Science F-2

Chapter 4 — Earth and space sciences: changes, the sky, and caring for Earth

Aboriginal and Torres Strait Islander content has been excluded as accuracy cannot be guaranteed, and it is better to be respectful than cover the entire curriculum inaccurately.

Significant effort has been made to ensure this content is legal. Please send any areas of concern to admin@vwx.au with appropriate document/legal references so errors can be verified and changes be made.

Contents

Daily and seasonal change, and the everyday decisions it drives

This is read with the teacher. The teacher reads all the words. The child looks, says, points and does. The child does not need to read.

> *daily and seasonal changes in the weather and the environment can be observed and affect decisions made in everyday life* — VC2S2U07
>
> **Evidences:** They identify daily and seasonal changes and describe ways these changes affect everyday life.

In this topic we will:

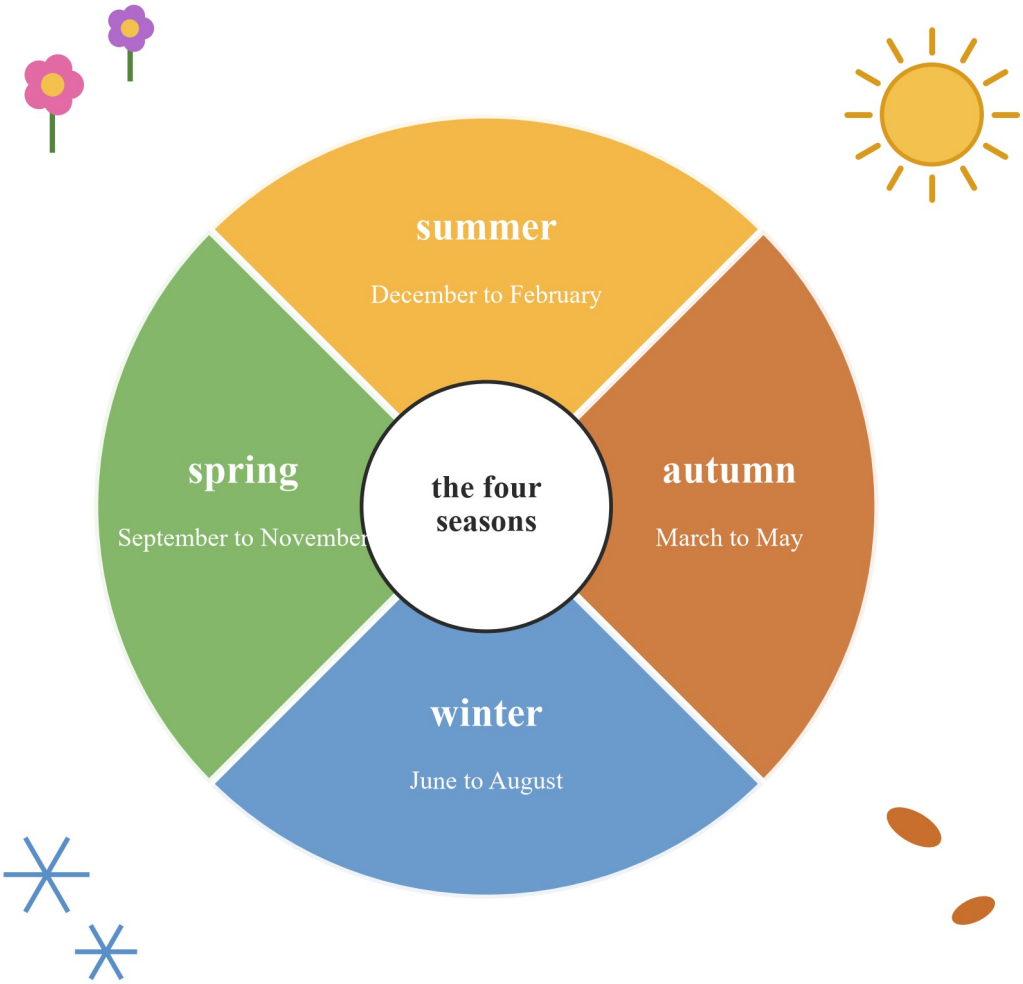
- look at the weather each day and record what we see (E01)
- watch for seasonal changes in plants, like leaves changing colour and falling (E01)
- find out about animals that hibernate and animals that migrate (E05)
- use daily weather signs and seasonal patterns to make plans (E02)
- choose clothes for the weather and for the season (E04)

Theory

The four seasons

A **season** is a part of the year. One year has four seasons.

One year has four seasons



In Victoria, summer is in December, January and February.

A wheel with four parts: summer (December to February), autumn (March to May), winter (June to August) and spring (September to November), with a sun, falling leaves, snowflakes and flowers at the corners.

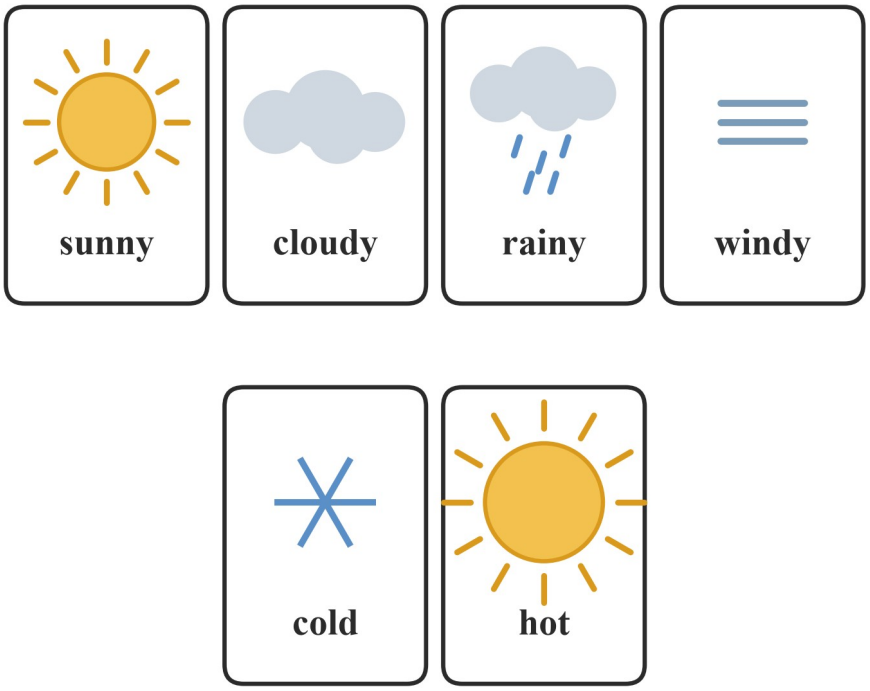
- **Summer.** Summer is hot.
- **Autumn.** In autumn the leaves change colour and fall.
- **Winter.** Winter is cold.
- **Spring.** In spring new leaves and flowers grow.

In Victoria, summer is in December, January and February. Autumn is in March, April and May. Winter is in June, July and August. Spring is in September, October and November. The seasons come in the same order every year. That order is a **pattern**. A pattern is something that happens again and again, in the same order.

The weather changes each day

The **weather** is what the sky and the air are like outside. Is it sunny? Is it rainy? Is it windy? The weather changes from day to day. These are **daily changes**.

Weather words we use



Each day, we can look outside and choose the weather words.

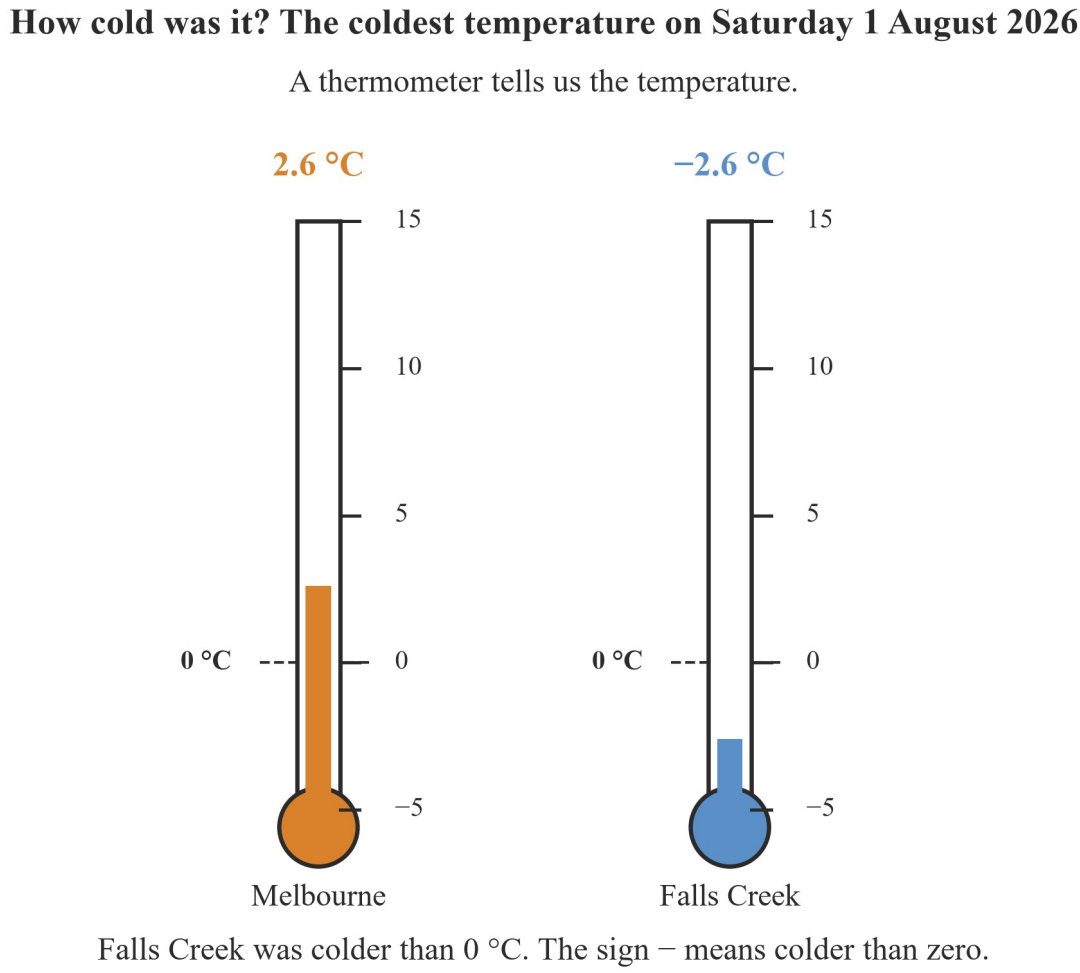
Six weather cards: sunny (a sun), cloudy (a cloud), rainy (a cloud with rain), windy (wind lines), cold (a snowflake) and hot (a big sun).

We can say the weather with these words: sunny, cloudy, rainy, windy, cold, hot.

Temperature tells us how hot or cold it is. We read the temperature with a **thermometer**. A thermometer is a tool that shows how warm or cold the air is. We write temperature in degrees Celsius, like this: °C.

When we look at the weather, we look at the sky and the clouds. We never look straight at the Sun.

A cold day in Victoria



Two thermometers for Saturday 1 August 2026. Melbourne shows 2.6 °C, above the 0 °C line. Falls Creek shows −2.6 °C, below the 0 °C line.

On Saturday 1 August 2026, the coldest temperature in Melbourne was 2.6 °C. At Falls Creek, a snowy place in the mountains of Victoria, the coldest temperature was −2.6 °C.

The sign − means colder than zero. −2.6 °C is colder than 0 °C. At Falls Creek it was colder than zero all week. That is winter in the mountains.

Source: Bureau of Meteorology, Daily Weather Observations — Melbourne (Olympic Park), 2026. Retrieved 2026-08-20.

Source: Bureau of Meteorology, Daily Weather Observations — Falls Creek, 2026. Retrieved 2026-08-20.

We record the weather

To **record** means to put down what we see, so we can look at it later. We can draw the weather or write the temperature. When we record the weather each day, we can see the daily changes.

One week of winter weather: Melbourne, August 2026

day	coldest (°C)	warmest (°C)	rain (mm)
Monday 3	8.2	15.9	0
Tuesday 4	7.6	13.6	0.6
Wednesday 5	9.4	13.4	3.6
Thursday 6	8.1	16.8	7.2
Friday 7	10.3	16.0	0.2

Each day the temperature changed, and some days had rain.

A table of one week of winter weather in Melbourne, August 2026: Monday 3 (8.2, 15.9, 0), Tuesday 4 (7.6, 13.6, 0.6), Wednesday 5 (9.4, 13.4, 3.6), Thursday 6 (8.1, 16.8, 7.2), Friday 7 (10.3, 16.0, 0.2), with columns for day, coldest, warmest and rain.

