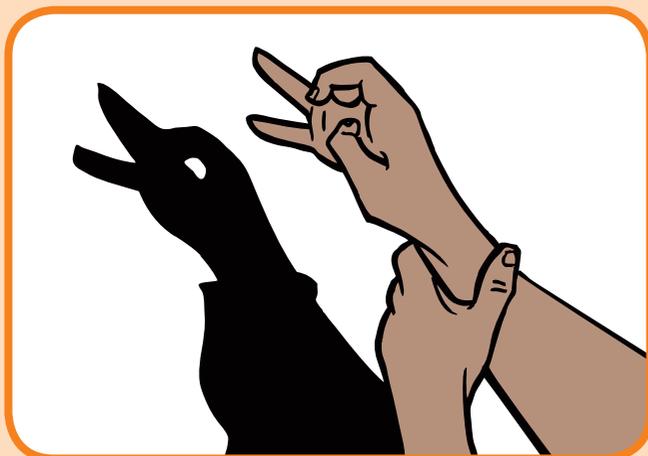
- 2 How many shapes can you make? Try to make some of the shapes below.



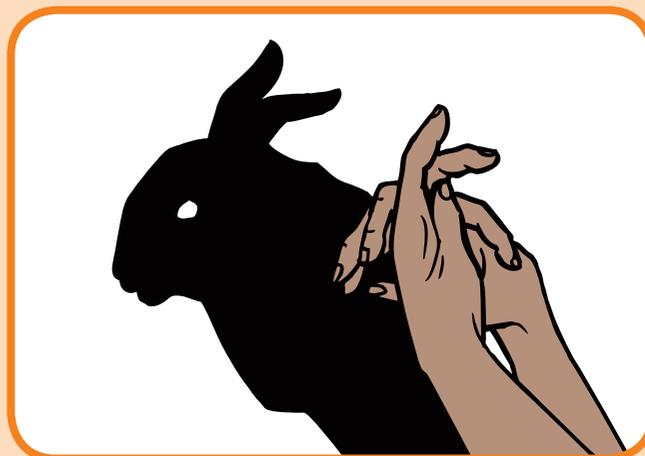
Dog



Eagle



Duck



Rabbit

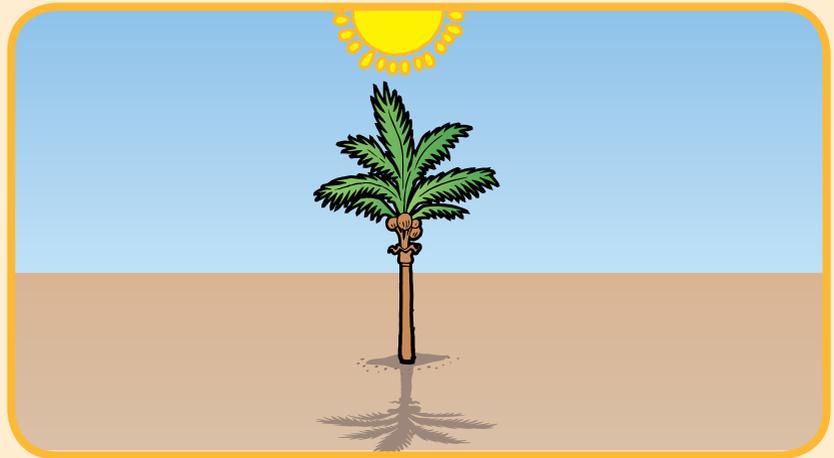
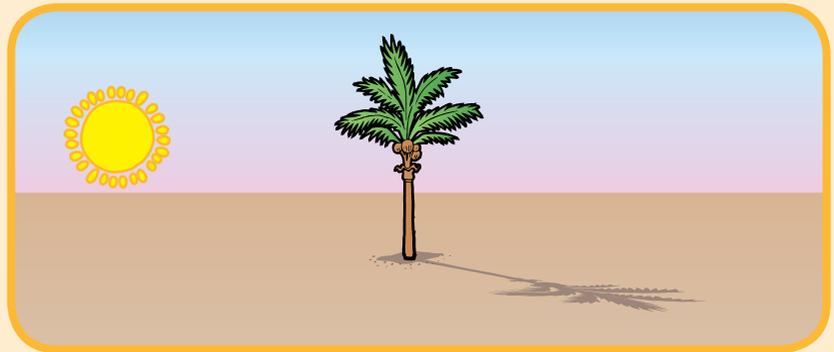
Our shadow changes

Our shadow changes during the day. In the early morning it is long. Then it gets shorter and then longer again during the day.



