Nelson International Science

Student Book 2

Anthony Russell

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Contents

Key to symbols

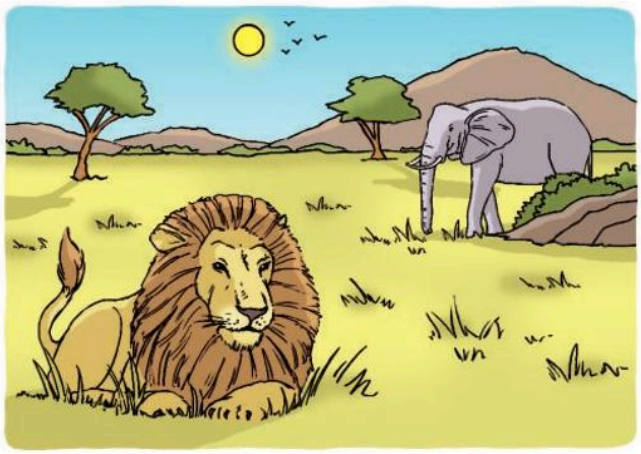
 Observe

 Discuss

 Write

Environments and living things

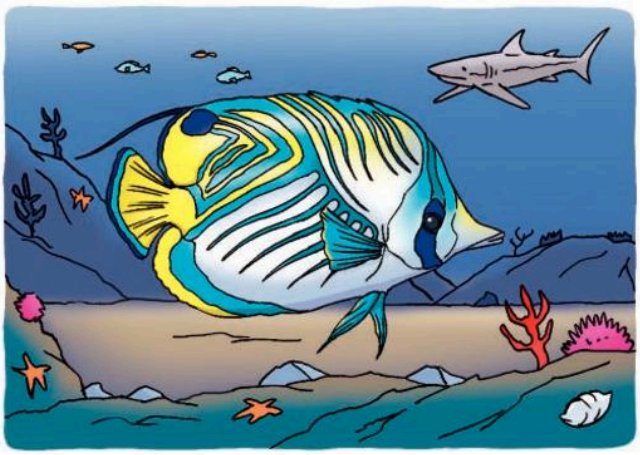
The **environment** is the surroundings, the place, in which plants and **animals** live. Each environment has things that are special to it.



(a) Some are hot and dry, such as the African grassland.

(b) Some are hot and wet, such as the rain forest.

(c) Others are cold and wet, such as the mountainside.



(d) Environments are also found under water, such as in the sea.

Activity 1

You will need: paper (or Workbook) and a pen or pencil.

1 **Look at the pictures of the four different environments.**

2 **Compare them.**

a What is the same in all the environments?

b What is different about each environment? Talk about this in a group.

c Record what you can see in a table like the one here.

Write a ✓ for 'yes' and a ✗ for 'no'.
Environment a has been done for you.

What can you see?

	Trees	Animals	Rocks	Grass	Water
Environment a	✓	✓	✓	✓	✗
Environment b					
Environment c					
Environment d					

3 **Share your group's ideas with the class.**

There are many different places on Earth, each with its own living things.

Lots of things affect the plants and animals in an environment.

The **temperature** – is it hot or cold?

The soil – is it good quality or poor quality?

The water – is there lots of it or only a little?

Is there **shelter** from danger, and plenty of food?

The **differences** in the living things found in each environment are **caused** by the differences in the environments.

Activity 2

You will need: paper (or Workbook) and a pen or pencil.

1 **Choose two environments close to your school to explore.**

They must be different.

2 Complete a table like the one in Activity 1. Write a ✓ for 'yes' and a ✗ for 'no'.

What can you see?

	Trees	Animals	Rocks	Grass	Water	Other
Environment 1						
Environment 2						

3 Go outside and take your table with you. Record what you **observe** of your first environment.

a Record what you see, smell, hear and touch.

b Can you see animals and plants? Write down their names and make drawings of them.

> **Remember** that 'observe' means using several **senses**, not just sight.

4 Now go out and look at your second environment. Record what you observe of your second environment in the same way.

5 Now compare the environments.

a What is the same?

b What is different?

Continue over the page

6 **In class, look at your completed table. These are your results.**

a Talk about them in a group.

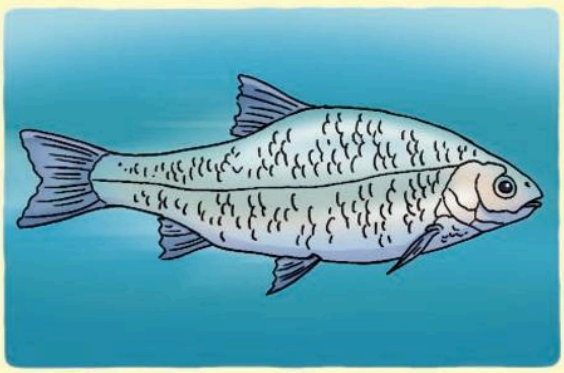
b Why were some things different? Try to explain.

7 **Share your results and ideas with the class.**

8 **Now copy and complete these sentences. The words you need are below.**

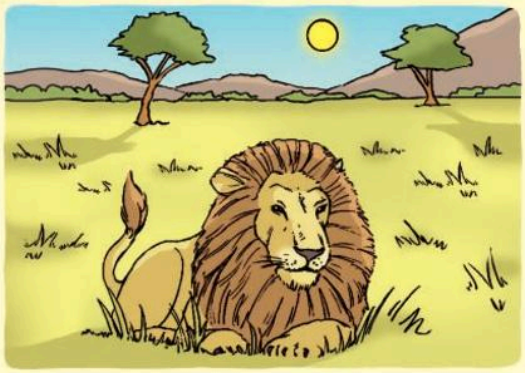
predators	town	fresh	rivers	
ponds	land	lions	ground	rats
animals	grass			

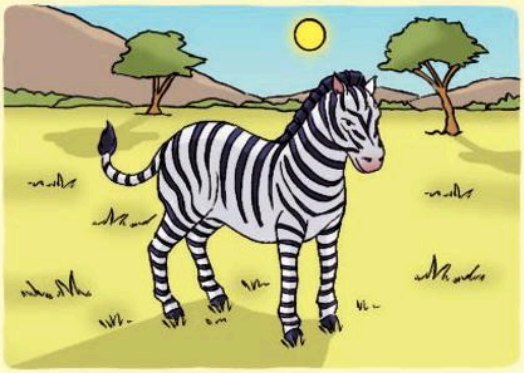
Most plants and _ _ _ _ _ _ _
cannot live under water.
They need to be on _ _ _ _ .



_ _ _ _ _ water in _ _ _ _ _ _ _ ,
streams, lakes and _ _ _ _ _ is
a good environment for plants
and animals.
Animals that eat grass cannot
live in the town. Most of the
_ _ _ _ _ _ is covered by
buildings.
In _ _ _ _ , cats eat mice and
_ _ _ _ .

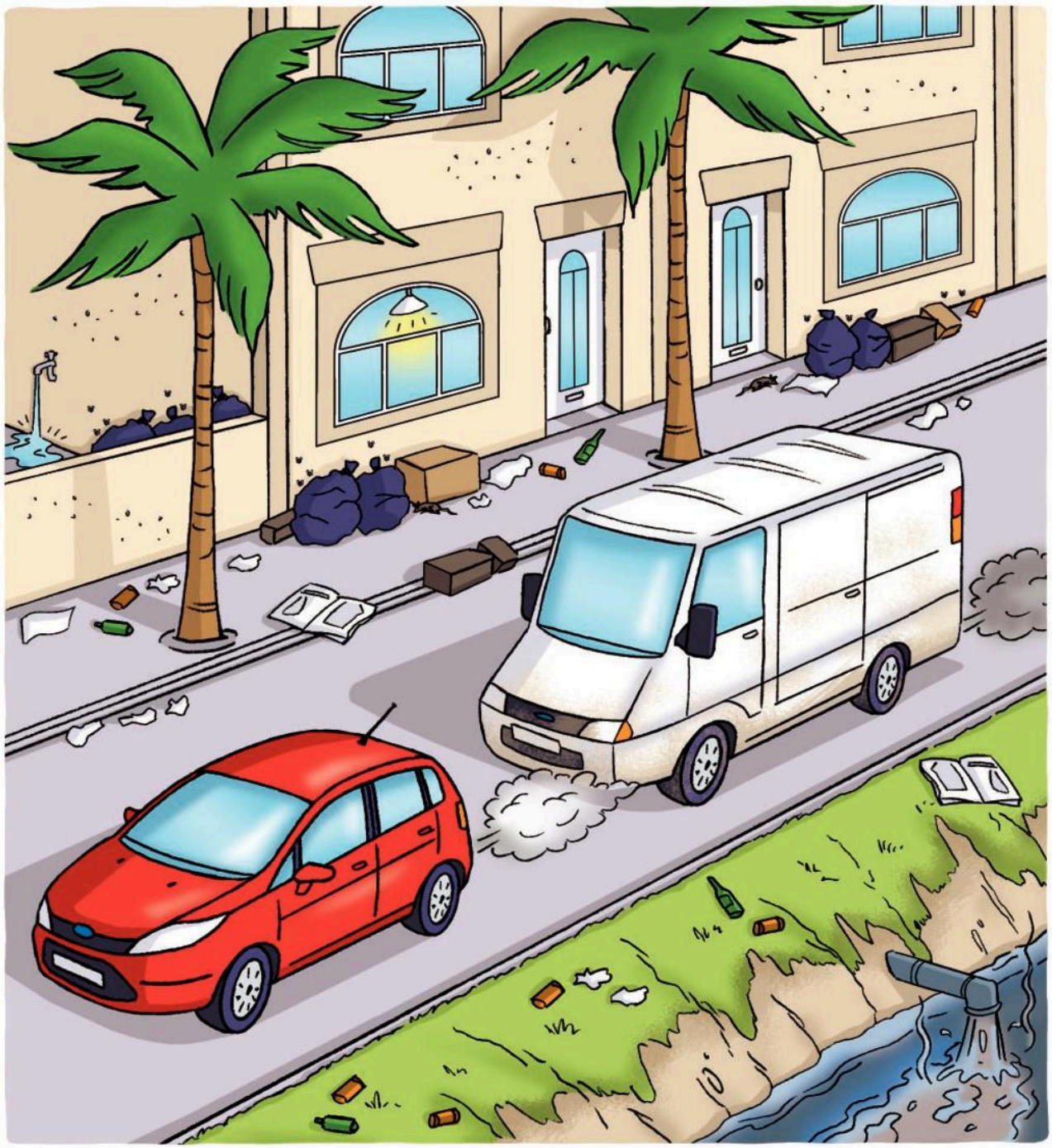
In grasslands, _ _ _ _ _ and
cheetahs eat antelope and other
_ _ _ _ _ eaters. They are
_ _ _ _ _ _ _ _ _ _ .