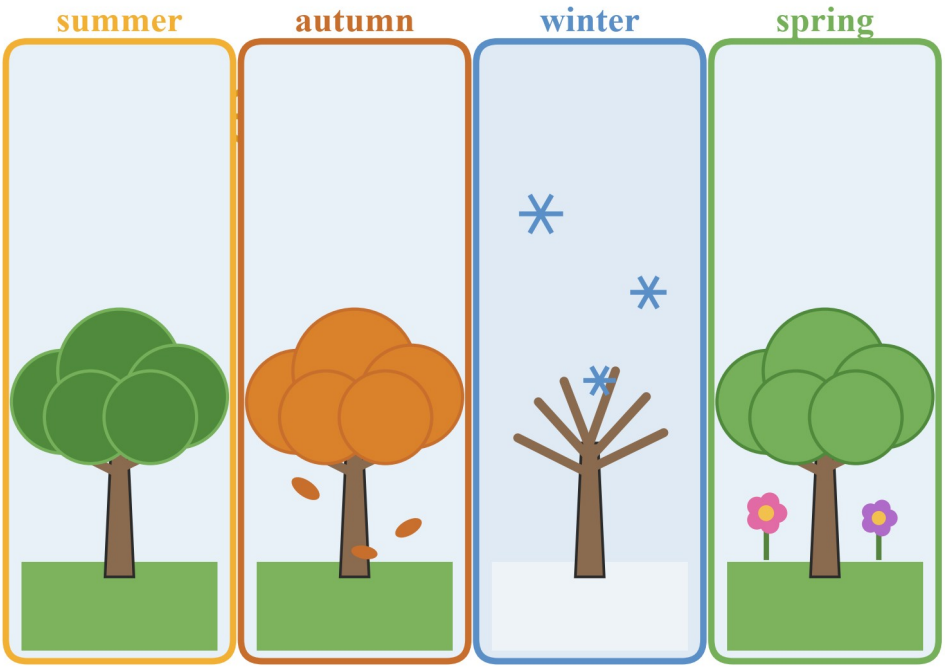
Look at this real record from Melbourne. The coldest temperature changed each day. It rained on four of the five days. The weather changed from day to day.

Source: Bureau of Meteorology, Daily Weather Observations — Melbourne (Olympic Park), 2026. Retrieved 2026-08-20.

Plants change with the seasons

Changes that happen at the same season every year are **seasonal changes**.

One tree through the four seasons



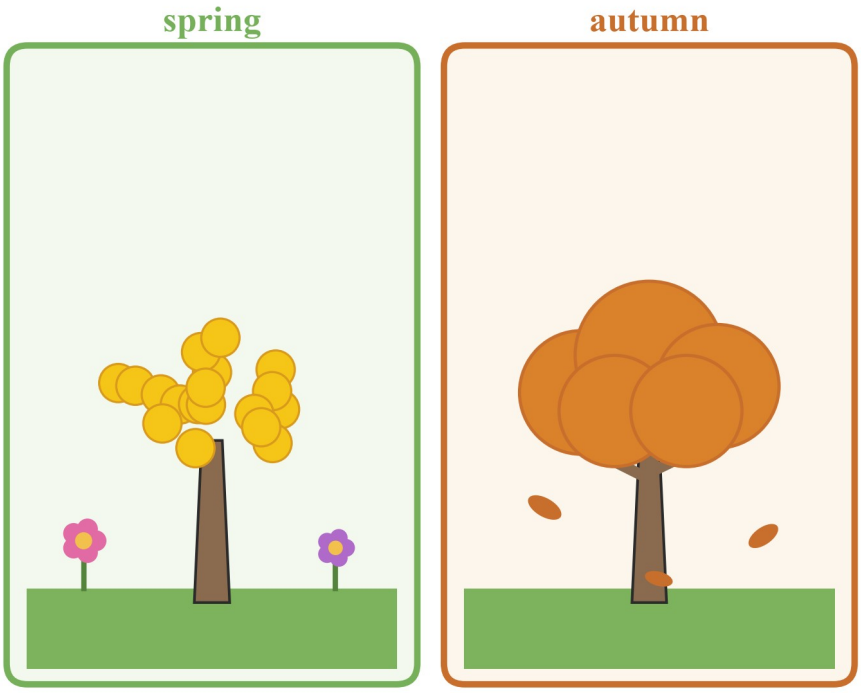
In autumn the leaves change colour and fall. In spring new leaves grow.

The same tree in four pictures: summer with green leaves, autumn with orange falling leaves, winter with bare branches and snow, spring with new leaves and flowers.

Look at the same tree through the year.

- In summer the leaves are green.
- In autumn the leaves change colour and fall.
- In winter the tree is **bare**. Bare means it has no leaves.
- In spring new leaves grow.

Plants change with the seasons



In spring, wattles flower. In autumn, leaves change colour and fall.

Two pictures. Spring: a wattle tree with gold flowers. Autumn: a tree with orange leaves falling.

In spring in Victoria, wattles flower. A **wattle** is a tree with small gold flowers. Wattle Walk is a walk in the Royal Botanic Gardens Victoria to see the wattles in flower on National Wattle Day.

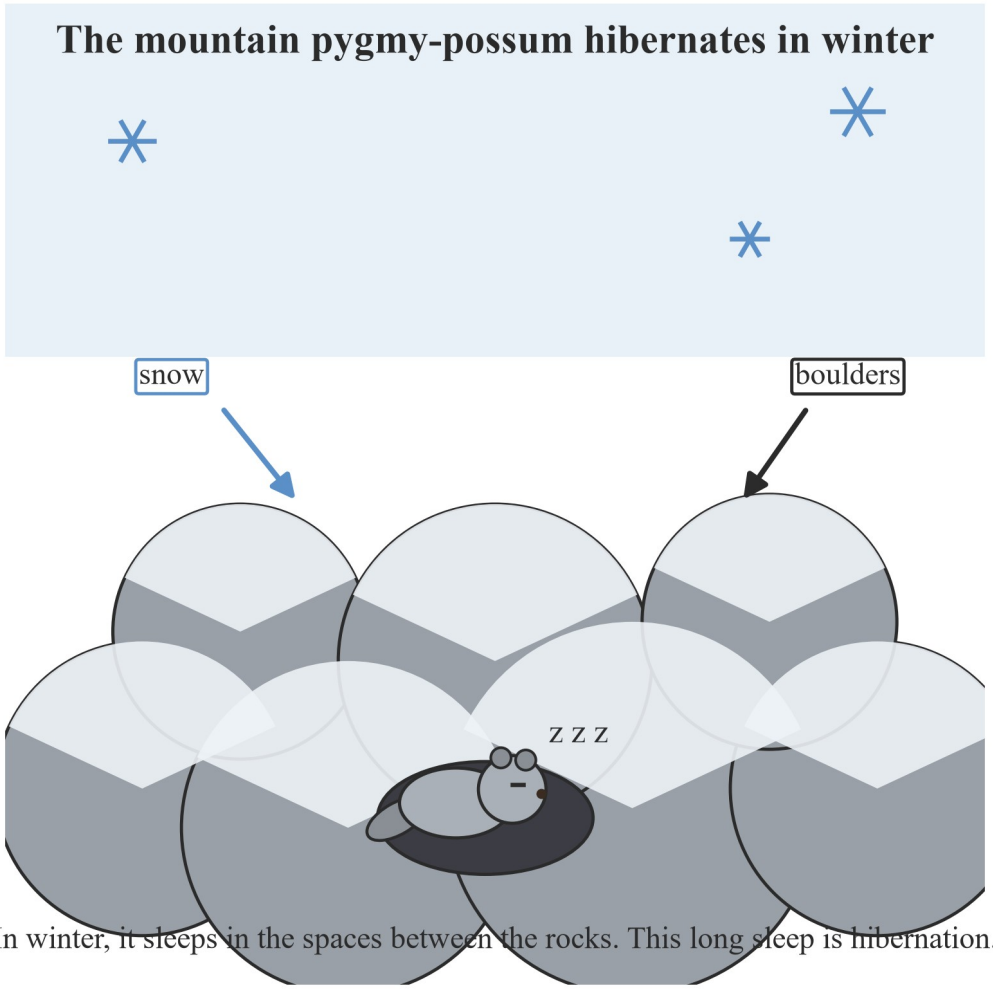
Source: Royal Botanic Gardens Victoria, Wattle Walk, 2026. Retrieved 2026-08-20.

In autumn, the leaves of many trees in Victoria change colour and fall. Parks Victoria says autumn has clear, crisp days and cooler weather.

Source: Parks Victoria, Where to walk this Autumn/Winter, 2023. Retrieved 2026-08-20.

Animals change with the seasons

Some animals **hibernate**. To hibernate means to have a long, deep sleep through winter. The animal sleeps and does not eat. This long sleep is **hibernation**.



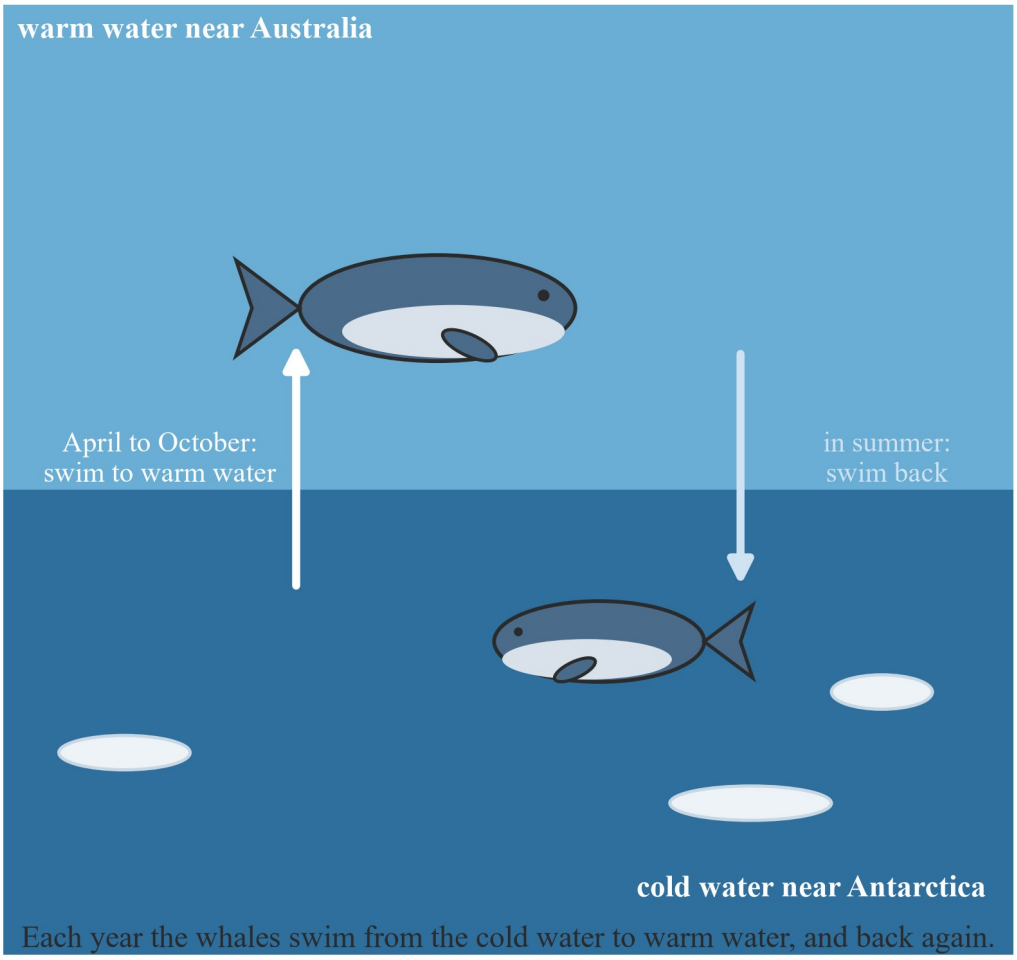
A mountain pygmy-possum asleep in a dark space between big rocks, with snow on top of the rocks and snowflakes falling. Labels: snow, boulders.

The mountain pygmy-possum is a small animal. It lives in the snowy mountains of Victoria. In winter, snow covers the big rocks, called **boulders**. The possum hibernates in the spaces between the boulders, safe under the snow.

Source: Parks Victoria, Pygmy-possum's rocky mountain home free of unwelcome willows for the winter, 2023. Retrieved 2026-08-20.

Some animals **migrate**. To migrate means to travel a long way at the same time each year. This long trip is **migration**.

Humpback whales travel a long way



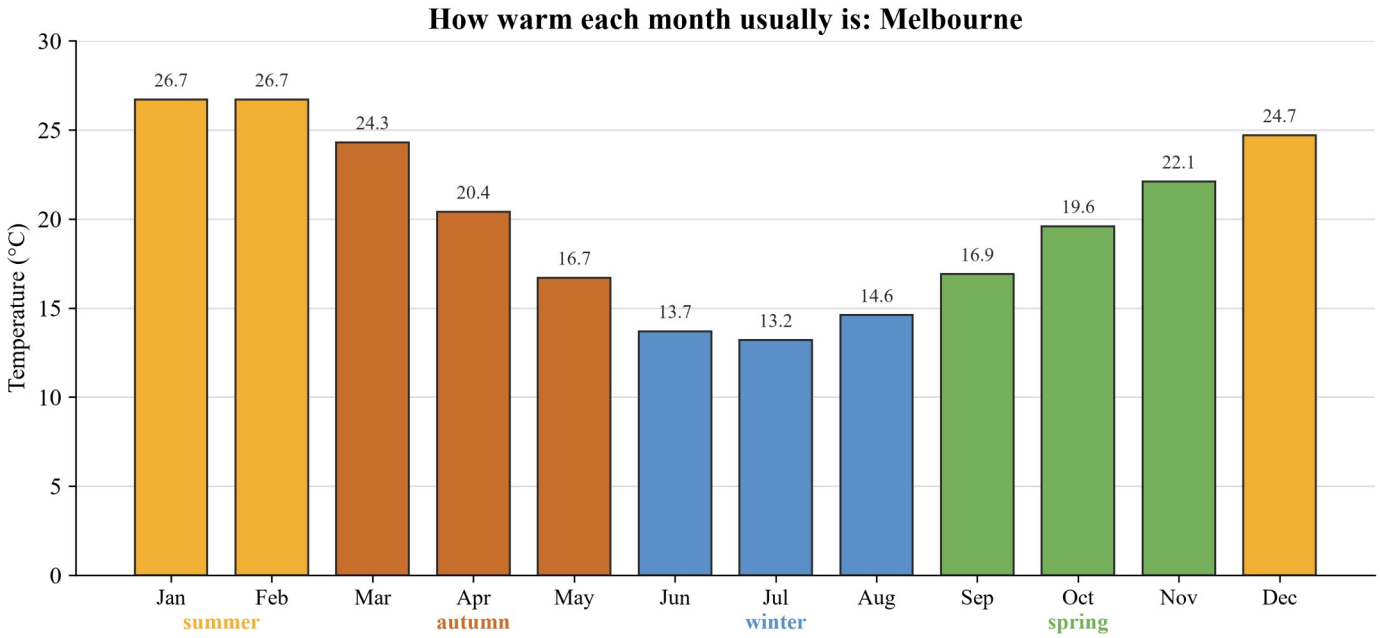
Humpback whales in the sea. An arrow shows them swimming from cold water near Antarctica up to warm water near Australia from April to October, and another arrow shows them swimming back in summer.