Activity 4

- 1** In the morning your teacher will take you into the Sun in the schoolyard and give you some chalk. Draw a chalk line around your friend's shadow and then they can draw a line around your shadow. Write your name in your shadow.
- 2** At lunchtime go back to the same spot and draw a line around your shadow. Has it moved and changed shape compared to the outline from earlier in the day?
- 3** In the afternoon return to the same spot and draw another shadow.
- 4** When is your shadow long and when is it short? Do a drawing in your exercise book to show this.

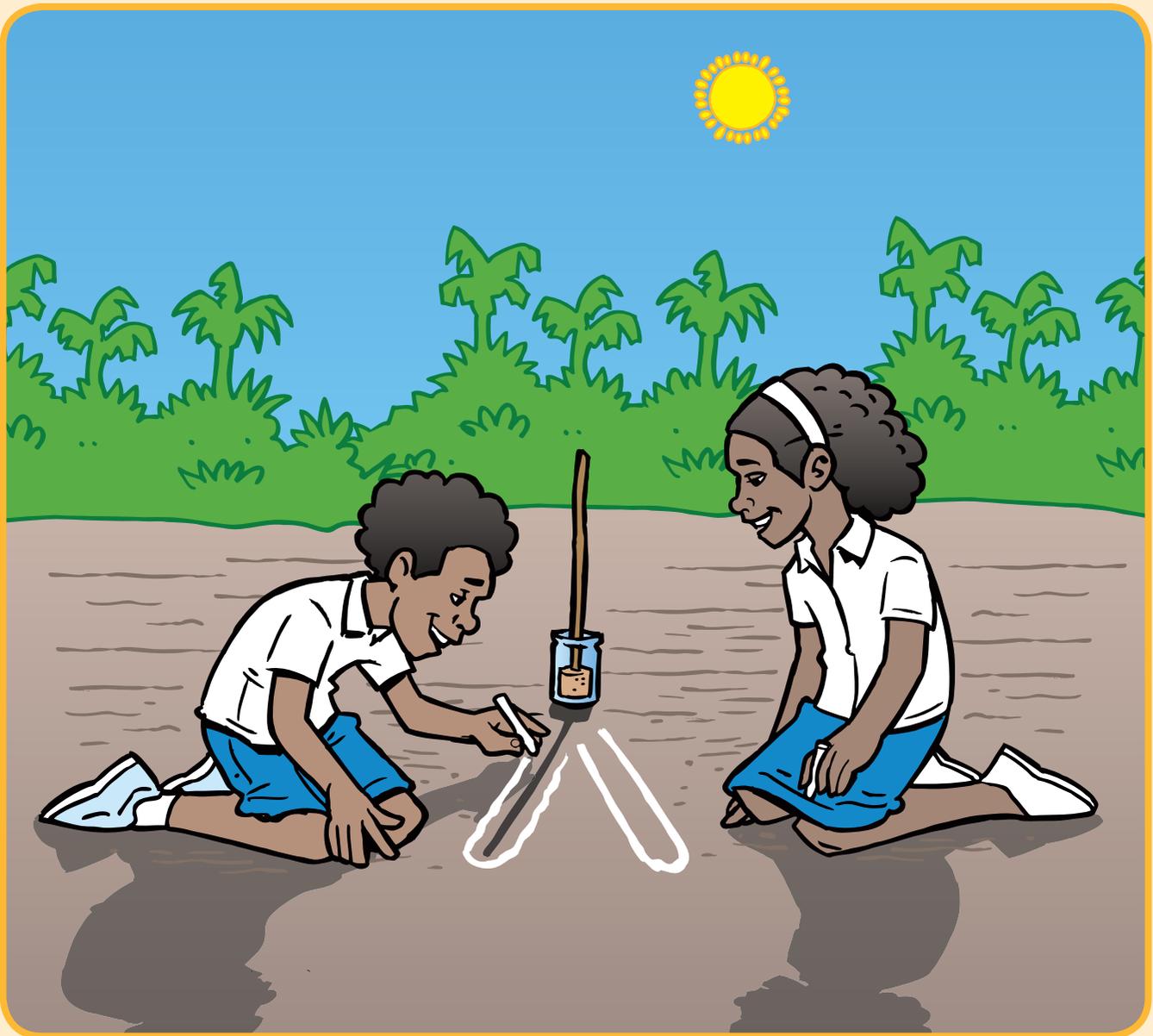


Using a shadow stick

Activity 5



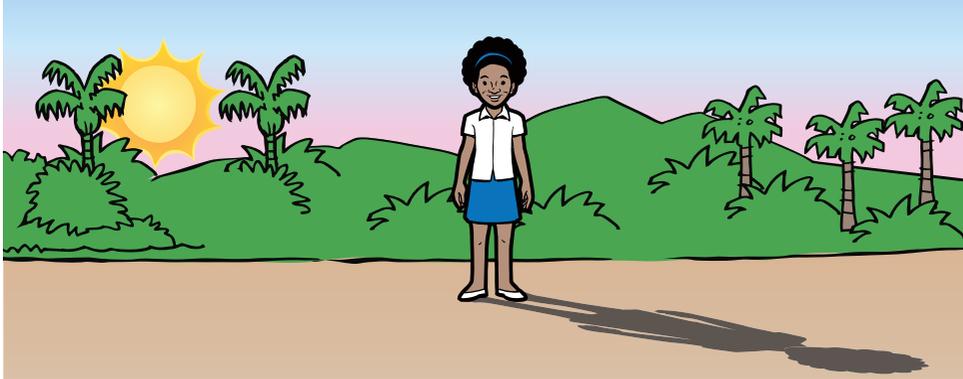