Caring for the environment

The environment in the picture is being **damaged**. People are not caring for it.



Activity 3

You will need: paper (or Workbook) and a pen or pencil.

1 **Describe the environment in the picture. How is it being damaged?**

2 **Talk about it in a group. What have you found?**

a Make a list of all the things you found.

b Try to explain why each thing is bad for the environment.

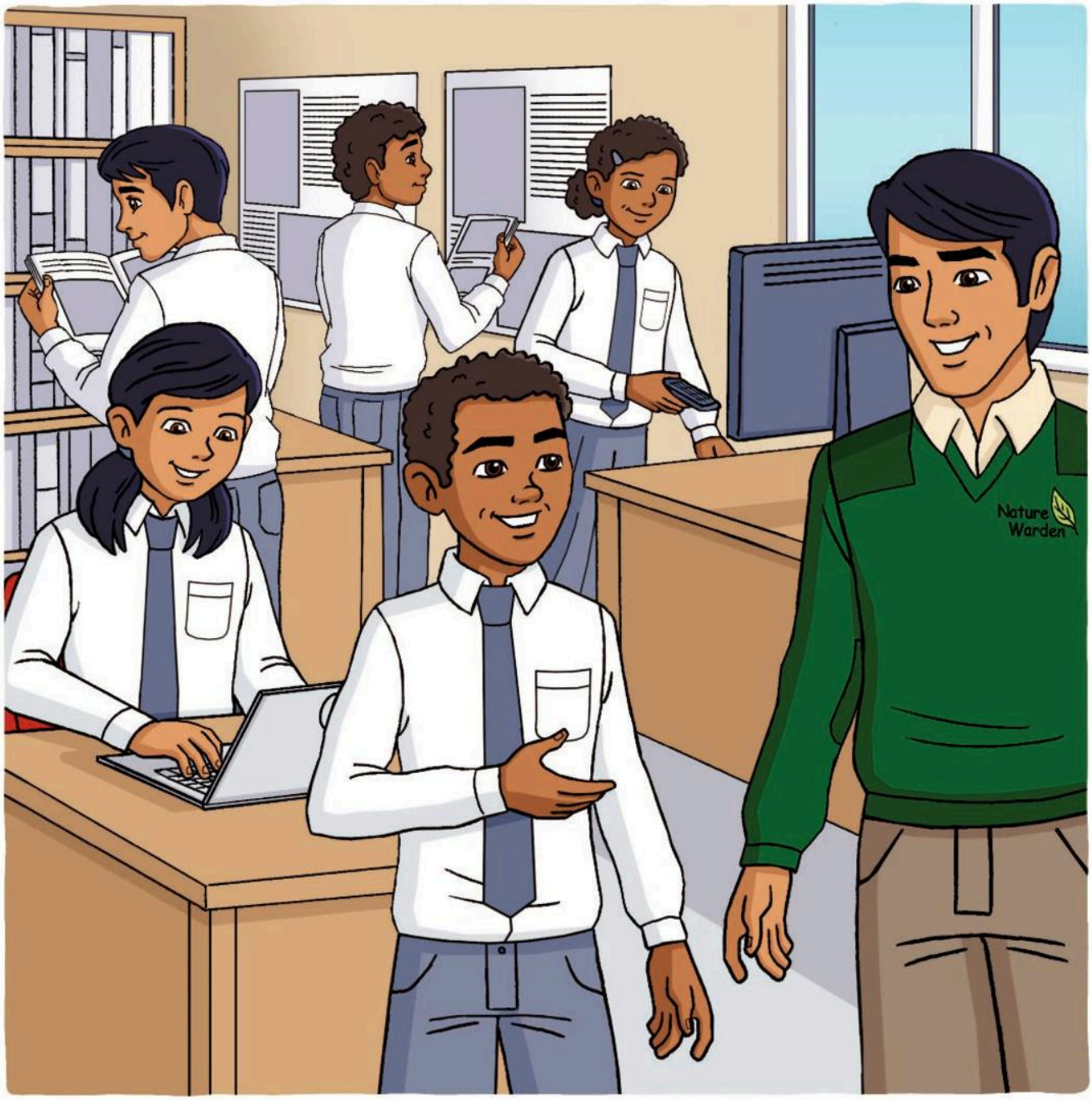
3 **Share your ideas and explanations with the class.**

The environment is made of two things:

- non-living parts – the soil, the air and the water
- living parts – the plants and the animals.

People can be careless and damage all these parts of the environment.

We should all behave carefully to keep our environment safe.



Activity 4

You will need: paper (or Workbook) and a pen or pencil.

The children in the picture are finding out about how to care for the environment.

1 Which part of the environment will you **investigate**?

the air	**the plants**	**the animals**
the fresh water	**the soil**	**the sea**

Remember, to 'investigate' something is to search for **evidence** to answer a question. Like a detective hunting for clues!

2 Decide what questions you want to ask about it.

3 Choose some different kinds of information to answer your questions.

Do not forget that **adults** can be **sources** of information.

4 Record what you find out in notes and drawings.

5 Talk about it with your group. What did you find out?

6 Now share your notes and drawings with the rest of the class.

Ask questions about what other groups have found out.

We care for the environment when we do not put **waste** into water, for example, into the river or the sea.

We care for the environment when we **recycle** ordinary **materials**, such as paper, metal, plastic or glass.

We care for the environment when we turn off taps and electrical items such as lights, heaters, a radio or a television.

We care for the environment when we put rubbish in the bin.

The weather

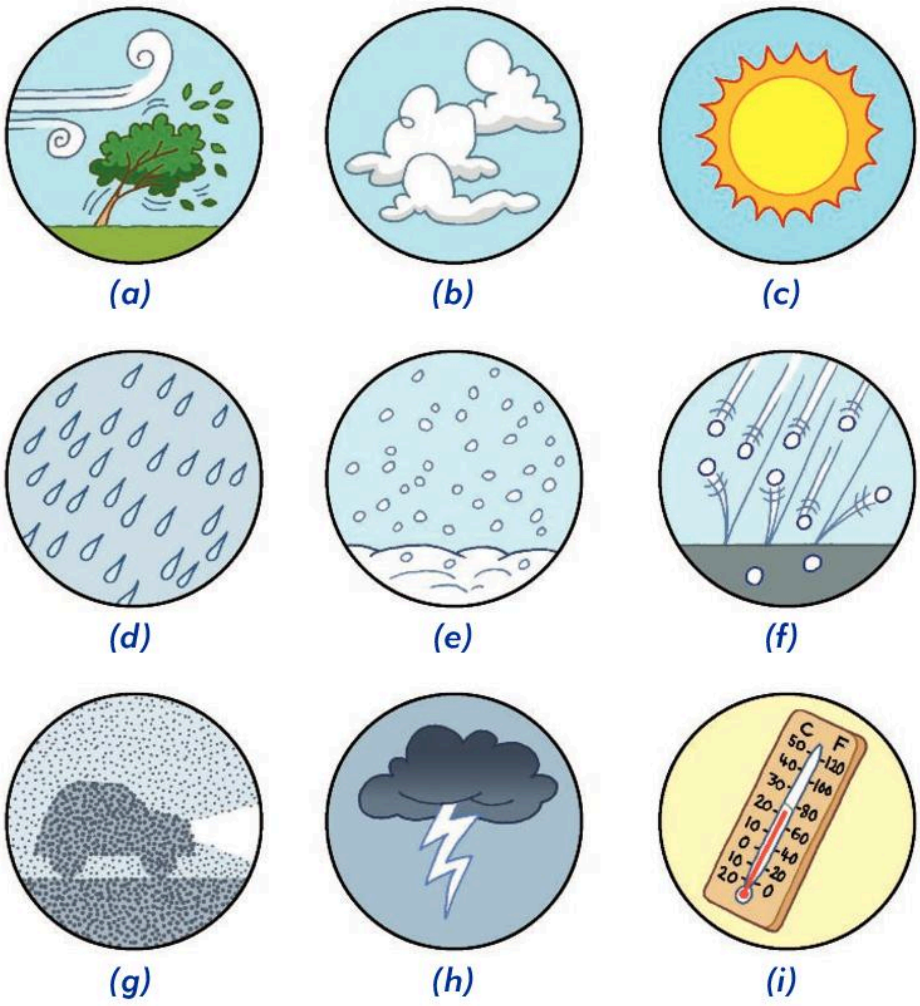
Look at the picture. Match these names to weather features (a) to (i).

sunny **snow** **fog** **storm** **hail** **cloudy**
temperature **rain** **lightning** **windy**

Make a list like this:

(a) _____

(b) _____



(a) *(b)* *(c)*

(d) *(e)* *(f)*

(g) *(h)* *(i)*

What does (i) show?