Humpback whales are very big animals that live in the sea. They migrate. From April to October each year, they swim from the cold water near Antarctica to warm water near Australia. In summer they swim back to the cold water.

Source: Parks Victoria, Wildlife viewing, n.d. Retrieved 2026-08-20.

The pattern helps us plan

The seasons follow a pattern. In Victoria, June, July and August are the cold months.



Each bar shows how warm the daytime usually is in that month.

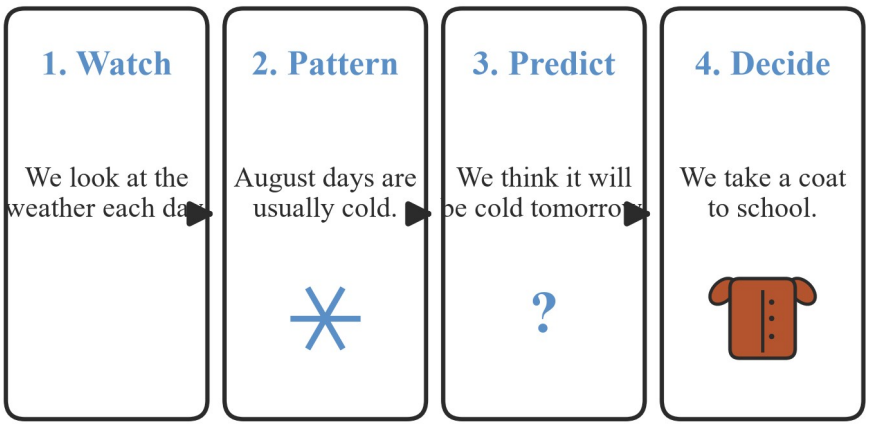
A bar graph for Melbourne: one bar for each month showing how warm the daytime usually is. The bars are coloured by season: December to February yellow (summer), March to May orange (autumn), June to August blue (winter), September to November green (spring).

Look at the bars. The tall bars are the warm months. The short bars are the cold months. December, January and February are warm. June, July and August are cold. Then the pattern starts again.

Source: Bureau of Meteorology, Climate statistics for Australian locations (Melbourne Airport), n.d. Retrieved 2026-08-20.

When we know the pattern, we can **predict**. A **prediction** says what we think will happen next. In August, we predict cold days. Then we make a **decision**. A decision is what we choose to do.

We watch the weather, then we get ready



The weather follows a pattern. The pattern helps us get ready.

A prediction says what we think will happen next.

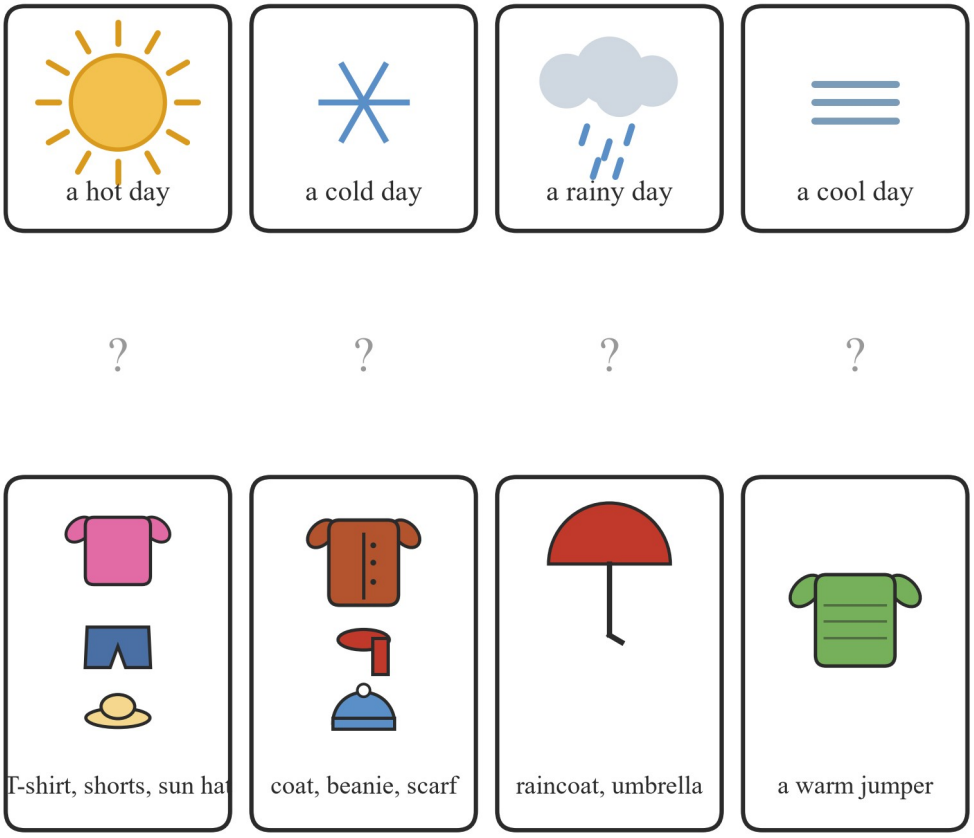
Four boxes joined by arrows: 1 Watch (we look at the weather each day), 2 Pattern (August days are usually cold), 3 Predict (we think it will be cold tomorrow), 4 Decide (we take a coat to school).

We watch the weather. We see the pattern. We predict. We decide. The weather and the seasons affect what we do.

What will we wear?

We choose our clothes for the weather and for the season. This is a decision too.

What do we wear?



Draw a line from each weather tile to the clothes that fit it.

Four weather tiles (a hot day, a cold day, a rainy day, a cool day) above four clothes tiles (T-shirt, shorts, sun hat; coat, beanie, scarf; raincoat, umbrella; a warm jumper), with question marks between.

- On a hot day we wear a T-shirt and shorts and a sun hat.
- On a cold day we wear a coat, a beanie and a scarf. A **beanie** is a soft, warm hat. A **scarf** is warm cloth we wear around the neck.
- On a rainy day we take a raincoat and an umbrella.
- On a cool day we wear a warm jumper.

In winter we predict cold days, so we take a coat to school. In summer we predict hot days, so we wear a sun hat.

Make your own weather record

My weather record

day	the weather (draw it)	cold or warm?	what I wore
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Watch the weather each school day. Fill in one row each day.

A blank table with five rows for Monday to Friday and columns for day, the weather (draw it), cold or warm, and what I wore.

Watch the weather each school day for one week. Draw the weather. Say if the day is cold or warm. Say what you wore. Then look for the pattern.

Worked examples

Do these with the teacher. Use what you can see here.

Worked example 1 — read the weather record

Look at the week record from Melbourne.

One week of winter weather: Melbourne, August 2026

day	coldest (°C)	warmest (°C)	rain (mm)
Monday 3	8.2	15.9	0
Tuesday 4	7.6	13.6	0.6
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Each day the temperature changed, and some days had rain.

A table of one week of winter weather in Melbourne, August 2026: Monday 3 (8.2, 15.9, 0), Tuesday 4 (7.6, 13.6, 0.6), Wednesday 5 (9.4, 13.4, 3.6), Thursday 6 (8.1, 16.8, 7.2), Friday 7 (10.3, 16.0, 0.2), with columns for day, coldest, warmest and rain.

Which day had the most rain?

Working	Say why
Read the rain column: 0, 0.6, 3.6, 7.2, 0.2.	The rain column shows the rain for each day.
7.2 is the biggest number.	The biggest number is the most rain.
7.2 is on Thursday 6.	Read across the row.

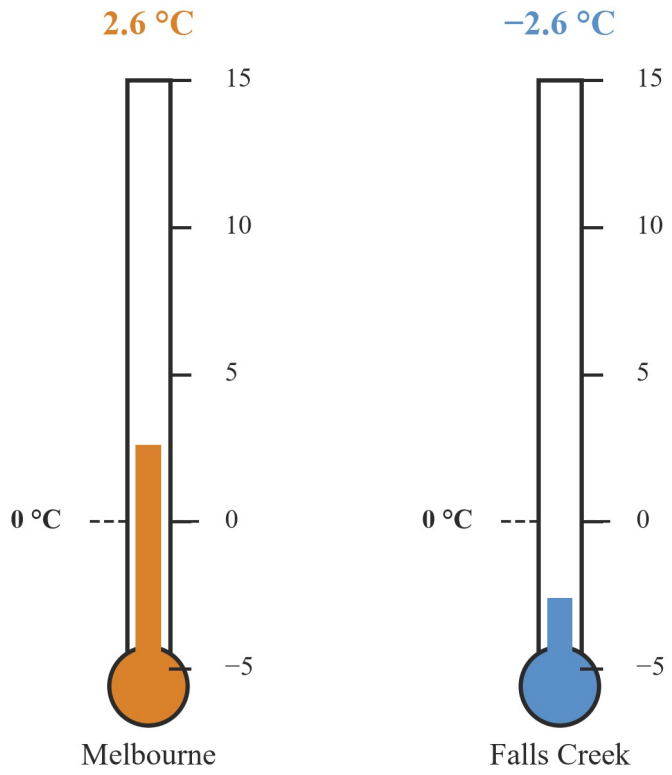
∴ Thursday 6 August had the most rain.

Worked example 2 — above zero or below zero?

Look at the two thermometers for Saturday 1 August 2026.

How cold was it? The coldest temperature on Saturday 1 August 2026

A thermometer tells us the temperature.



Falls Creek was colder than 0 °C. The sign − means colder than zero.

Two thermometers for Saturday 1 August 2026. Melbourne shows 2.6 °C, above the 0 °C line. Falls Creek shows −2.6 °C, below the 0 °C line.

Which place was colder than 0 °C?

Working	Say why
Melbourne shows 2.6 °C.	2.6 °C is above the 0 °C line.
Falls Creek shows −2.6 °C.	The sign − means colder than zero.
−2.6 °C is below the 0 °C line.	Below zero is colder than zero.

∴ Falls Creek was colder than 0 °C. Melbourne was above 0 °C.

Worked example 3 — which season is it?

It is August in Victoria. Which season is it?

Working	Say why
Winter in Victoria is June, July and August.	The seasons follow a pattern.
August is in that list.	June, July, August are the winter months.
Winter is cold.	We predict cold days in August.

∴ August is in winter in Victoria. We predict cold days.

Worked example 4 — what will we wear?

Tomorrow we predict a cold day and rain. What do we wear and take?

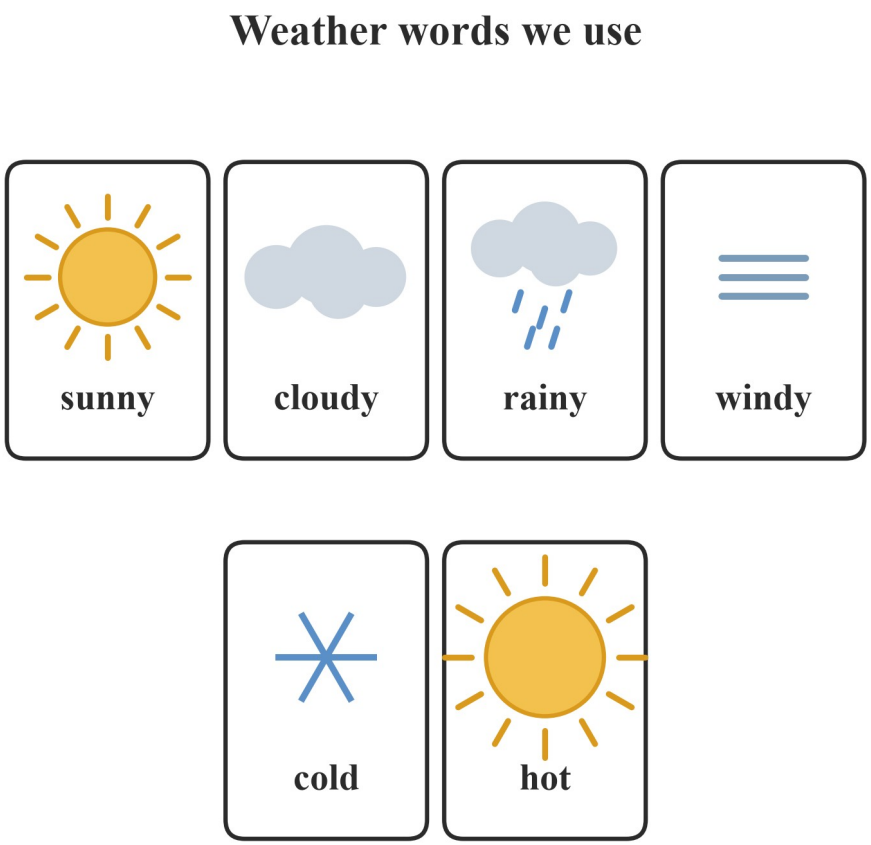
Working	Say why
A cold day: coat, beanie, scarf.	We choose clothes for the weather.
Rain: raincoat and umbrella.	A raincoat and umbrella keep us dry.
We wear the coat and beanie, and take the umbrella.	One decision for cold, one for rain.