- 1 Your teacher will show you how to make a shadow stick to put in the schoolyard in the Sun.
- 2 Draw a chalk line round the shadow from the stick in the early morning, at lunchtime and in the afternoon.



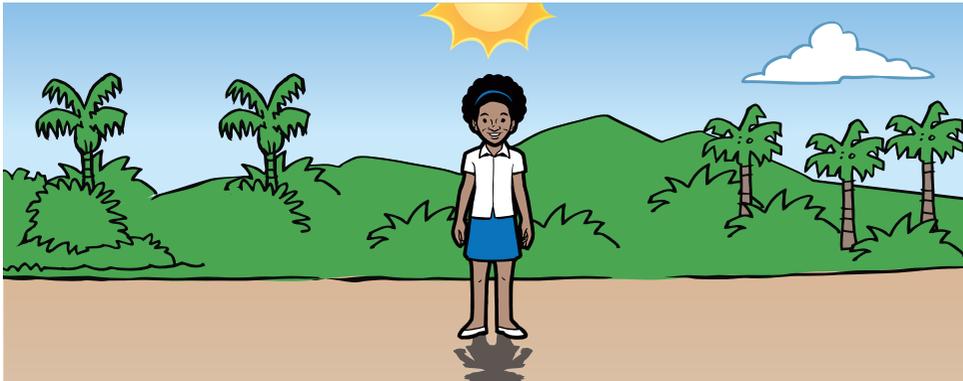
- 3 Does the direction of the shadow change as well as its length?

Here is a poem

My shadow is **long** when the Sun is **low** in the morning.



My shadow is **short** in the middle of the day when the Sun is **high** in the sky.



My shadow is long when the Sun is low in the evening.



At night my shadow goes away.

In what direction does the Sun rise and set?

The Sun rises in the east and sets in the west.