We use a thermometer to measure the temperature.

Activity 5

You will need: a thermometer, chart paper, a pen or pencil, card, scissors and pins.

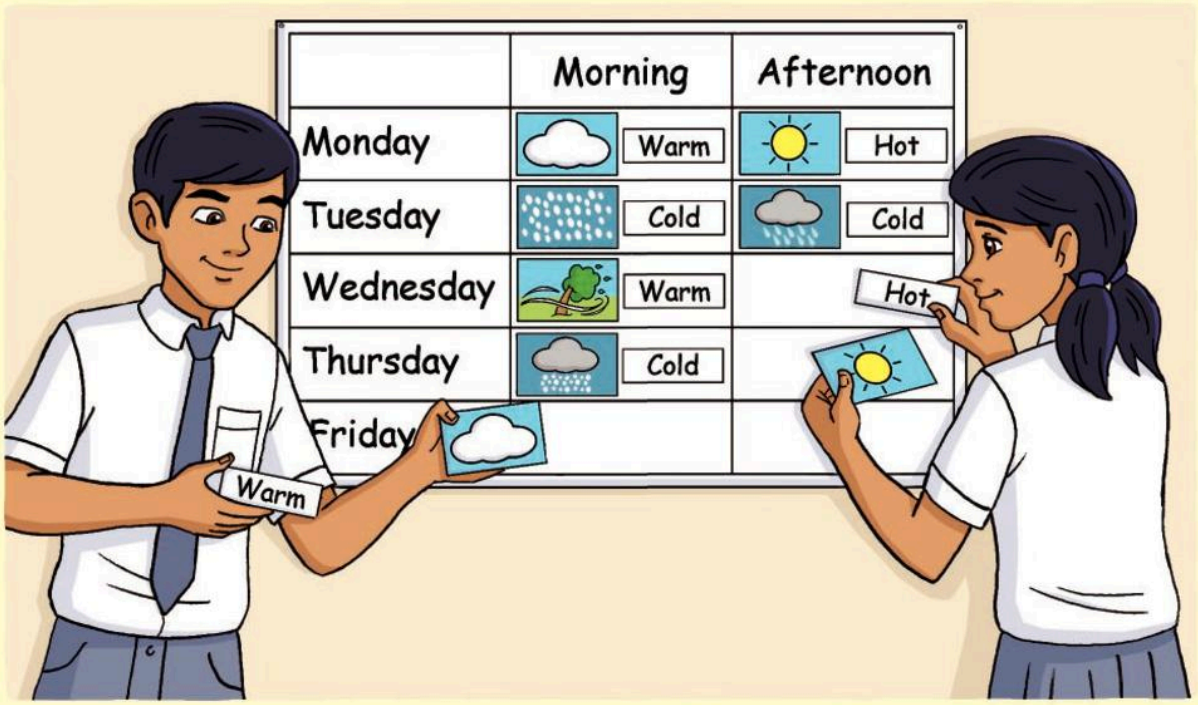
You will look at some different kinds of weather.

1 In a group, decide what two kinds of weather you will look at, such as wind or rain.

2 Choose how and where you will make your **observations**.

a How will you record what you see, hear, smell, touch or taste?

You can choose **symbols** or words.



b Choose the *same time* each day to look at the weather.

c Choose the *same place* each day to look at the weather.

3 As a group, record your observations on your weather chart.

4 After one week look at your weather chart.

a In your group, talk about what it shows.

b Look at the weather charts of other groups.

5 In your class, compare all the charts.

a What is the same?

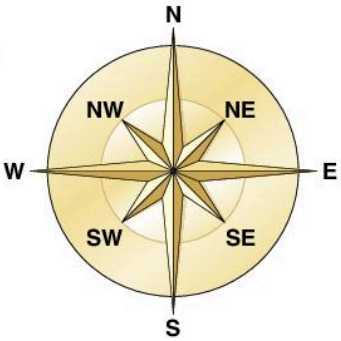
b What is different?

c Are there any patterns?

6 Try to explain any patterns that you can see.

Weather changes from day to day and during a single day.

Changes in one **part of the weather** can make other parts of the weather change. For example, the wind can change the clouds, and how hot or cold the temperature is. This shows that they are **linked**.



Day	Cloud and Sun	Temperature	Wind direction and strength	Rain	Electrical storm
Monday		Hot, 30°C	West 		
Tuesday		Hot, 38°C	West 		
Wednesday		Warm, 25°C	Northwest 		
Thursday		Cool, 18°C	Northwest 		
Friday		Cold, 13°C	North 		

Activity 6

You will need: paper (or Workbook) and a pen or pencil.

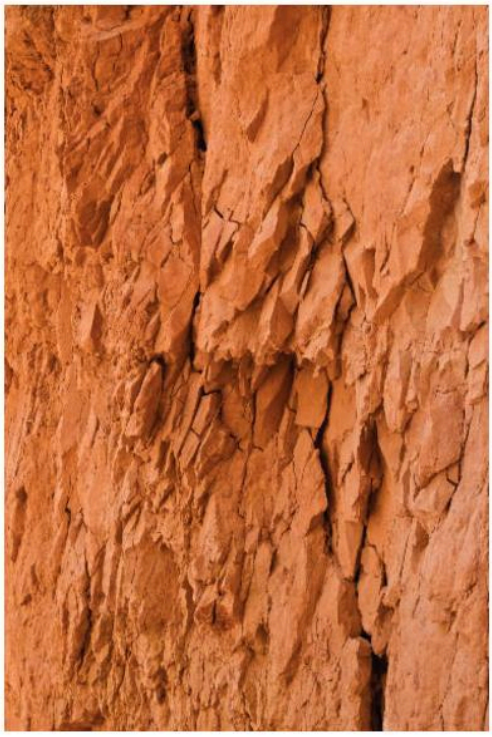
Copy and complete these sentences.
Use the chart on page 16 to help.

1. As the _ _ _ _ _ increases the _ _ _ _ _ _ _ _ _ _ _ _ _ falls.
2. The _ _ _ _ strength changes and so does its _ _ _ _ _ _ _ _ _ _ .
3. _ _ _ _ falls only when there are _ _ _ _ _ _ _ .

Rocks and their uses

(a) limestone

(b) sandstone



(c) granite

(d) marble

(e) flint

(f) slate

Some common rocks

Compare the rocks shown in the photographs.

What is the same? What is different?

Activity 1

You will need: different rocks, a hand lens, paper (or Workbook), a pen or pencil and coloured pencils.

1 Examine the rocks you have in class.

a Draw a picture of each one.

b Write a short description of what each rock feels like. Describe their:

texture hardness

c Use other sources of information to identify the rocks. Which sources did you use? Make a list.

2 Share your drawings and notes with the class.

3 Play a game with the rocks.

a Read out the description of a rock. Ask someone to find the correct rock and pick it up.

b Repeat this to allow turns for everyone.

Rocks have many differences.

Some, like sandstone, have a rough texture. They have small grains that can be easily broken off.

Others, like granite, are very hard and strong. They have bits called **particles** of different sizes and colours.

Limestone and marble are both white rocks.

Chalk is a kind of limestone. It is soft.

Activity 2

You will need: paper (or Workbook) and a pen or pencil.

1 **Go out of school. Look for rocks that have been used in your environment.**

They could be easy to pick up, or they could be used on buildings or roads.

2 What do the rocks look like?

a Record your observations in a table like this:

Name of rock	Description	Uses
Marble	White, smooth, shiny	Covering wall of the bank

One row has been done for you.

Here are some words to help you.