∴ We wear a coat and a beanie, and we take an umbrella.

Practice questions

The teacher reads all the words. The child says or does the answer. The teacher puts the answer down.

Q1. *(Foundation)* Look at the weather words.



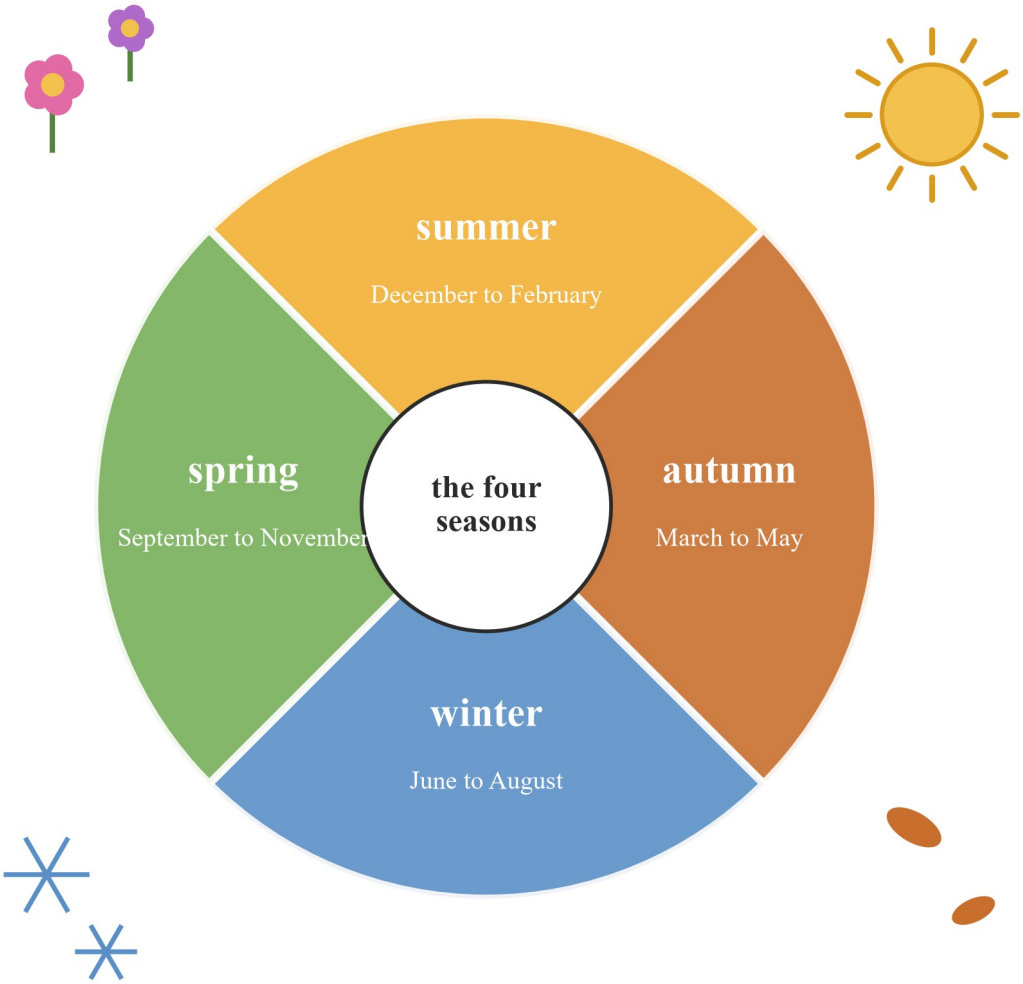
Each day, we can look outside and choose the weather words.

Six weather cards: sunny (a sun), cloudy (a cloud), rainy (a cloud with rain), windy (wind lines), cold (a snowflake) and hot (a big sun).

a. Point to the card for rainy.
b. Point to the card for cold.
c. Say two weather words.

Q2. *(Foundation)* Look at the seasons wheel.

One year has four seasons



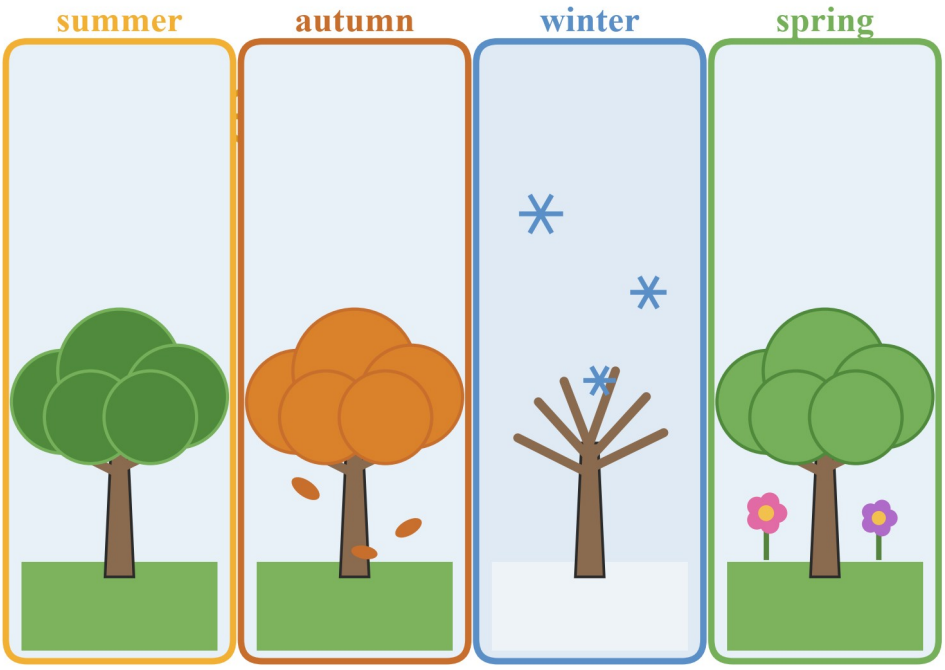
In Victoria, summer is in December, January and February.

A wheel with four parts: summer (December to February), autumn (March to May), winter (June to August) and spring (September to November), with a sun, falling leaves, snowflakes and flowers at the corners.

a. Point to winter.
b. Say how many seasons there are in one year.
c. Say the season that comes after winter.

Q3. *(Foundation)* Look at the tree through the four seasons.

One tree through the four seasons



In autumn the leaves change colour and fall. In spring new leaves grow.

The same tree in four pictures: summer with green leaves, autumn with orange falling leaves, winter with bare branches and snow, spring with new leaves and flowers.

a. Point to the tree with no leaves.
b. Say the season when the leaves fall.
c. Say the season when new leaves grow.

Q4. *(Level 1)* Look at the week record from Melbourne.

One week of winter weather: Melbourne, August 2026

day	coldest (°C)	warmest (°C)	rain (mm)
Monday 3	8.2	15.9	0
Tuesday 4	7.6	13.6	0.6
Wednesday 5	9.4	13.4	3.6
Thursday 6	8.1	16.8	7.2
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Each day the temperature changed, and some days had rain.

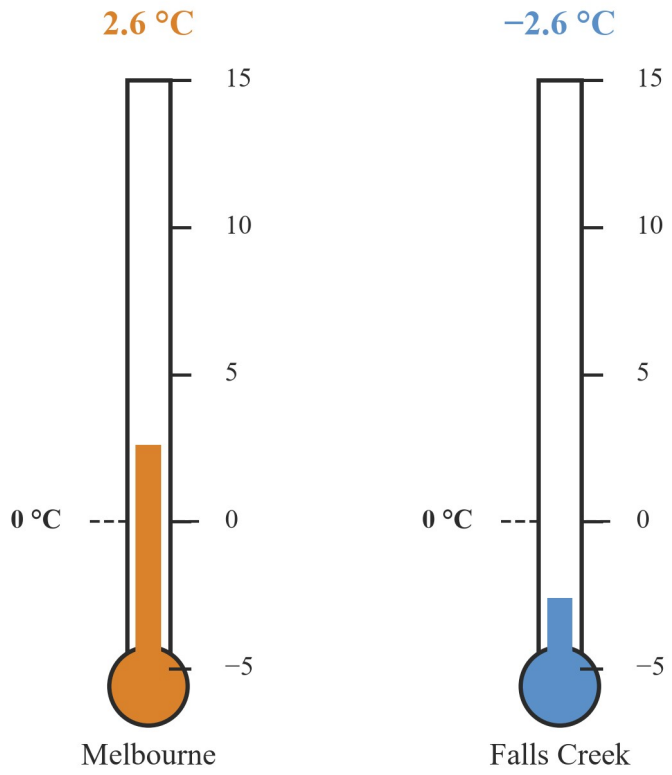
A table of one week of winter weather in Melbourne, August 2026: Monday 3 (8.2, 15.9, 0), Tuesday 4 (7.6, 13.6, 0.6), Wednesday 5 (9.4, 13.4, 3.6), Thursday 6 (8.1, 16.8, 7.2), Friday 7 (10.3, 16.0, 0.2), with columns for day, coldest, warmest and rain.

a. The warmest temperature on Friday 7 was ____ °C.
b. The day with 3.6 mm of rain was ____
c. Say yes or no: did the weather change from day to day?

Q5. *(Level 1)* Look at the two thermometers.

How cold was it? The coldest temperature on Saturday 1 August 2026

A thermometer tells us the temperature.



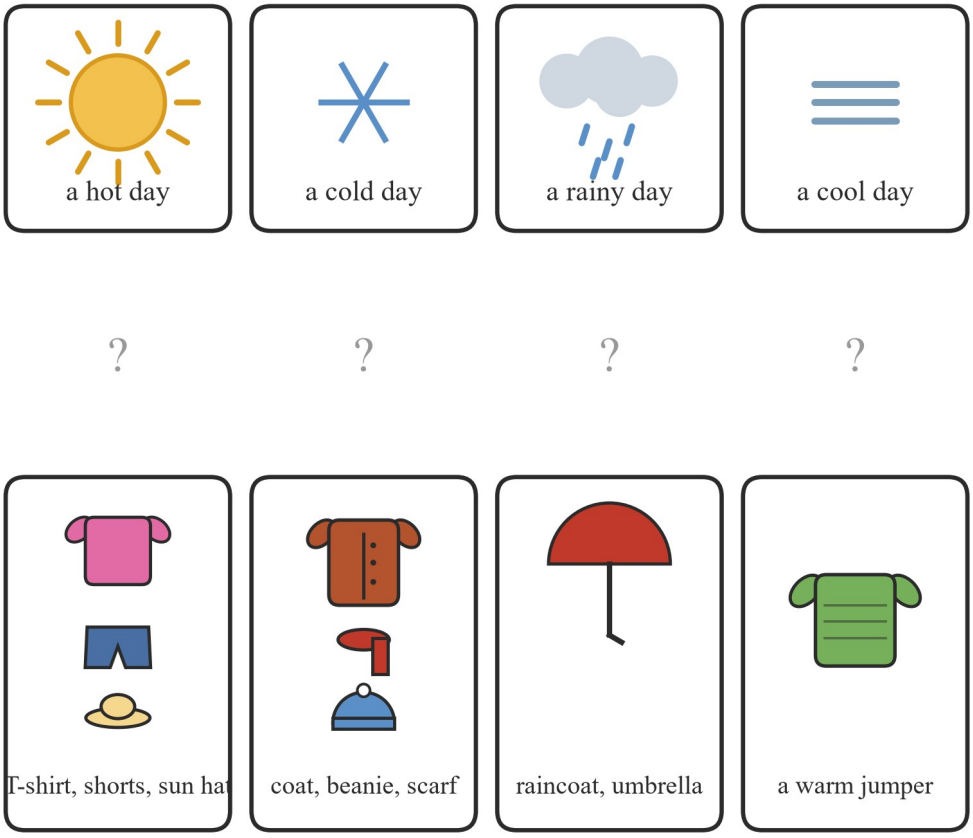
Falls Creek was colder than 0 °C. The sign − means colder than zero.

Two thermometers for Saturday 1 August 2026. Melbourne shows 2.6 °C, above the 0 °C line. Falls Creek shows −2.6 °C, below the 0 °C line.

a. Say the coldest temperature in Melbourne.
b. Say the coldest temperature at Falls Creek.
c. Which one is colder than 0 °C?

Q6. *(Level 1)* Match each weather tile to the clothes that fit it.

What do we wear?



Draw a line from each weather tile to the clothes that fit it.