Shadow puppets

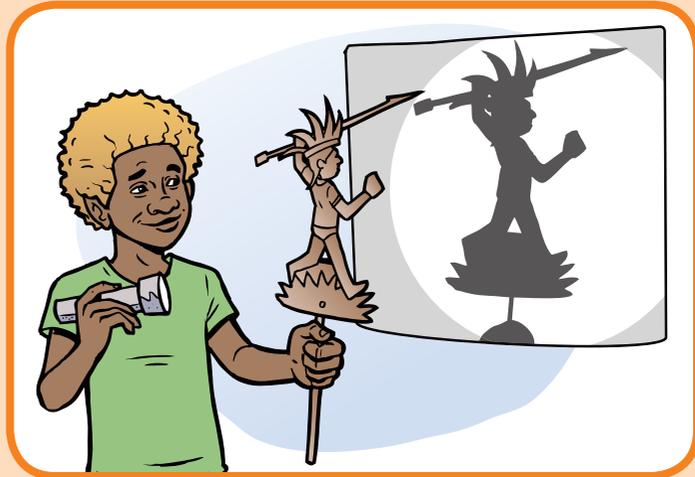
A puppet can be used to make shadows.



Activity 6

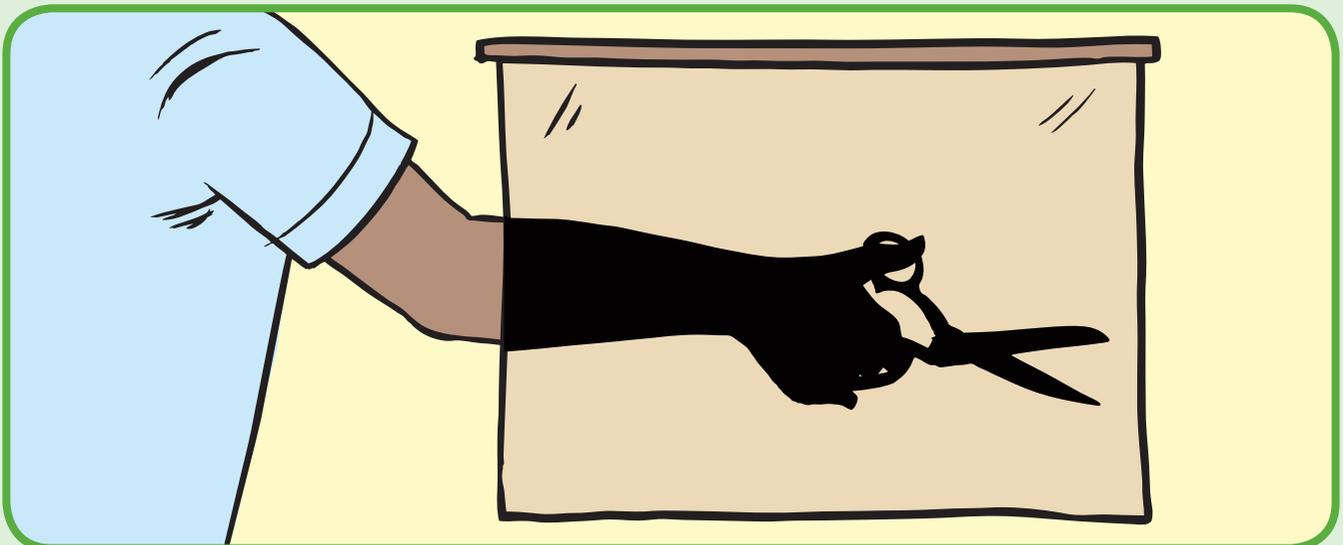
You can do this activity in groups. Your teacher will give you some shadow puppets. Use these puppets and the screen to tell a story to the rest of the class.

You can also use your hands to make puppets for the story.



Activity 7

Your teacher will hold up some things behind a screen. Look at the shadow and tell your teacher what each thing is.