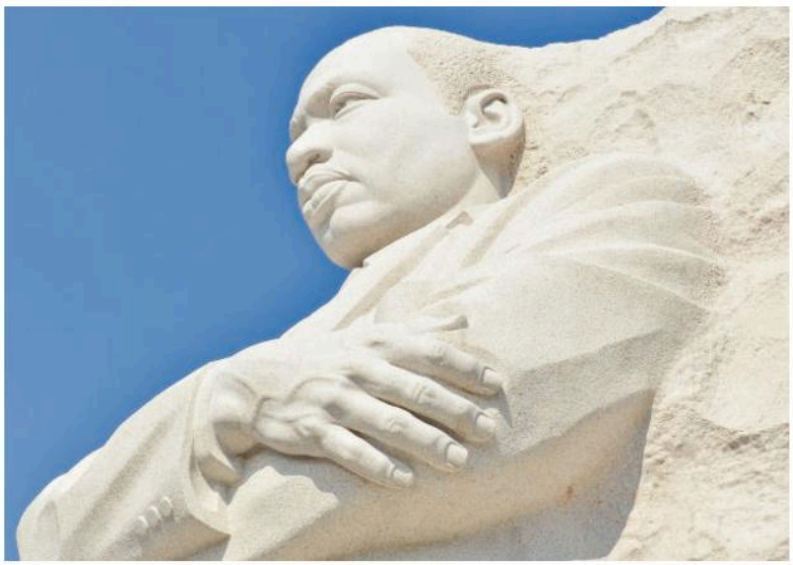
smooth marble rough
sandstone shiny granite
dull slate knobbly
shale speckled

b In class, talk about your findings. Add your information to the class record.

Chalk is soft. It is used for writing and drawing.

Granite is very hard and strong. It is used for road surfaces and buildings.

Marble can be cut and polished. This makes it beautiful. It is used for covering expensive buildings and for statues.

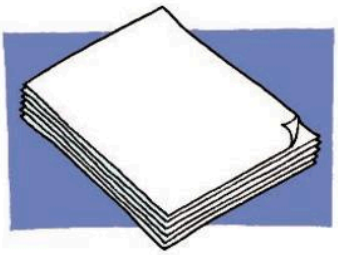


Sandstone can be cut easily into blocks. It can be used for buildings and pavements.

Slate can be split into thin sheets. It is very useful for covering roofs and for floor tiles.

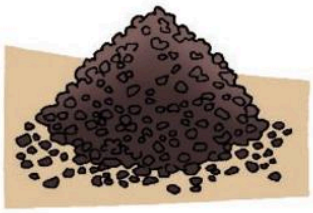
Natural and man-made materials

Here are some pictures of materials.



paper

wool



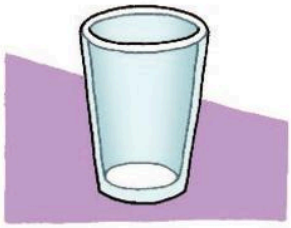
soil

sugar

milk

plastic

iron



glass

leather

Activity 3

You will need: paper (or Workbook) and a pen or pencil.

1 **Look at the materials shown in the picture.**

a In your group, talk about which are natural materials.

b Then talk about which are man-made (manufactured) materials.

2 Make two lists of the materials: natural materials and man-made materials.

3 Share your lists with the class.

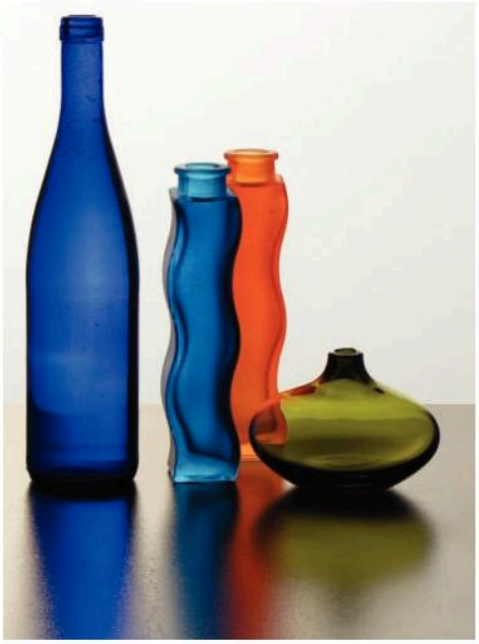
People use many natural materials, such as wood, wool, rock, clay or leather.

They can be made into useful things. For example, clay can be made into pots.

Man-made materials are all made from natural materials. For example, plastic is made from oil.

Oil is a natural material. It is taken from under the ground. Then it can be turned into useful materials, such as plastic, or petrol or diesel fuel.

Some kinds of sand can be used to make glass. When sand is **heated** it **melts** and becomes a **liquid**. The liquid becomes **solid** glass when it is **cooled**.



Iron is a metal that is made from rocks that have iron ore in them.

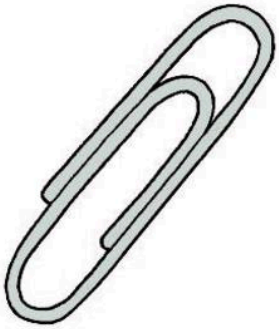
When the ore is heated it melts and the liquid iron flows out.

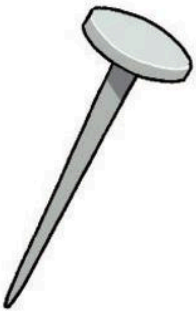
When liquid iron is cooled it changes into solid iron. Iron is used to make many things, such as cars, nails or gates.

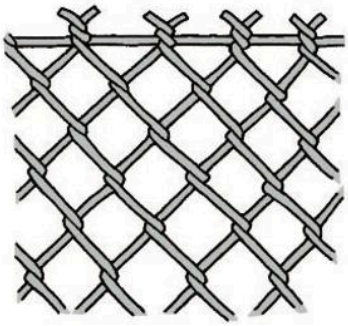
Changing shape

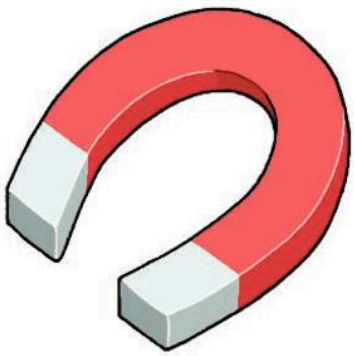
It is easy to change the shape of some materials, such as paper, fabric, un-baked clay and some plastics.

It is very hard to change the shape of some other materials, such as stone, wood, metal and baked clay.







If a material like metal is made thin enough, it can be easy to change its shape.

Look at the objects in the picture on page 28. Which ones can be easily changed?

Activity 1: Can you change the shape of some things?

You will need: four different objects made of different materials, paper (or Workbook) and a pen or pencil.

1 **Find four different objects made of different materials. You will look at four different ways to change their shape: squashing, bending, twisting and stretching.**

What do you think will happen when you squash, or bend, or twist, or stretch your objects?

Saying what you think might happen is called 'making a prediction'.

Scientists often make predictions. Then they do a test to see if they are right.

Continue over the page

2 Record your tests. Complete one table each time you try to change an object's shape. Look at the example table shown here to help you.

Squashing

Object	Material	Prediction Squash or not? ✓ or ✗	Test	Result Yes or No
1 Pebble	Rock	✗	We tried to squash it using our hands	No
2 String				

a Write the names of the objects and their materials in each table.

b Think about four ways that could change the shape of the objects.

c Write your predictions in each table before you start the testing.

Continue over the page

3 **You must try to do the same things to each material.**

> **Remember**, you must put the same weight on each material. For example, you could put a 2 kg mass on each material to see if it changes shape. If you use different weights, that would not be a **fair test**.

Try the four ways of changing the shape of the objects. Then record what you found out in the four tables.

4 **What happened in the tests? Were your predictions correct?**

5 **In the class, talk about what happened.**

a Were your results different to those of other groups? Compare them.

b Show how you changed the shape of two of your materials.

c Explain how you made your testing fair.

Have you seen some materials change when they get heated or cooled?

Tell the class what you have observed.

Activity 2

You will need: paper (or Workbook), a pen or pencil, a heat source and two of these materials: wax, chocolate, butter, ice.

1 Choose two of the following materials for your **exploration**:

wax **chocolate** **butter** **ice**

Remember, when you explore something in science you will search, study and examine something carefully.

Continue over the page

2 Talk with your group about how you will explore the way these materials change:

- **a** when they are heated
- **b** when they are cooled.

3 Plan to make your exploration fair.

4 Decide what **equipment** you need and collect it.

5 Choose how you will observe change.

6 Choose how you will record what you find out.

7 Make predictions about both materials, and write down your predictions. Say:

- **a** how they will change when heated
- **b** how they will change when cooled.

8 **Heat the first material.**

a Observe it closely. What can you smell, hear and see?

> ⚠ **WARNING:** take care when heating. Stand well back from the heat source.

b Record any changes.

9 **When there are no more changes, let the material cool.**

a Observe it closely.

b Record any changes.

> **Remember,** when you 'record' something you can write and draw what you did and what you found out.

Continue over the page

10 Use the second material.
Do the heating and cooling
as you did with the first one.

Remember to make the testing fair.

11 Record what you found out.

12 Compare your results with what you predicted might happen. Were your predictions right?

13 Compare the way the two materials were changed by heating and cooling.

a What was different?

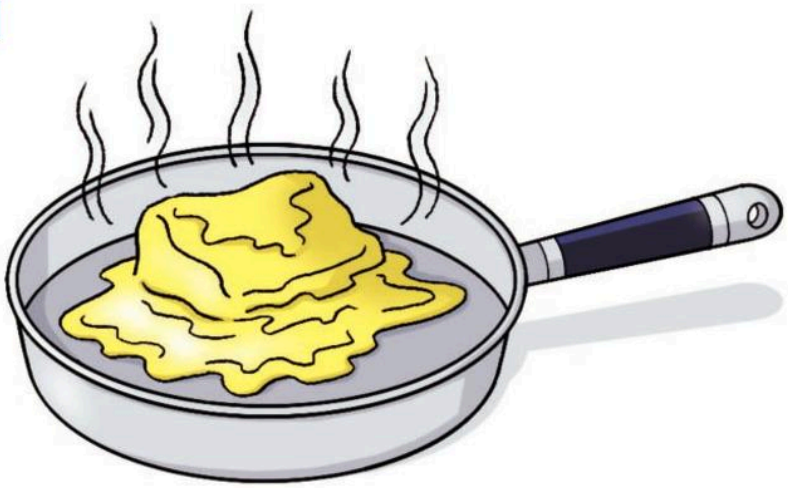
b What was the same?