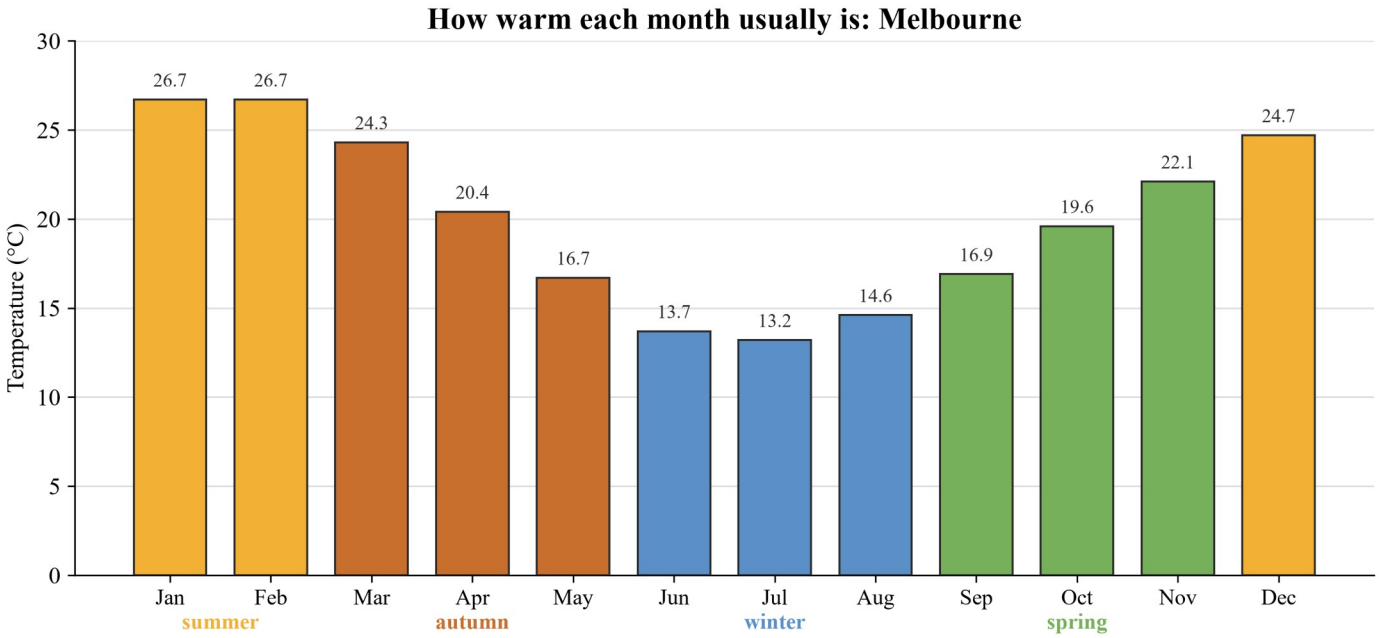
Four weather tiles (a hot day, a cold day, a rainy day, a cool day) above four clothes tiles (T-shirt, shorts, sun hat; coat, beanie, scarf; raincoat, umbrella; a warm jumper), with question marks between.

a. a hot day → ____
b. a rainy day → ____
c. a cold day → ____

Q7. *(Level 1)* Say the season for these months in Victoria.

a. December, January, February → ____
b. June, July, August → ____
c. March, April, May → ____

Q8. *(Level 2)* Look at the bars for Melbourne.

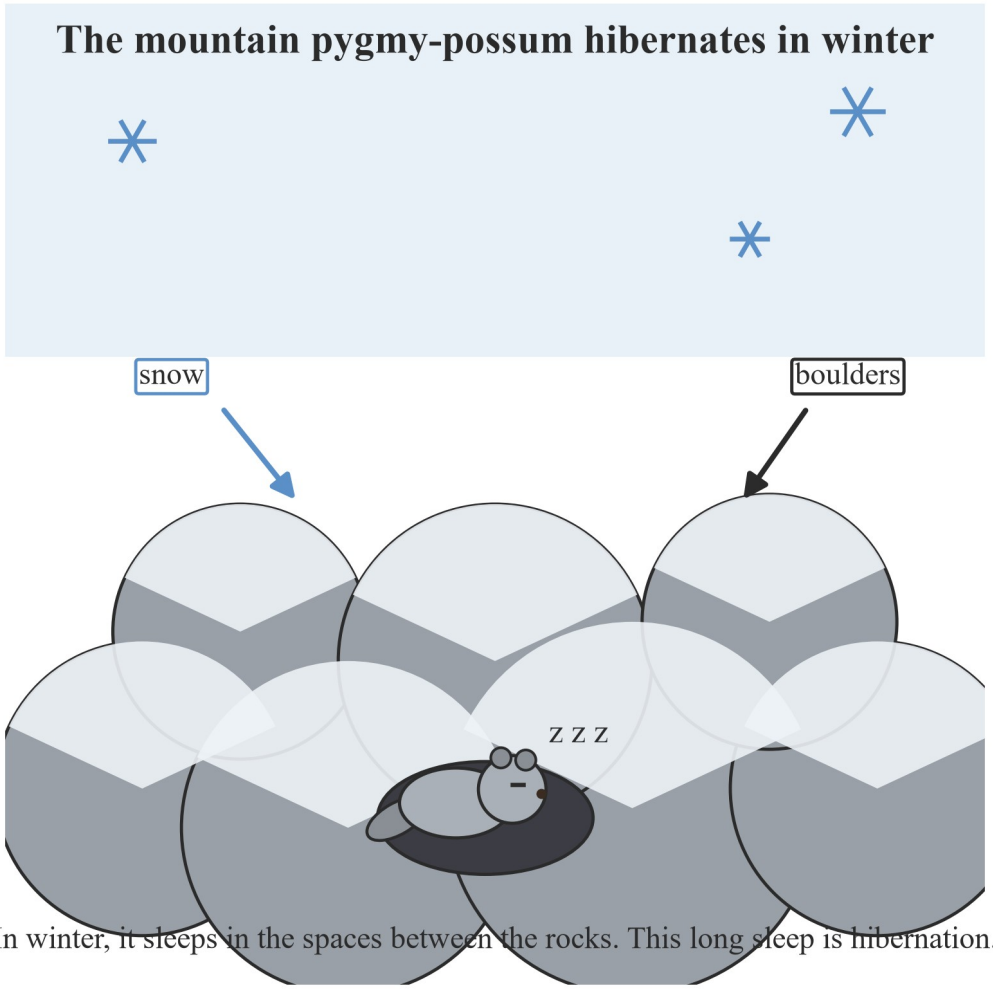


Each bar shows how warm the daytime usually is in that month.

A bar graph for Melbourne: one bar for each month showing how warm the daytime usually is. The bars are coloured by season: December to February yellow (summer), March to May orange (autumn), June to August blue (winter), September to November green (spring).

a. Say two months that are usually warm.
b. Say two months that are usually cold.
c. Say how the bars show the pattern of the seasons.

Q9. *(Level 2)* The mountain pygmy-possum hibernates.

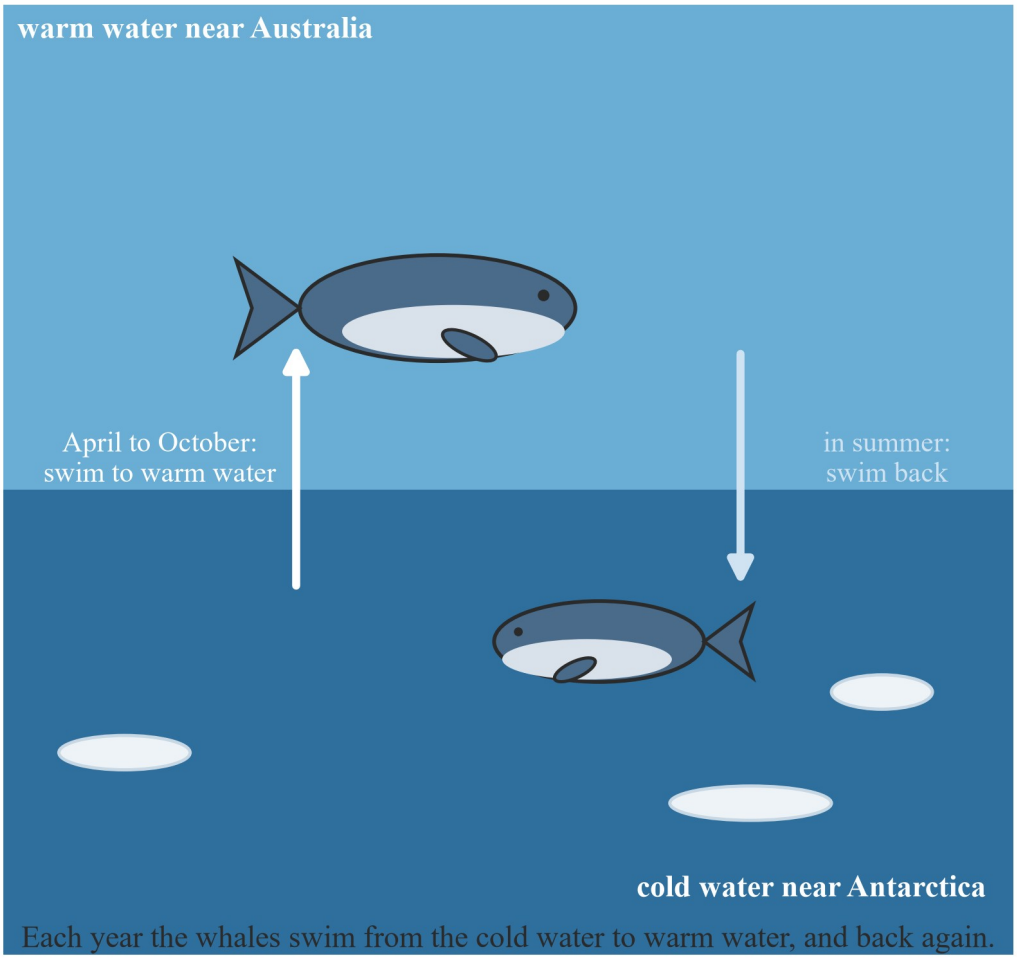


A mountain pygmy-possum asleep in a dark space between big rocks, with snow on top of the rocks and snowflakes falling. Labels: snow, boulders.

a. Say where the possum sleeps in winter.
b. Say what hibernate means.
c. Is hibernation for winter or for summer?

Q10. *(Level 2)* Humpback whales migrate.

Humpback whales travel a long way

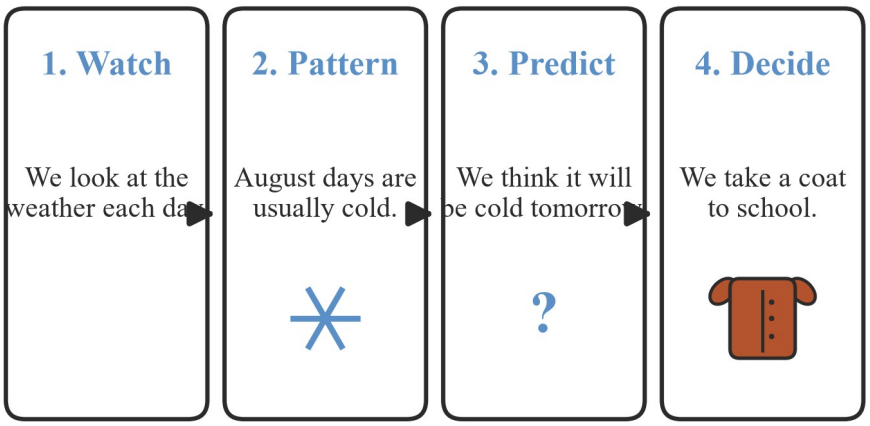


Humpback whales in the sea. An arrow shows them swimming from cold water near Antarctica up to warm water near Australia from April to October, and another arrow shows them swimming back in summer.

a. Say where the whales swim from April to October.
b. Say when the whales swim back to the cold water.
c. Say the word for this long trip at the same time each year.

Q11. *(Level 2)* Look at the watch, pattern, predict, decide boxes.

We watch the weather, then we get ready



The weather follows a pattern. The pattern helps us get ready.

A prediction says what we think will happen next.

Four boxes joined by arrows: 1 Watch (we look at the weather each day), 2 Pattern (August days are usually cold), 3 Predict (we think it will be cold tomorrow), 4 Decide (we take a coat to school).

a. Say what we do first.
b. Say what a prediction is.
c. Tomorrow we predict cold and rain. Say one decision.

Q12. *(Level 2)* Use your weather record.

My weather record

day	the weather (draw it)	cold or warm?	what I wore
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Watch the weather each school day. Fill in one row each day.

A blank table with five rows for Monday to Friday and columns for day, the weather (draw it), cold or warm, and what I wore.

a. Draw the weather for one day.
b. Say if the day was cold or warm.
c. Say what you wore, and say if it was a good decision.

Answers

Q1. a. the rainy card (a cloud with rain) b. the cold card (a snowflake) c. any two, e.g. sunny, windy.

Q2. a. the blue part b. four c. spring.

Q3. a. the winter tree b. autumn c. spring.

Q4. a. 16.0 b. Wednesday 5 c. yes.

Q5. a. 2.6 °C b. −2.6 °C c. Falls Creek.

Q6. a. T-shirt, shorts, sun hat b. raincoat, umbrella c. coat, beanie, scarf.

Q7. a. summer b. winter c. autumn.