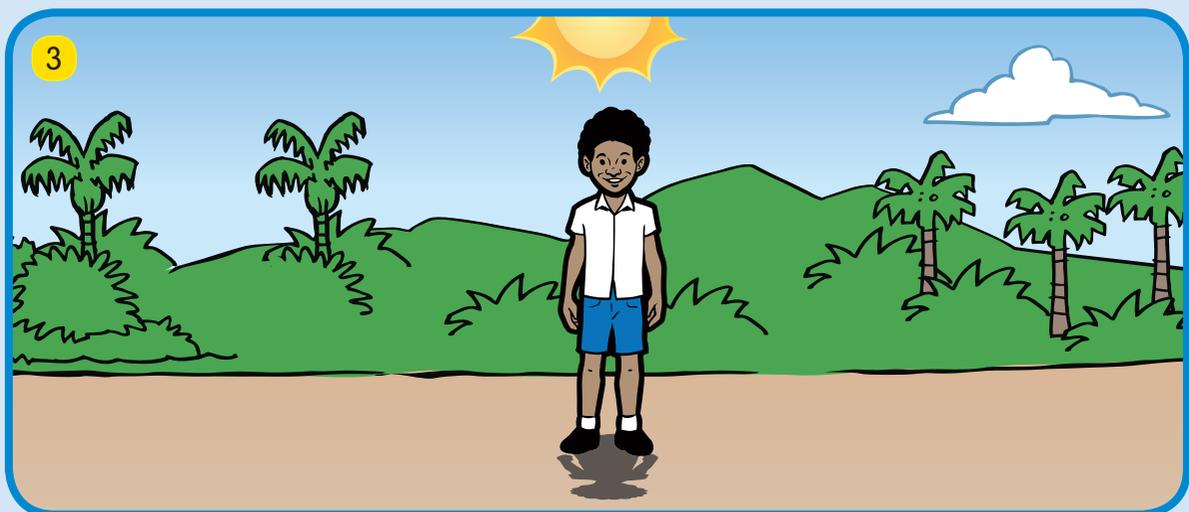
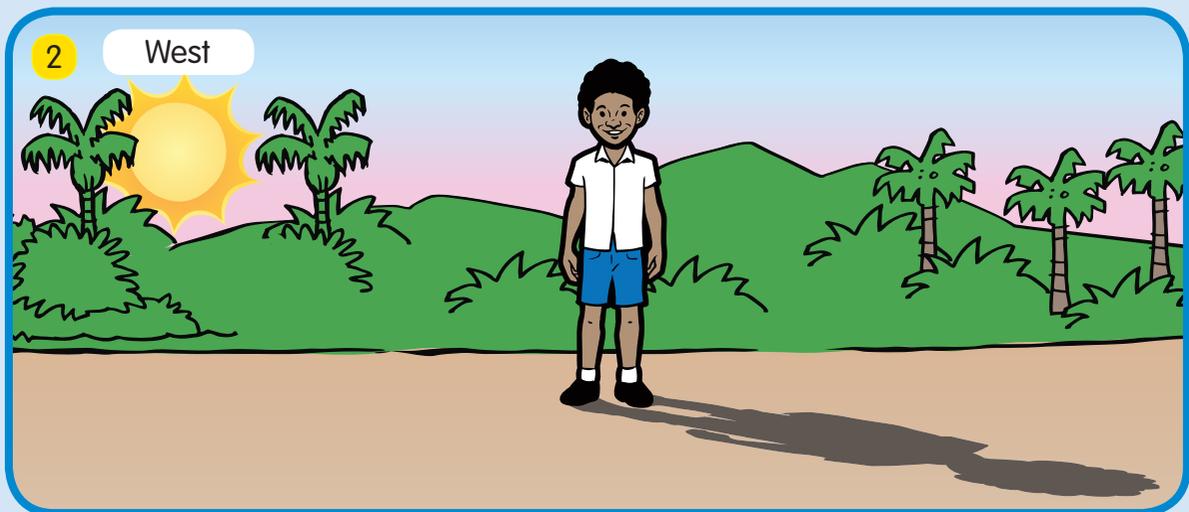


- 1 Shadows are formed when something blocks the light.
- 2 Shadows are different sizes at different times of the day.
- 3 Shadows are longer when the Sun shines in the morning and in the evening.
- 4 Shadows are shorter when the Sun shines at midday.
- 5 The Sun rises in the east and sets in the west.