14 Share with the class what you found out.

Some materials change very quickly when heated.

A solid material changes into a liquid. This is called melting.

Wax, butter and ice all melt easily.



Cooling a liquid material changes it back into a solid.

This happens quickly to wax, butter and chocolate. It is much more difficult to change water back into ice. Changing water into ice must be done in a freezer.

Materials in water

We put lots of things into water every day. We make instant coffee. We add salt to water to cook food. We put soap powder into water to wash clothes.

What happens to the materials we add to the water?

Activity 3

You will need: paper (or Workbook) and a pen or pencil.

1 Look at the pictures. What is the same about all of them?

2 Make a list of three materials that do not behave this way when mixed with water.

3 Tell the class what your three materials are.

4 Some materials **dissolve** in water and others do not dissolve in water.

When a material dissolves it disappears – it cannot be seen.

a Is the material still there?

b How can you tell?

5 Share your answer with the class.

The dissolved material mixes with water in a special way.

It 'goes inside' the water. We can tell that the dissolved material is still there by tasting the water. For example, we can still taste the salt, or the sugar.

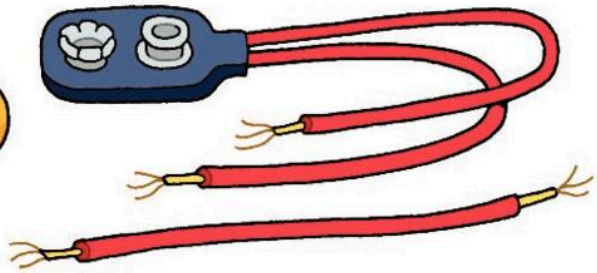
Materials such as sand, wax or plastic can be mixed with water but they do not dissolve. They can still be seen. They stay separate from the water. The solids and the water are just a mixture.

Circuit components

The picture shows some things for making a simple **circuit**.

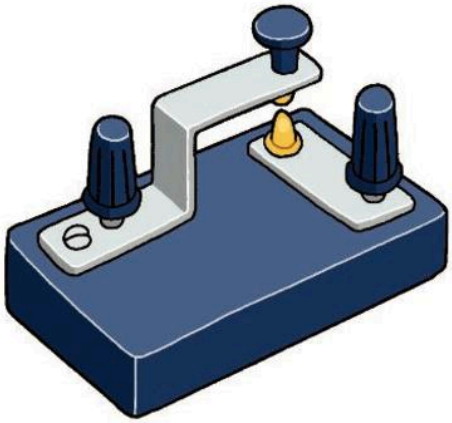
You must learn their names and use them correctly. As you use them you will learn what each one can do.

(a) cells (batteries)

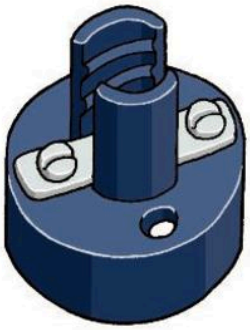


(b) wires

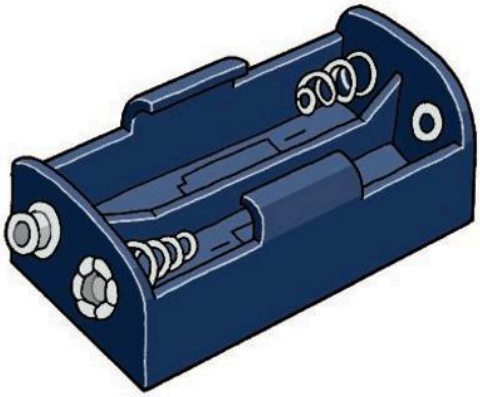
(c) lamp



(d) simple switch



(e) lamp holder



(f) battery holder

Activity 1

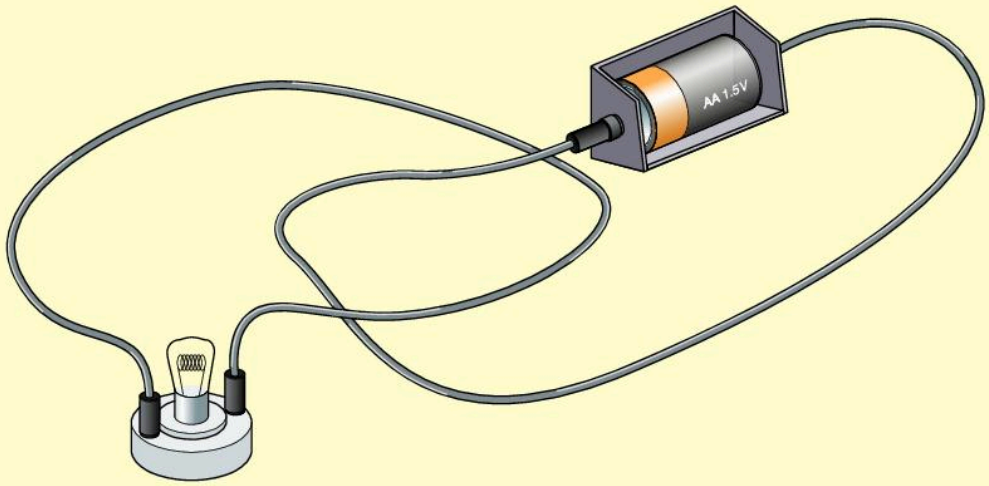
You will need: a cell (battery), a lamp, two wires, paper and a pen or pencil.

Work with a partner.

1. Take a cell (battery), a lamp and two wires.

2. Explore what happens when you connect these things in different ways.

3. Draw a picture of each way you try. Here is an example.

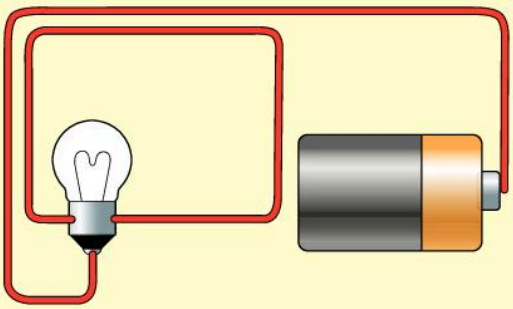


4. Try to make the lamp light up. Record this on the drawings of the circuits you make.

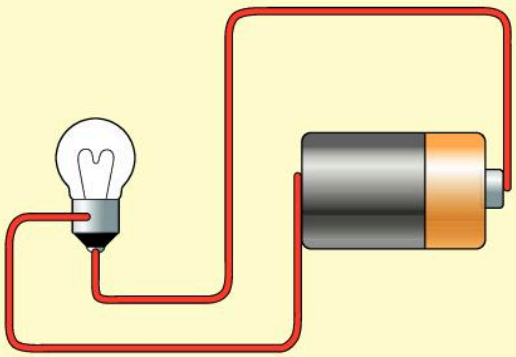
Continue over the page

5 Share your results with the class. Show them how you made the lamp light up.

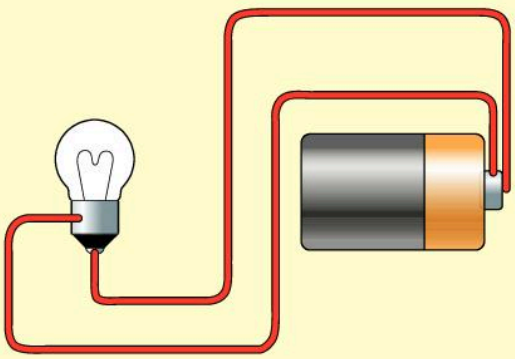
There is more than one way to make a circuit that lights the lamp.