Q8. a. any two of December, January, February (also November, March) b. any two of June, July, August c. the warm months and cold months come in the same order each year.

Q9. a. in the spaces between the boulders, under the snow b. to have a long, deep sleep through winter c. winter.

Q10. a. to the warm water near Australia b. in summer c. migration (to migrate).

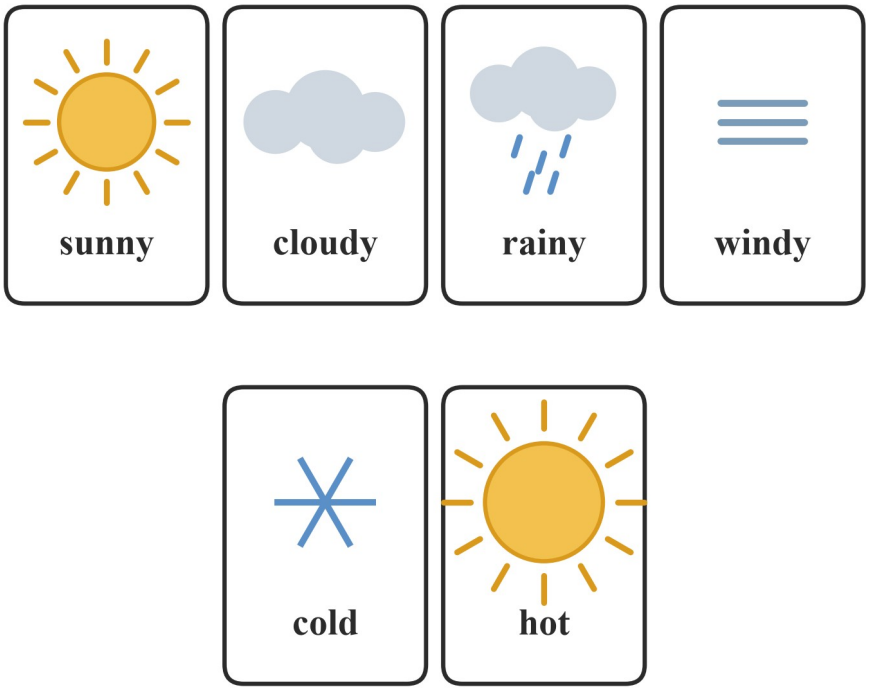
Q11. a. watch the weather b. a prediction says what we think will happen next c. any one, e.g. take a coat and an umbrella.

Q12. a. any true drawing b. any true saying c. any true saying, e.g. *I wore a jumper. It was a good decision because the day was cold.*

Fully-worked solutions

Q1.

Weather words we use



Each day, we can look outside and choose the weather words.

Six weather cards: sunny (a sun), cloudy (a cloud), rainy (a cloud with rain), windy (wind lines), cold (a snowflake) and hot (a big sun).

a. Point to the card with a cloud and rain. That is rainy.
b. Point to the card with a snowflake. That is cold.
c. Say any two: sunny, cloudy, rainy, windy, cold, hot.

∴ The cards name the weather words.

Q2.

a. Winter is the blue part of the wheel. Point to it.
b. One year has four seasons.
c. After winter comes spring.

∴ Four seasons; spring comes after winter.

Q3.

a. The winter tree has no leaves. Point to it.
b. The leaves fall in autumn.
c. New leaves grow in spring.

∴ No leaves: winter. Leaves fall: autumn. New leaves: spring.

Q4.

a. Read across the Friday 7 row to the warmest column: 16.0 °C.
b. 3.6 mm of rain is on the Wednesday 5 row.
c. The numbers change from day to day, so yes.

∴ a. 16.0 °C b. Wednesday 5 c. yes, the weather changed each day.

Q5.

a. The Melbourne thermometer shows 2.6 °C.
b. The Falls Creek thermometer shows −2.6 °C.
c. −2.6 °C is below the 0 °C line, so Falls Creek is colder than 0 °C.

∴ Melbourne 2.6 °C; Falls Creek −2.6 °C; Falls Creek is colder than 0 °C.

Q6.

a. A hot day is for a T-shirt, shorts and a sun hat.
b. A rainy day is for a raincoat and an umbrella.
c. A cold day is for a coat, a beanie and a scarf.

∴ Hot → T-shirt, shorts, sun hat. Rainy → raincoat, umbrella. Cold → coat, beanie, scarf.

Q7.

a. December, January and February are summer in Victoria.
b. June, July and August are winter.
c. March, April and May are autumn.

∴ a. summer b. winter c. autumn.

Q8.

a. The tall bars are warm months, e.g. January and February.
b. The short bars are cold months, e.g. July and August.
c. The bars go down, then up, in the same order every year. That order is the pattern of the seasons.

∴ Warm: e.g. January, February. Cold: e.g. July, August. The same order each year is the pattern.

Q9.

a. The possum sleeps in the spaces between the boulders, under the snow.
b. To hibernate is to have a long, deep sleep through winter.
c. Hibernation is for winter, when it is cold and snowy.

∴ Between the boulders; a long deep sleep through winter; winter.

Q10.

a. From April to October, the whales swim to the warm water near Australia.
b. In summer they swim back to the cold water.
c. The long trip at the same time each year is migration.

∴ To warm water near Australia; in summer; migration.

Q11.

a. First we watch the weather each day.
b. A prediction says what we think will happen next.
c. For cold and rain, one decision is: take a coat and an umbrella.

∴ Watch first; a prediction says what will happen next; e.g. take a coat and an umbrella.

Q12.

a. Draw the sky you saw, e.g. a cloud with rain.

b. Say cold or warm, e.g. *the day was cold*.
c. Say what you wore, e.g. *I wore a jumper. It was a good decision because the day was cold.*

∴ Any true drawing and saying is right. A good decision fits the weather.

Earth in the solar system; patterns in the changing sky

This is read with the teacher. The teacher reads all the words. The child looks, says, points and does. The child does not need to read.

> *Earth is one of 8 planets in our solar system; observing the sky reveals patterns in the changing positions of the Sun, Moon, planets and stars* — VC2S2U08
>
> **Evidences:** They identify celestial objects and describe patterns they see in the sky.

In this topic we will:

- look at pictures and models of the solar system, and at Earth from space (E01)
- sort the things we see into the day sky and the night sky (E02)
- keep a class Moon diary for a month, find the pattern and make predictions (E03)
- find patterns that come back each day, each month and each year, and hear the special names blue Moon, blood Moon and super Moon (E04)

Theory

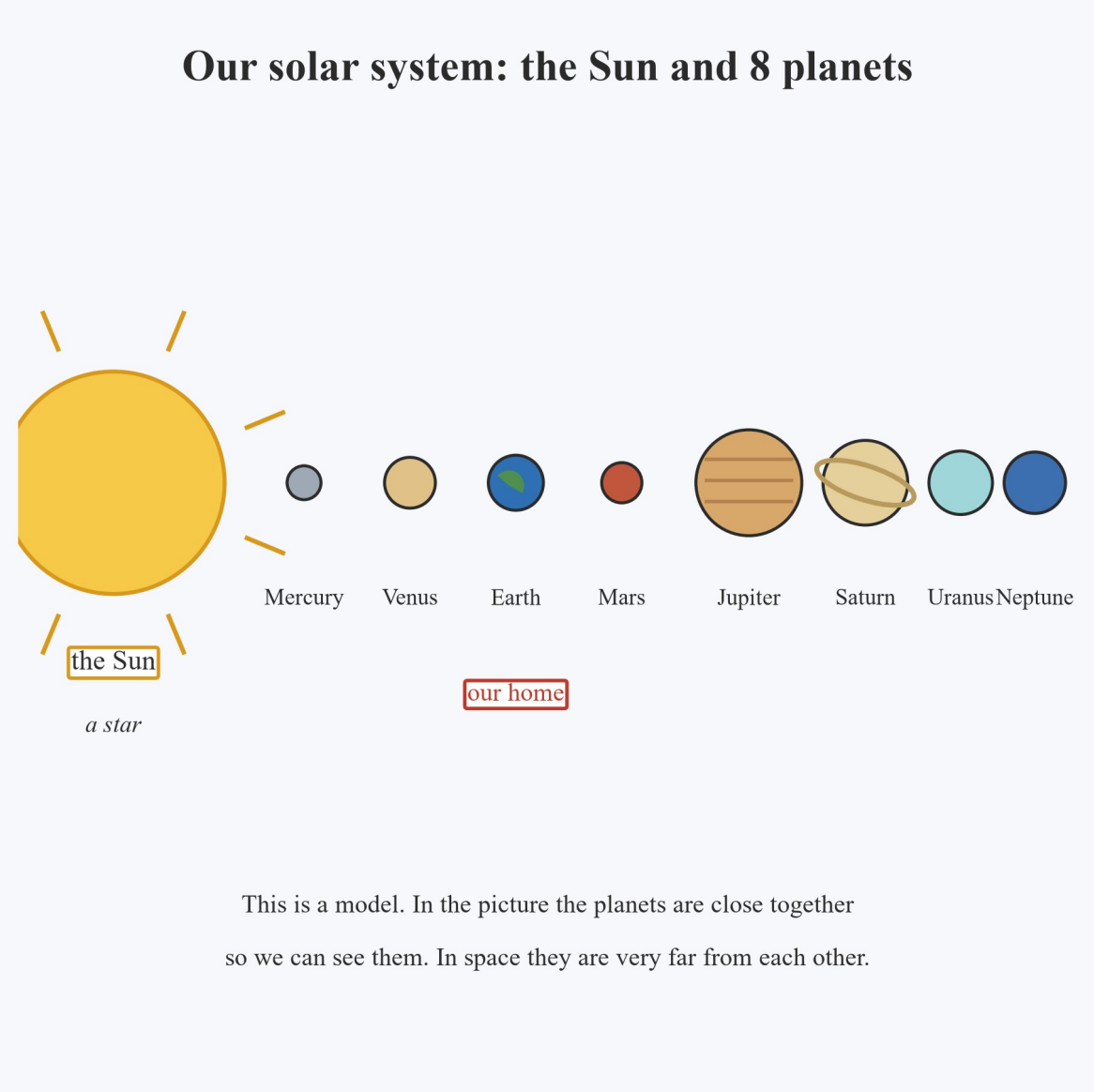
Our home in space

Space is the dark place outside Earth. The Sun, the Moon and the stars are in space.

A **star** makes its own light. The Sun is a star.

A **planet** is a big ball in space. A planet does not make its own light. Earth is a planet.

Our **solar system** is the Sun and the 8 planets.



A model of our solar system: the Sun on the left, then the 8 planets in a row, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, with Earth marked our home, and a note that in space the planets are very far from each other.

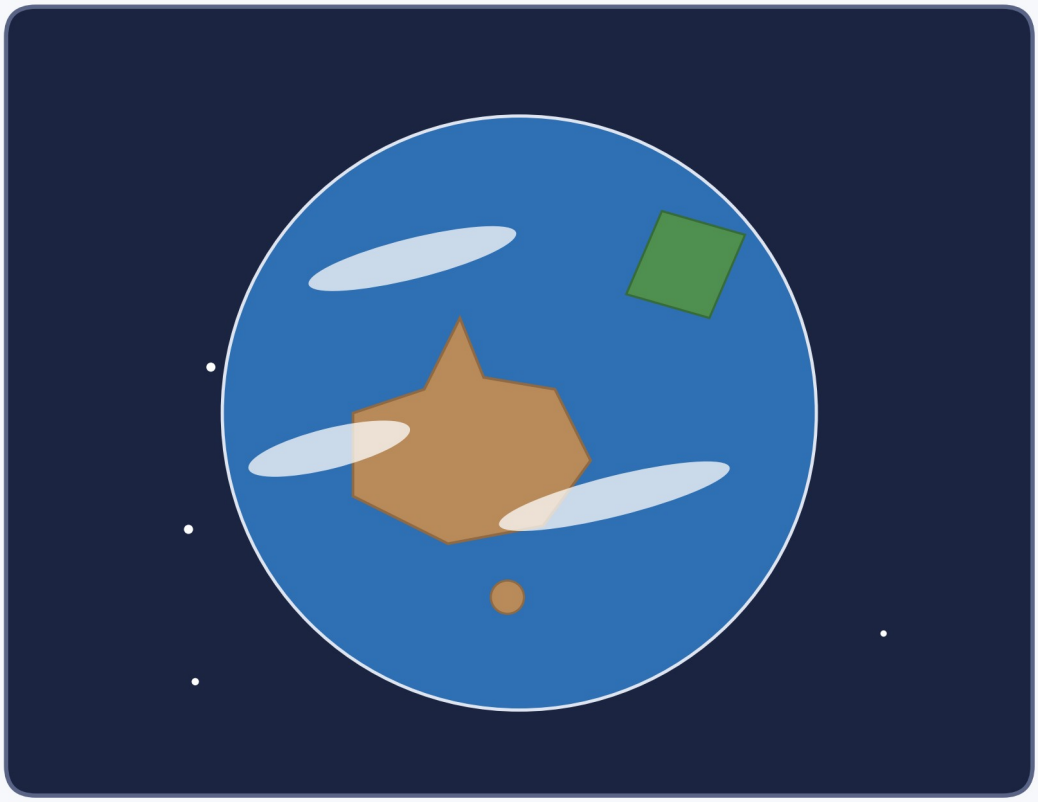
- The Sun is a star.
- Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune are the 8 planets.
- Earth is our home. Earth is one of the 8 planets.