Concept map



Look at the pictures of the boy and his shadow. Tell your teacher which picture shows morning, evening and the middle of the day.



Glossary

A, B

blind	not able to see
blow	to make air move
boat	an open vehicle, smaller than a ship, that moves on water

C

clay	a kind of soil that hold water easily
clear	can see through
cold	without heat or warmth
compost	a mixture of decaying leaves, vegetables, or manure that is used to improve garden soil
cool	slightly cold; not hot or warm

D

dangerous	likely to cause harm; not safe
deaf	not able to hear

E

ear	an organ of the body used for hearing
electricity	a form of energy which travels through wires
eye	an organ of the body used for seeing

F, G

fingers	the five long parts at the end of the hand
float	to sit on the surface of a liquid without sinking

H

hard	not soft; solid
hear	to receive sound with the ears
heavy	having much weight
high	reaching up a great distance
humus	a material that is made up of partly decayed leaves and plants; humus adds nutrients to soil and helps it hold water

I, J, K

instrument (musical)	a device used to produce musical notes
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L

light	the form of energy that makes it possible for the eye to see; the Sun produces light
long	covering a great distance or time
low	close to the ground

M

movement	a motion or way of moving
music	pleasant sounds made by voices or instruments

N

nose	the organ of the body that controls breathing and smelling. The nose is in the middle of the face
------	---

O

object	anything that has shape or form and can be seen or touched
--------	--

P, Q

plane

a machine that is heavier than air and that can fly; it has wings and engines

pluck

to play on by pulling and letting go

press

to put pressure on something

properties

characteristics or features

puppet

toy

R

roof

the surface or covering on the top of a building

rough

not smooth

S

salty

having the taste of salt

sand

tiny, loose grains of ground rock such as you can see on beaches

see

to use your eyes and receive image

senses

any of five ways to experience your environment; the senses are touch, smell, taste, sight and hearing

shadow

the dark image on a surface caused by something that blocks light from the Sun

shape

the form of the outer edge of an object

short

not long in size or time

smell

to sense something by means of the nose

smooth

not rough; even

soil

the top layer of the earth's surface; dirt

sour

having a sharp taste caused by acid. Lemons, vinegar, and yogurt are some things that are sour

strong difficult to break or damage
sunlight the light of the Sun; sunshine
sweet having a taste like that of sugar

T, U, V

taste to tell the flavour of something by putting it onto your tongue

tongue the organ in the mouth used for tasting and swallowing and also in speaking

tools instruments such as a hammer that are usually held with the hands; tools are used for doing work

touch to put one's hand or fingers on something in order to feel it

W, X, Y, Z

warm having some heat; not cold

Solomon Islands Primary Science

LEARNER'S RESOURCE BOOK Year 2

Science is an exciting subject. At primary level, it is also very enjoyable. The *Solomon Islands Primary Science Year 2 Learner's Resource Book* is filled with engaging activities supported by colourful illustrations and photos that enable learners to discover and understand the physical and living world.

This Learner's Resource Book is one of a series for Solomon Islands Primary Science for Years 1–6. The series helps learners to achieve the *Key Learning Outcomes of the Primary Science Syllabus (2008)* and was developed during the Solomon Islands school curriculum reform from 2005 to 2013. The books are designed to help learners to develop their understanding of scientific concepts in an interesting and engaging way. The series also incorporates Solomon Islands indigenous knowledge and understanding of the natural world.

The Ministry of Education's Key Learning Objectives are addressed in many of the activities. Hands-on investigations allow learners to explore their physical and living world using everyday materials, and to learn about key scientific concepts, skills and understanding, as well as to explore the scientific way of working.

This Learner's Resource Book will help learners to gain knowledge, understanding and skills from their environment and introduces them to the language of science and to new ideas.