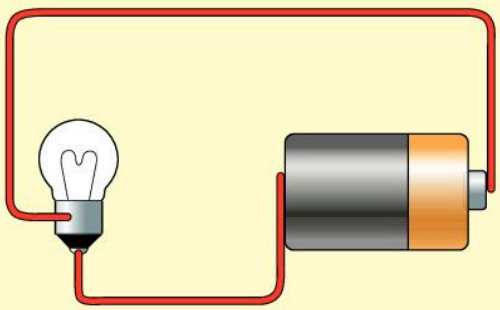
(a)



(b)



(c)



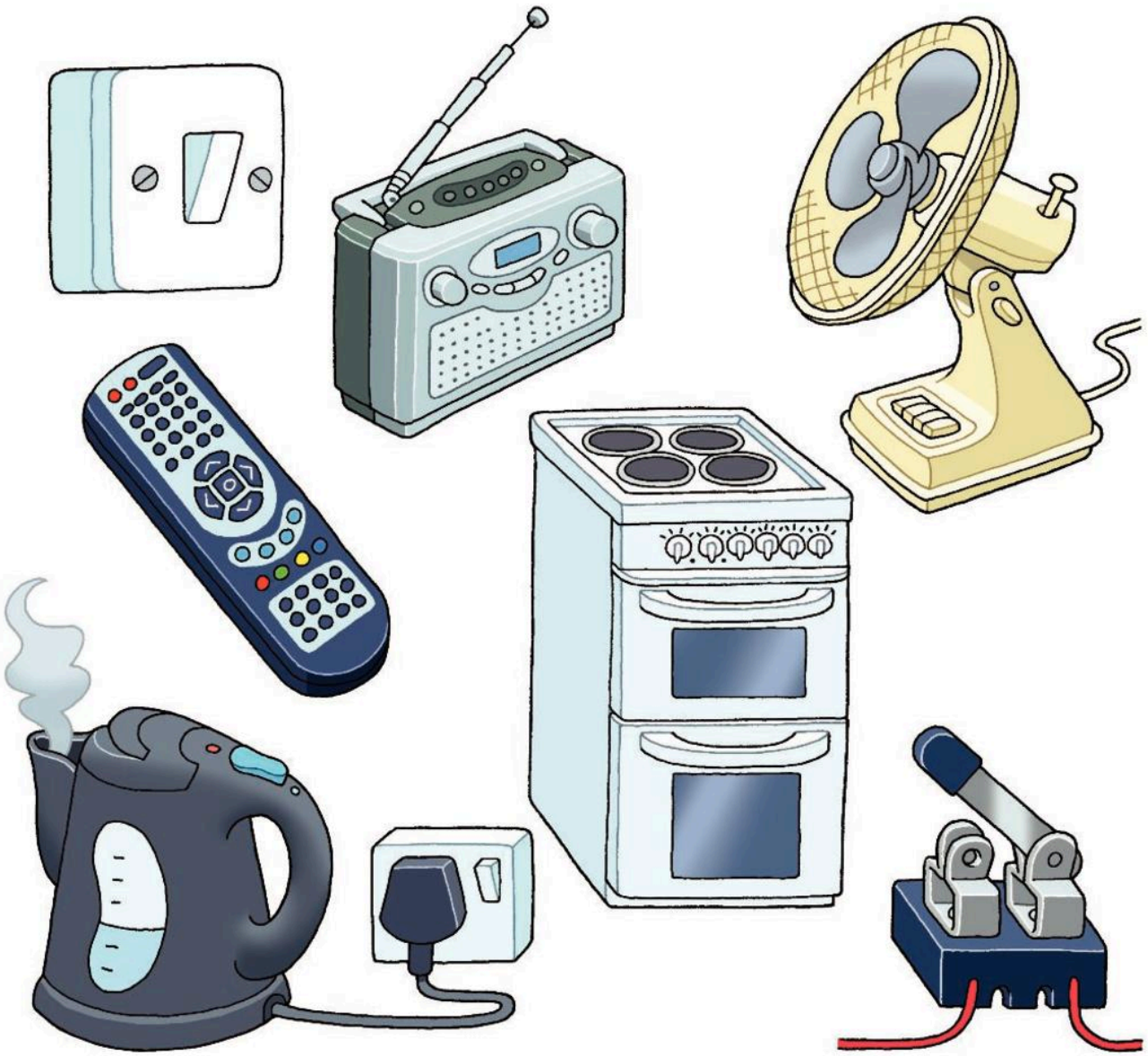
(d)

6 Look at the four circuit drawings.

Which ones will light the lamp? Tell the class what you think.

Switches

A **switch** is used to break a circuit and to re-make it. It is a way of making a gap. A gap breaks the connection between all the things in the circuit.



Switches are very useful and are found on many things, such as electric kettles.

Activity 2

You will need: objects with switches, paper (or Workbook) and a pen or pencil.

1 **Make a survey of switches in the classroom.**

a Record your findings in a table like this one.

b Use as many rows as you need.

Drawing of the switch	Where it is	What it is for

2 **Move around the room. Look for at least four different switches.**

a Record each switch as a drawing.

b In the table, write down where the switch is and what it is for.

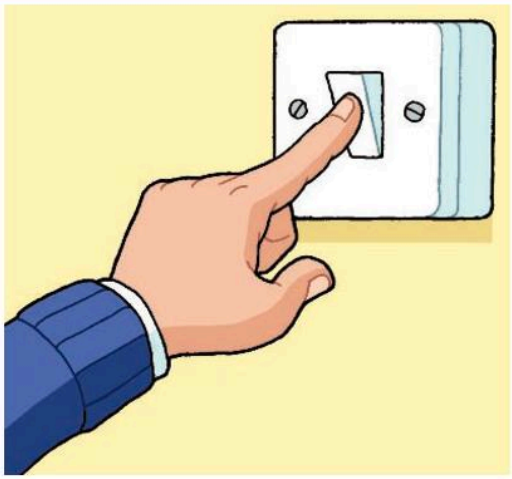
c Add up all the switches you can find in the room. Record this number.

3 **Share your survey results with the class.**

Switches can be many shapes and sizes, but they all do the same job.

They *break* the circuit and this *stops* the device.

They *re-make* the circuit and this *starts* the device.



Activity 3

You will need: a lamp, two wires, a cell (battery), a switch, paper (or Workbook) and a pen or pencil.

1 **Take the things you need to make a circuit.**

a Set it up so that the lamp lights up.

b Take a switch and add it to your circuit.

c Try to switch the lamp on and off.

d If it does not work, connect the switch in a different way in the circuit.

2 **Draw a picture of each circuit where the switch works.**

3 **Share your results with the class. Show them how your switch works.**

Light sources

Activity 1

You will need: paper (or Workbook) and a pen or pencil.

1. Talk with your group about all the sources of light you can identify.

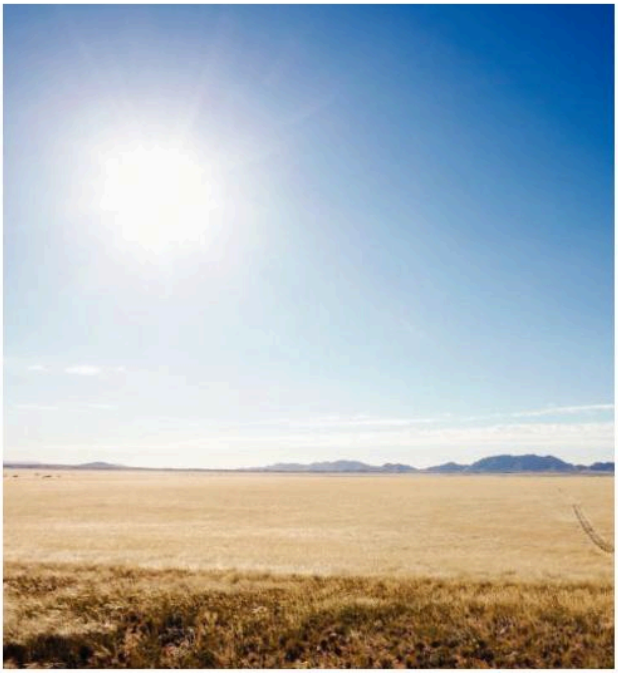
> **Remember**, a source is where something comes from, like the source of a river.

2. Make a list of all the sources.

3. Share the list with the class.

The Sun is the main source of light on Earth.

Its light travels across space and shines on the Earth's surface. People are more active during the daytime when the Sun's light is shining on their part of the world.



(a) (b) (c) (d)

(e) (f) (g) (h)

Look at the light sources in the picture. Copy the letters *(a)* to *(h)*.

Match the names below to the light sources and write them down next to the letters.