A **model** helps us see something that is too big or too far away to see all at once. This picture is a model. The real planets are very far from each other.

Earth, seen from space

Cameras in space take photos of Earth.

Earth, seen from space



The blue parts are water. The brown and green parts are land. We live on the land. Earth is one of the 8 planets.

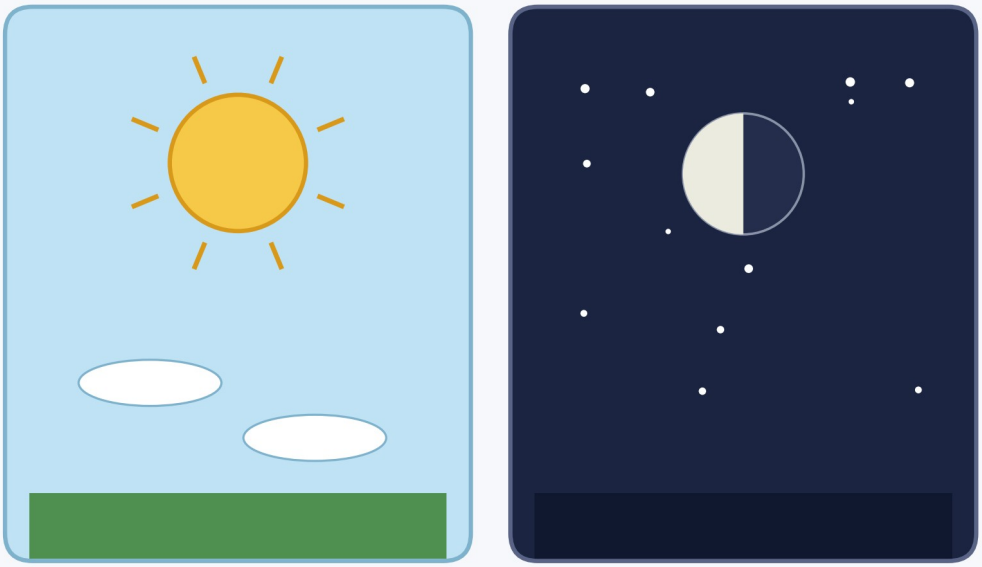
Earth seen from space as a ball in a dark sky with stars: blue water, brown and green land, and white cloud.

- The blue parts are water.
- The brown and green parts are land. We live on the land.
- From space, Earth looks like a ball. Earth is one of the 8 planets.

The day sky and the night sky

In the day, the sky is bright. At night, the sky is dark.

The day sky and the night sky



the day sky

the night sky

We see the Sun in the day. We see the Moon and the stars at night.

Two cards: the day sky with the Sun and clouds, and the night sky with the Moon and stars.

- We see the Sun in the day.
- We see the Moon and the stars at night.

Safety. We never look straight at the Sun.

Some things go with the day. Some things go with the night.

Two cards, in the day and at night, and three tiles to sort: the Sun, the stars and the Moon.

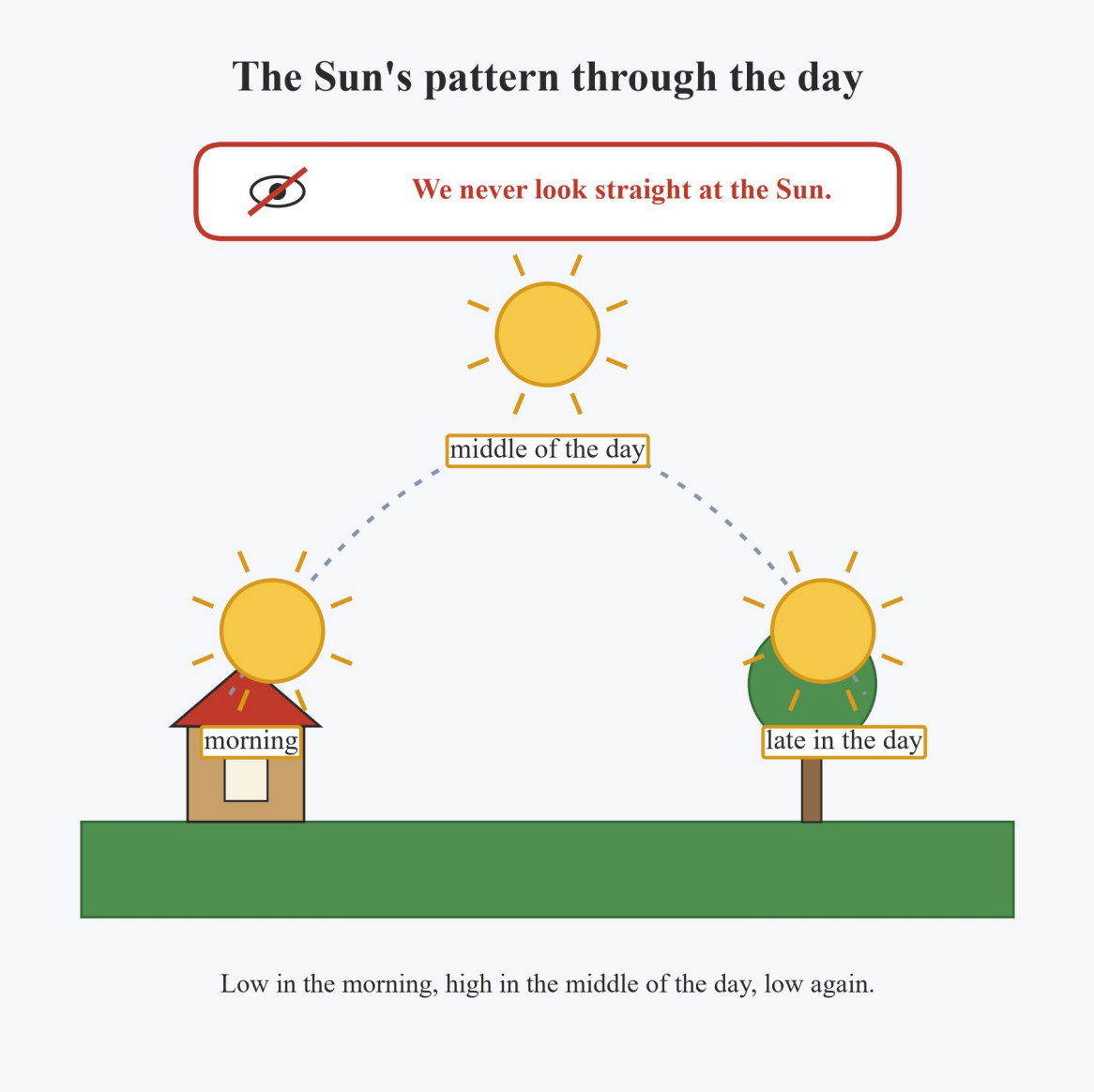
Point to each one. Say where it goes.

- The Sun goes in the day.
- The Moon and the stars go at night.

The Sun's pattern through the day

Safety. We never look straight at the Sun.

We can see where the Sun is in the sky.



Low in the morning, high in the middle of the day, low again.

The Sun low in the morning, high in the middle of the day and low again late in the day over a house and a tree, with a red badge: We never look straight at the Sun.

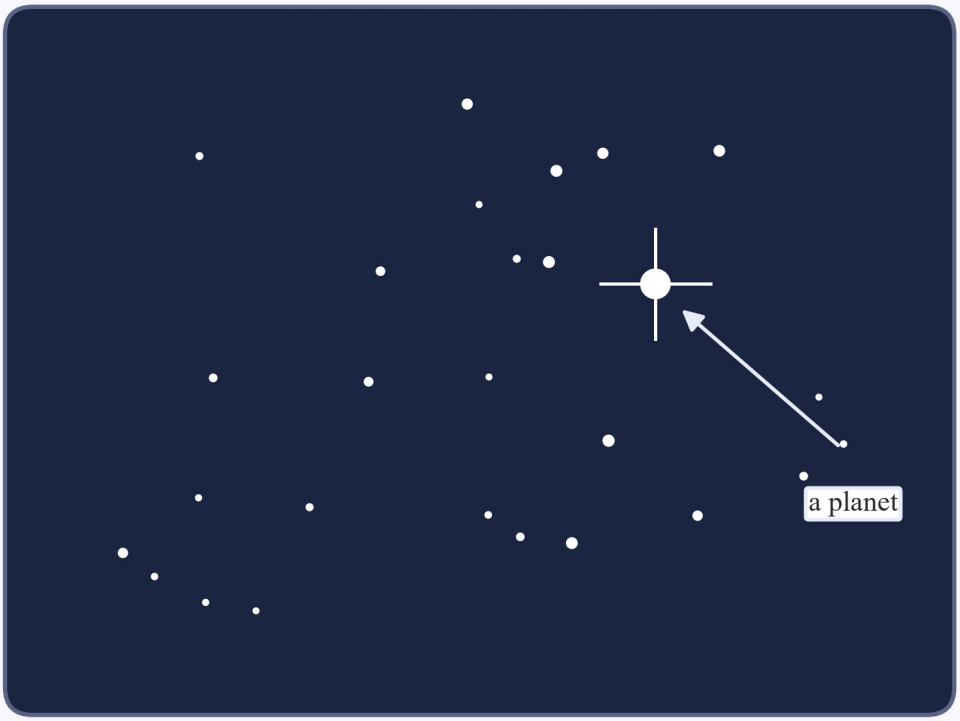
- In the morning the Sun is low.
- In the middle of the day the Sun is high.
- Late in the day the Sun is low again.

This is a pattern. It happens every day.

The night sky

At night we see many stars. Stars look like tiny lights.

Some bright lights are planets



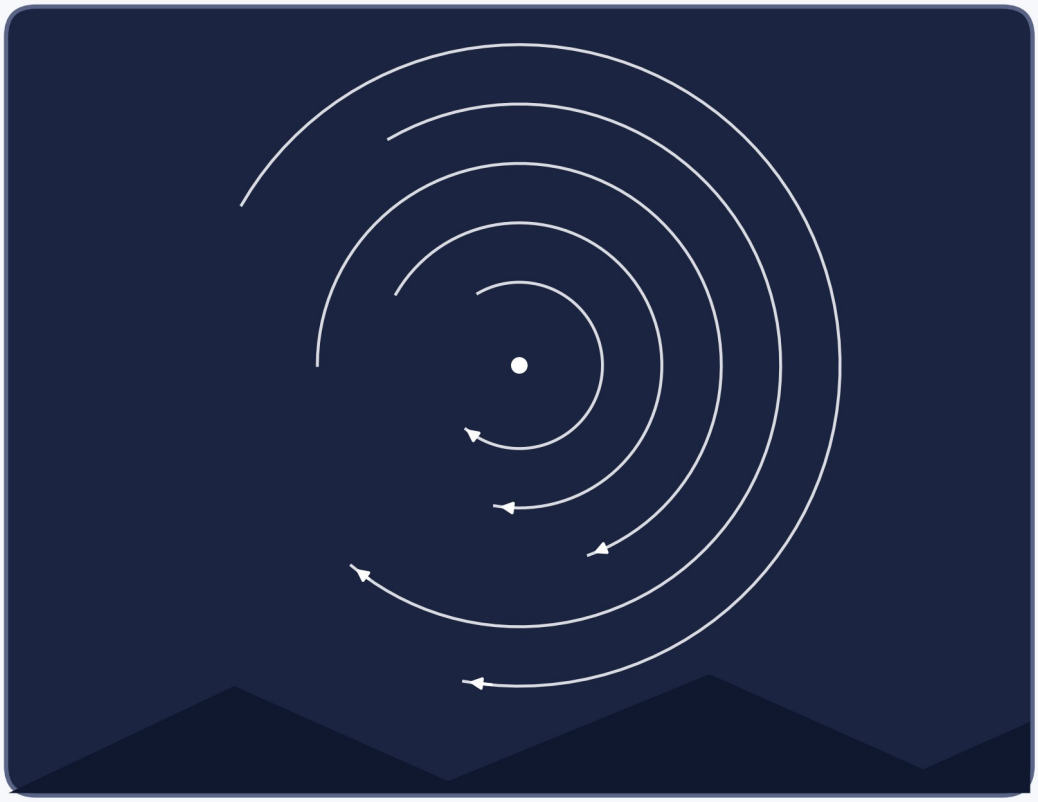
Stars look like tiny lights. A planet can look like a very bright star.

A dark night sky with many tiny stars and one very bright light marked a planet.

Some bright lights in the night sky are planets. A planet can look like a very bright star.

A camera can look up at the night sky for many hours. The photo shows star **trails**. A trail is a line a light makes in a long photo.