television torch street light candle fire oil lamp headlights desk lamp

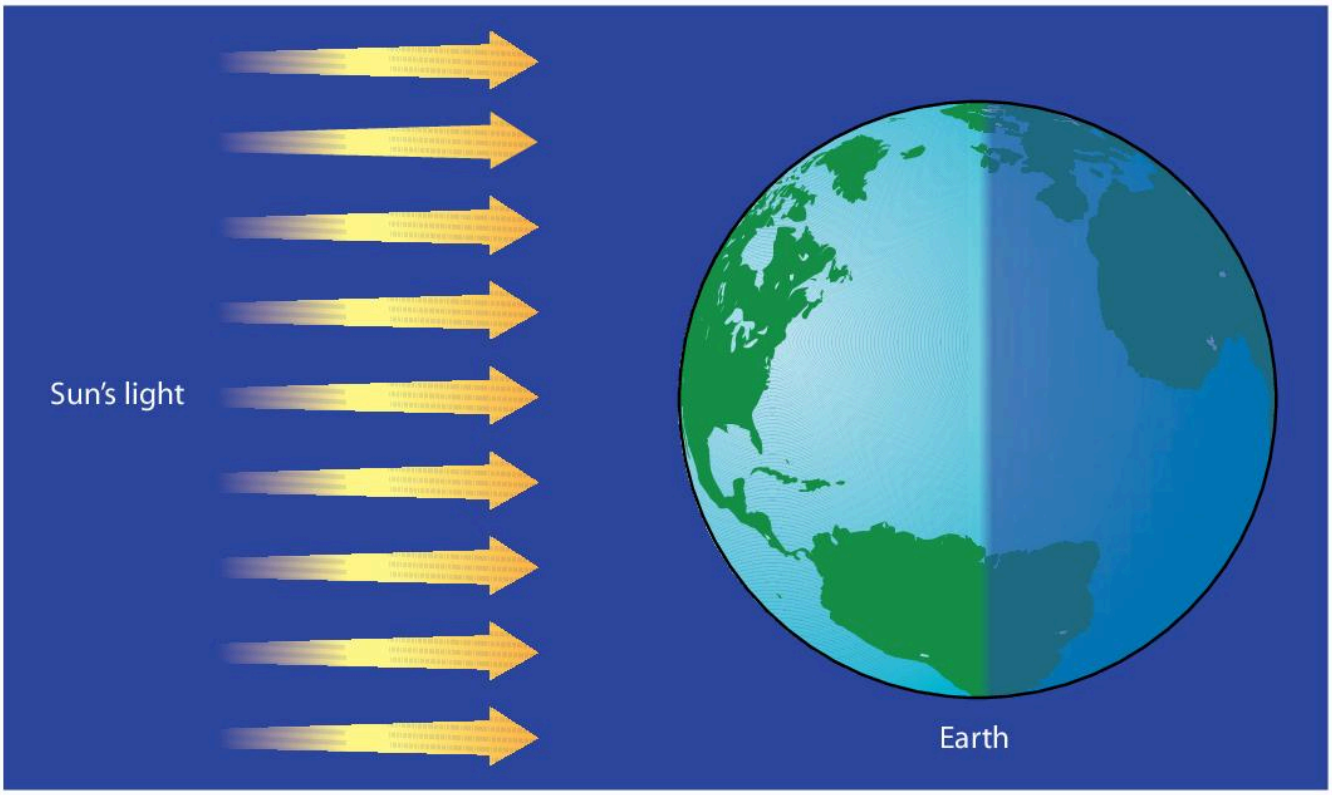
Most light sources that we use now are electrical, such as torches or car headlights.

A few people still use old methods of making light. They burn a fuel to make the light. For example, candles burn wax, an oil lamp burns oil, and fire burns wood.

Light and dark

Look at the diagram. It shows light from the Sun travelling to Earth. Talk with your group about why the Earth is half lit up and half dark.

Share your group's ideas with the class.



Darkness on Earth is caused by the lack of sunlight. Darkness comes every day as daytime changes into night-time.

The night is the time when the Sun's light does not shine on our side of the Earth. No light means it will be dark.

Copy the picture of the Earth on page 50 and add the labels: 'daytime (light)' and 'night-time (darkness)'.

Activity 2: What happens to colours when there is no light?

You will need: a small cardboard box, scissors, black paper or cloth, small brightly coloured objects, paper (or Workbook) and a pen or pencil.

1 **Find a small cardboard box. For example, a cereal packet or a shoe box.**

a Cut a small flap in the end of the box. This flap will act as a 'window' that can be opened and closed.

⚠ **WARNING:** always ask your teacher for help with cutting something.

Continue over the page

b Make a small hole in one side of the box for you to peep through.

c Put some small coloured objects in the box.

d Wrap the box in black paper or in a cloth to keep out the light. You will need to cut the same flap and hole in the wrapping.

2 Open the flap and then peep through the hole.

What can you see?

3 Record what you observe.

4 Predict what will happen when you close the flap.

5 Close the flap and peep through the small hole again.

What can you see?

6 Record what you observe.

7 Talk with your group about what you found out.

a Try to explain it.

b Share what you found out with the class.

When light enters the box through the 'window', we can see the things inside the box.

When no light enters the box, there is darkness inside. Then we cannot see the things inside.

Darkness is the absence of light.

Shadows

Shadows are areas of darkness, made when something blocks the light.

Your body makes a shadow sometimes. It is fun to play with shadows. We play games with shadows. We try to step on other people's shadows. We can make shadow shapes on the wall.

Activity 3

You will need: sunny space outside.

1 **Go outside and look for three shadows. For each one you find, say what is making the shadow.**

> ⚠ **WARNING:** Never look directly at the Sun – it will damage your eyes.

2 **Look at your own shadow.**

a Try to change it. Make at least four different shapes.

b Try to make your shadow disappear.

3 **Show the class two of your shadow shapes and how you can 'lose' your shadow.**

Look at the shadows in the picture.
Are the shadow shapes the same shape as the objects that make them? Or are they different?

Activity 4

You will need: a torch, three objects with different shapes, paper (or Workbook) and a pen or pencil.

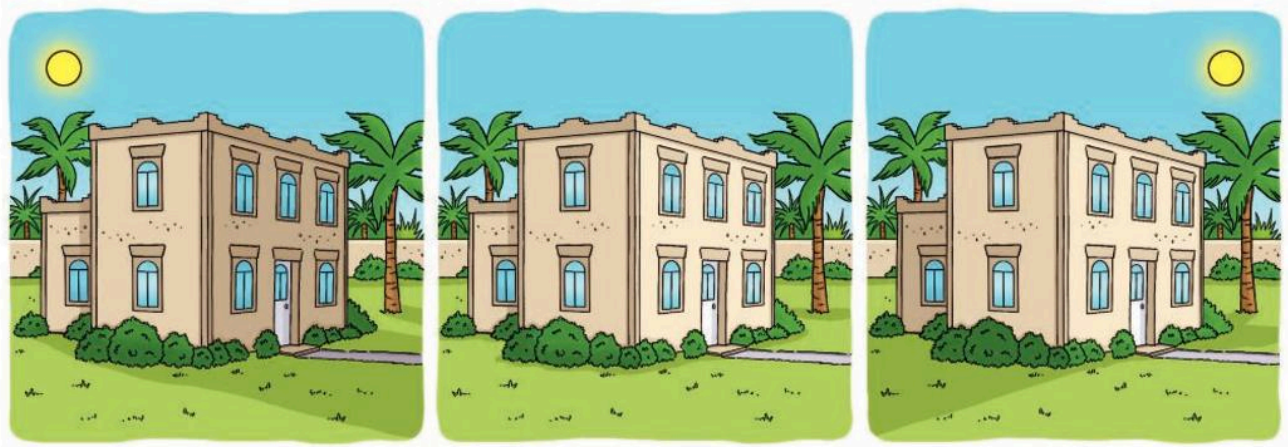
1. Talk with your group about how you can make shadows using a torch.
2. Collect three objects that have different shapes.
3. Play with the objects and the torch to explore what shadows you can make.
4. Record the shadows as drawings.
5. What do you notice about:
   - a where the light is
   - b where the object is
   - c where the shadow is?
6. Tell the class what you think.

Look at the pictures and explain what they show.

Shadows and the Sun

When we are outside and the Sun is shining, we see shadows. They are not always the same. But why does this happen?

Look at the pictures and talk about them with your group.



(a) *(b)* *(c)*

Try to explain the differences you can see. Think about the **position** of the Sun in your explanation.

Remember, the 'position' is the place where something is.

Activity 1

You will need: paper (or Workbook), a watch or clock, a meter stick or tape measure and a pen or pencil.

1 Go outside in the morning.

a Stand in an open place where you can see the Sun.

b Look for things that have shadows, such as trees or buildings.

2 Draw a simple picture of the skyline.

a Show the Sun in the sky.

b Show the things with their shadows.

3 Measure at least one of the shadows.

a Write down its length.

b What time of the morning did you look at the shadows? Write down the time on your drawing.

4 Predict what you will see when you go outside at noon. Write down your prediction.

Continue over the page

5 **Go outside as near to noon as you can and stand in the same place as before.**

a Make a second drawing of the Sun and the same things on the skyline, with their shadows.

b Measure the same shadow and record its length.

c Write down the time on your drawing.

6 **Compare what you recorded with your prediction.**

a What did you observe?

b Was it different to your prediction?

c Try to explain what you observed.

7 **Predict what you will see when you go outside late in the day. Write down your prediction.**

8 **Go outside as late in the day as you can and stand in the same place.**

a Make a third drawing of the Sun and the same things on the skyline, with their shadows.

b Measure the same shadow and record its length.

c Write down the time on your drawing.

9 **Compare what you recorded with your prediction.**

a What did you observe?

b Was it different to your prediction?

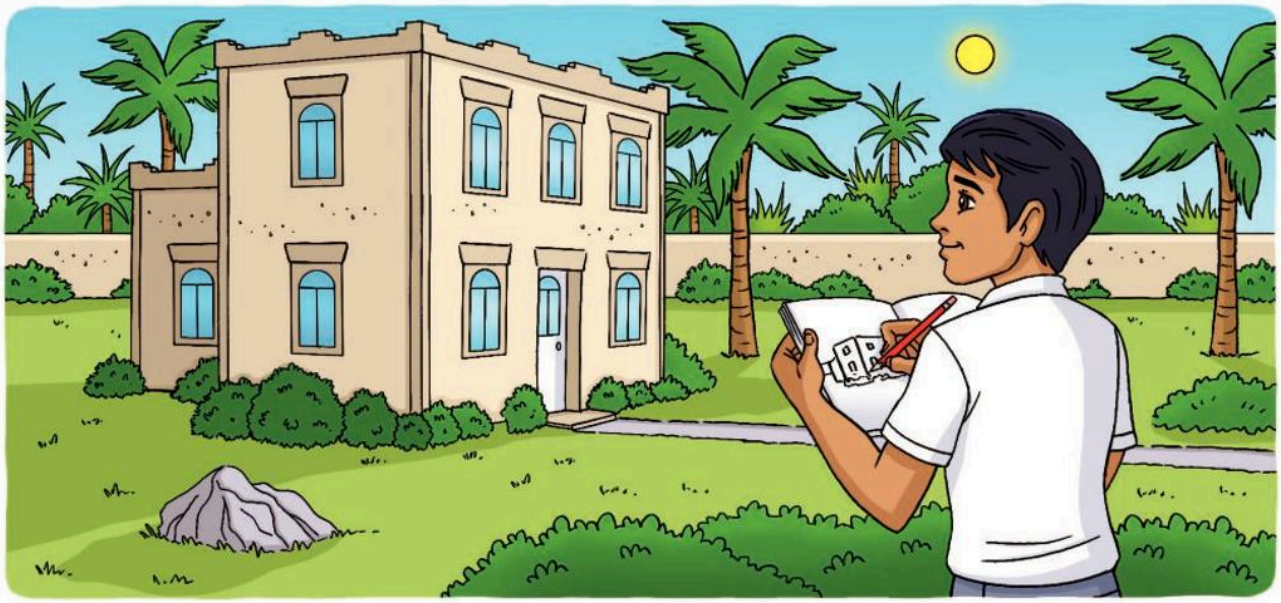
c Try to explain what you observed.

10 **Share your drawings, your measurements and your explanations with the class.**

What happens to the shadows during the day? Describe two things that change.

What actually happens?

What happens to the position of the Sun during the day?



Is there a link between the position of the Sun and the size and position of the shadows?

Does the Sun move across the sky?

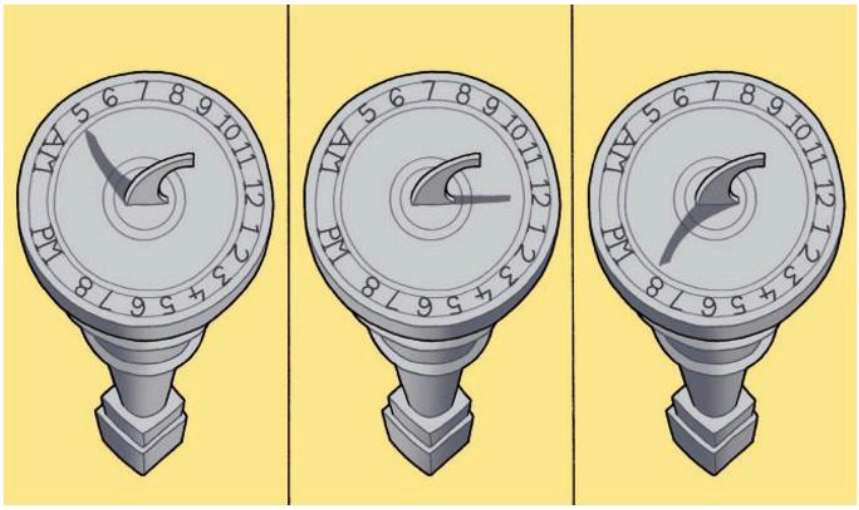
Tell the class what you think.

As the picture above shows, and as you observed, the Sun *appears* to travel across the sky each day.

As its position in the sky changes, the shadows also change:

- They get bigger or smaller.
- They get longer or shorter.
- They change direction.

Since long ago, people have observed this and used it as a way of telling the time.



Sundials show the time as a shadow. How do they work?

Throughout history most people have thought that the Sun was travelling up and down, across the sky each day. That is why we say **sunrise** and **sunset**.

Science has discovered that these changes are caused by the movement of the Earth – *not the Sun*.

The Earth **rotates** (spins round and round) on its **axis**. The Earth's **rotation** makes the Sun *appear* to move across the sky.

Day and night

Every day we wake up when it's light and go to bed when it's dark.

All over the Earth people do this at different times.

Sunrise and sunset happen at different times in different places.

This is because the Earth rotates (spins round) once each day.

Activity 2

You will need: a large ball, a pen or pencil, a torch and a dark place.

1 **Think of the large ball as the Earth. Make a mark on it to show where your home is.**

a Make the room dark, or go into the darkest corner of the room.

b Hold the ball at the top and the bottom so that you can turn it slowly.

c Get another group member to shine the torch onto one side of the ball.

d Slowly turn the ball around.

Continue over the page

2 **Watch your mark on the ball as it goes into and out of the light.**

3 **Talk with your group about what you have done and observed.**

a What do the ball and torch stand for?

b What is the movement into and out of the light copying?

4 **Share your ideas with the class.**

Think of your exploration with the ball and the torch.

- Which was moving – the ball or the torch?
- Did the mark ('your home') get day and night?

Every 24 hours the Earth rotates once. So when it is light in China, it is dark in the United Kingdom.

For part of the 24 hours, your home is facing the Sun and it is daytime for you.

For the rest of the 24 hours, your home is facing away from the Sun and it is night-time for you.

The same thing happens wherever you are on Earth.

The rotation of the Earth causes day and night.

Glossary

A

absence – a lack of something (for example, light).

adults – grown-up people; fully grown animals, able to reproduce (have babies).

animals – living things that must eat plants or other animals as food.

axis – the imaginary line around which the Earth spins or rotates.

C

cause – what makes something happen.

chart – a plan or a diagram; a way of showing a lot of information clearly. Charts are used to record results.

circuit – (in electricity) a complete circular route around which electricity can flow.

compare – to look for differences and similarities in two or more things or events.

cooled – made less hot; at a lower temperature.

D

damage – harm.

device – a machine or tool used for a particular purpose (for example, a torch, an electric bell or a radio).

differences – things that are not the same when two things are compared.

dissolve – to disappear into (for example, a solid such as salt dissolves into a liquid such as water).

E

environment – the surroundings in which things live, including the weather, the soil, or competition with other living things.

equipment – things that are used to do something.

evidence – facts, information, proof, clues or data that help us to work something out.

explain – to give a reason for something; to tell why something is like it is.

exploration – a careful search, study or examination of something.

explore – to study carefully; to search; to examine.

F

fair test – a test of an idea where everything is kept the same, except the one thing you are testing.

Glossary

H

hardness – how hard a material is compared with other materials.

heated – made hotter; the temperature is made higher.

I

investigate/investigation – a search for evidence to answer a question.

L

link – a link is when two or more things are connected.

liquid – anything that is not a gas or a solid (for example, milk, water and oil are all liquids).

M

man-made – made by people (another term for manufactured); sometimes referred to as non-natural.

manufactured – made by people (another term for man-made).

material – stuff; what things are made of.

melt/melting – the process of changing from a solid into a liquid.

N

natural – not made by people, found in nature (for example, rocks, water or wood).

noon – midday; twelve o'clock.

O

object – thing.

observe/observation – notice when paying careful attention, using sight, smell, hearing, touch or taste.

P

particles – bits; small parts.

parts of the weather – rain, temperature, wind and clouds are all parts of the weather.

pattern – some regular feature: a repeated shape, relationship or measurement, for example.

position – the place where something is.

predator – an animal that kills other animals for food.

predict/prediction – to tell what will happen before doing something.

R

record – writing or drawings of what was done or what was observed.

recycle – when we use something again (for example, turning old paper into more paper things).

Glossary

results – observations of all kinds, including measurements, collected during an investigation.

rotate/rotation – turning or spinning (for example, the Earth on its axis).

S

senses – the main ones are sight, hearing, smell, taste, touch.

shadow – darkness; shade; where light is blocked by something.

shelter – a place where an animal is safe and protected from weather and other animals.

solid – anything that is not a gas or a liquid (for example, ice, rock, plastic or glass).

source – where something comes from.

sunrise – as the Earth turns the Sun appears to rise in the sky (in the morning).

sunset – as the Earth turns the Sun appears to get lower in the sky until it disappears (in the evening).

switch – a device that turns something on or off by breaking the circuit (for example, a light switch).

symbol – a sign that stands for something (for example, a drawing of the Sun can represent sunny weather on a chart).

T

table – a way of writing things down in rows and columns.

temperature – a measure of how hot a substance is.

test – a way of finding out an answer to a question, or trying out an idea.

texture – the feel of something (for example, rough or smooth).

W

waste – things that are unwanted and thrown away, including household rubbish, sewage or industrial waste.

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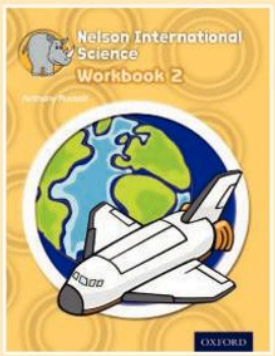

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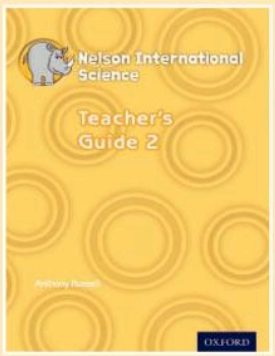

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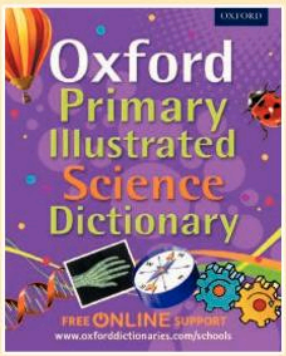

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