Star trails: the stars go around in circles



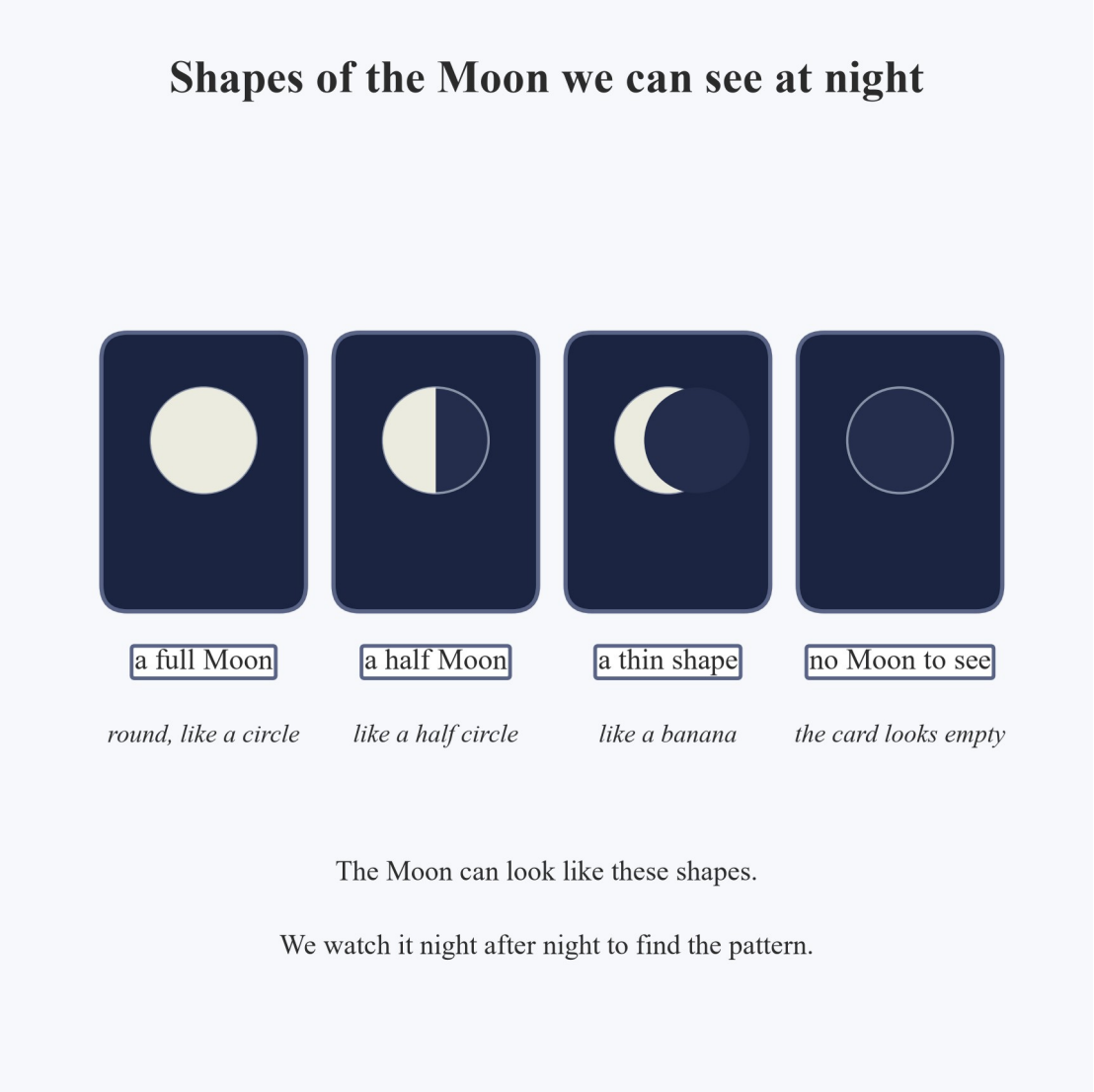
This is what a photo of the night sky looks like when the camera looks up for many hours. The stars make circles around one point in the sky. That is a pattern too.

Star trails: white circle lines around one bright point in a dark sky over hills.

The stars go in circles around one point in the sky. That is a pattern too.

Shapes of the Moon

The Moon can look like different shapes at night.



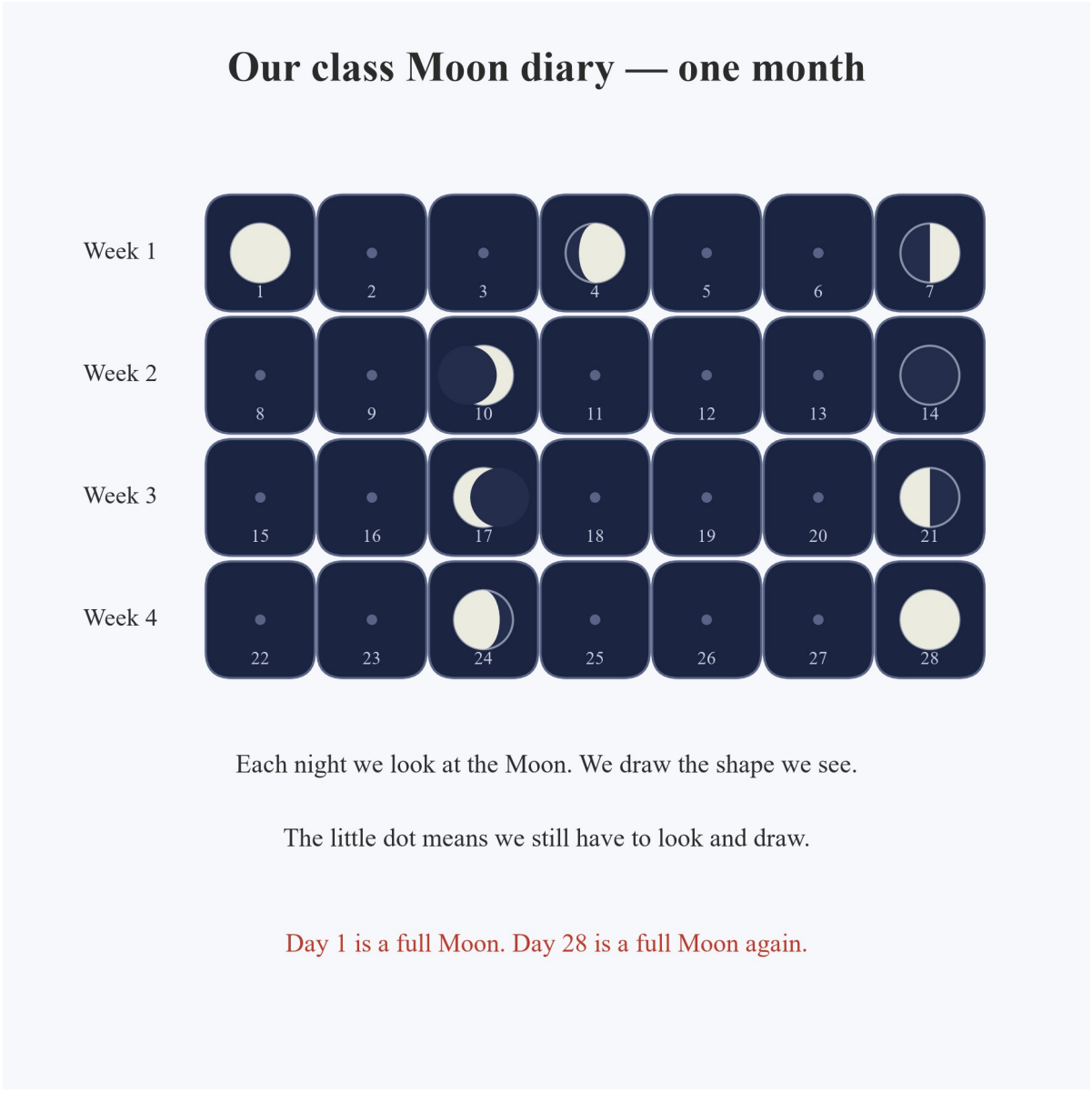
Four night cards: a full Moon round like a circle, a half Moon, a thin shape like a banana, and a card with no Moon to see.

- A **full Moon** is round, like a circle.
- A **half Moon** is like a half circle.
- Sometimes the Moon is a thin shape, like a banana.
- Sometimes there is no Moon to see.

We watch night after night to find the pattern.

Our class Moon diary

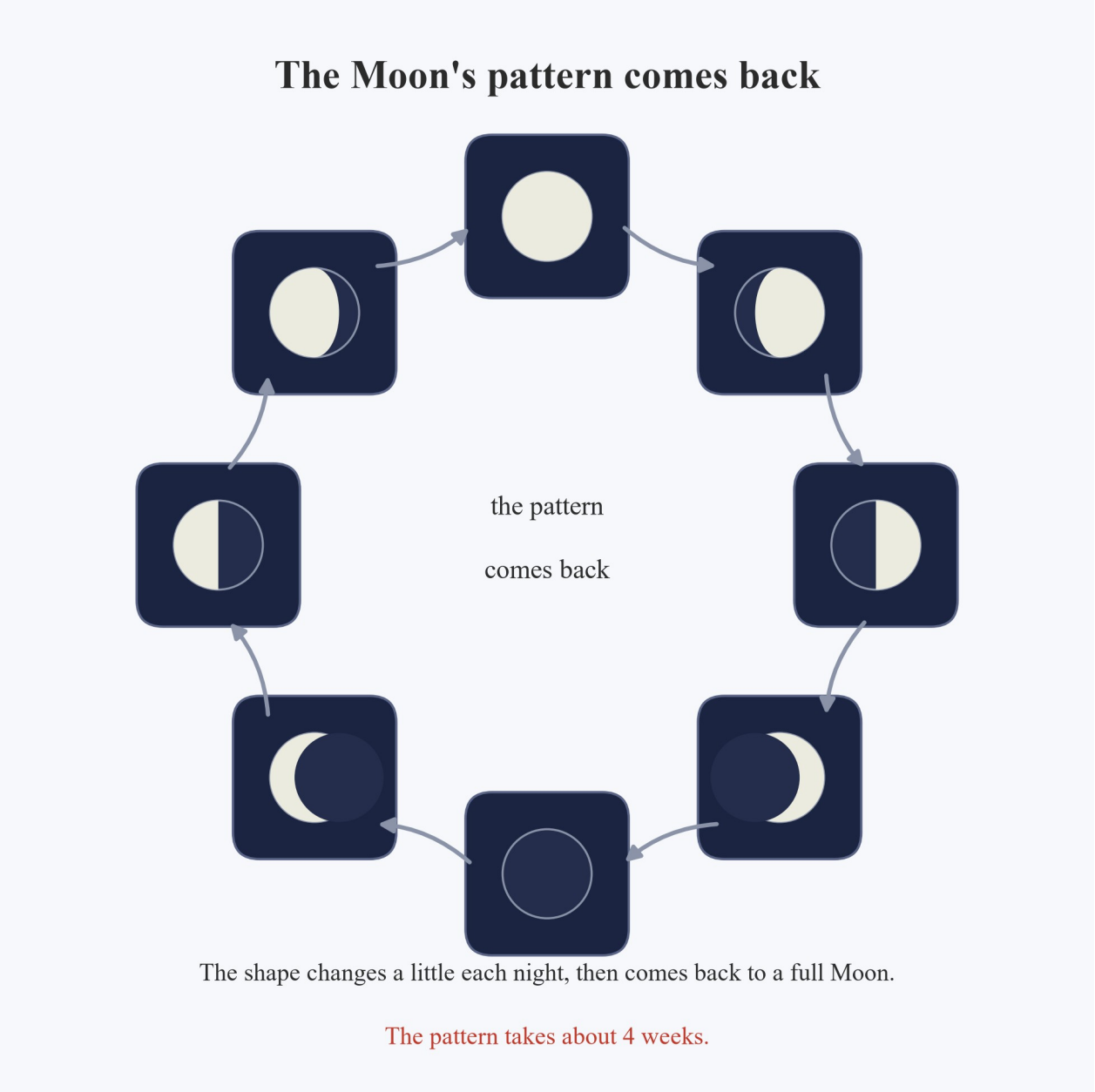
We keep a class Moon **diary**. A diary is something we draw in every day. Each night we look at the Moon and draw the shape we see.



A class Moon diary for one month in four weeks: full Moon on day 1, the shape gets smaller, no Moon on day 14, then more of the Moon, and a full Moon again on day 28.

- Day 1 is a full Moon.
- After that, the shape we see gets smaller each night.
- Day 14: no Moon to see.
- Then, night by night, we see more of the Moon.
- Day 28 is a full Moon again.

The Moon’s pattern comes back



Eight night cards in a ring with arrows going around: full Moon, then smaller shapes, then no Moon, then more of the Moon, back to the full Moon.

The Moon’s pattern takes about 4 weeks. Then it comes back again.

To **predict** is to say what will happen next. We can predict the Moon. Today is a full Moon. In about 4 weeks, we predict a full Moon again.

Full Moons with special names

Sometimes a full Moon has a special name.

Four night cards: a full Moon, a blue Moon, a red blood Moon, and a super Moon that looks very big, with a thin circle for the size of the other full Moons, and the note a blue Moon is not really blue.

- A **blue Moon** is the second full Moon in one month. A blue Moon is not really blue!
- A **blood Moon** is a full Moon that looks red.
- A **super Moon** looks very big. The thin circle in the picture shows the size of the other full Moons.

A pattern through the year

In Victoria, winter is June, July and August. Summer is December, January and February.

Two cards: a winter afternoon already dark with stars and a light in a window, and a summer afternoon still bright with the Sun up.

- In winter it gets dark early.
- In summer the Sun stays up late.

This pattern comes back every year.

Sky watch

We do our own sky watch. Each night we look at the sky. We draw the Moon. We say if we see stars.

A sky watch table

day	draw the Moon	stars? yes or no
Monday		yes
Tuesday	*we draw it*	*yes / no*
Wednesday	*we draw it*	*yes / no*
Thursday	*we draw it*	*yes / no*
Friday	*we draw it*	*yes / no*

Monday is done as an example: a thin Moon, and stars.

Now we do the rest. We look each night and draw what we see.

A sky watch table with a part for the day, a part to draw the Moon and a part for stars yes or no; Monday is done as an example with a thin Moon and yes.

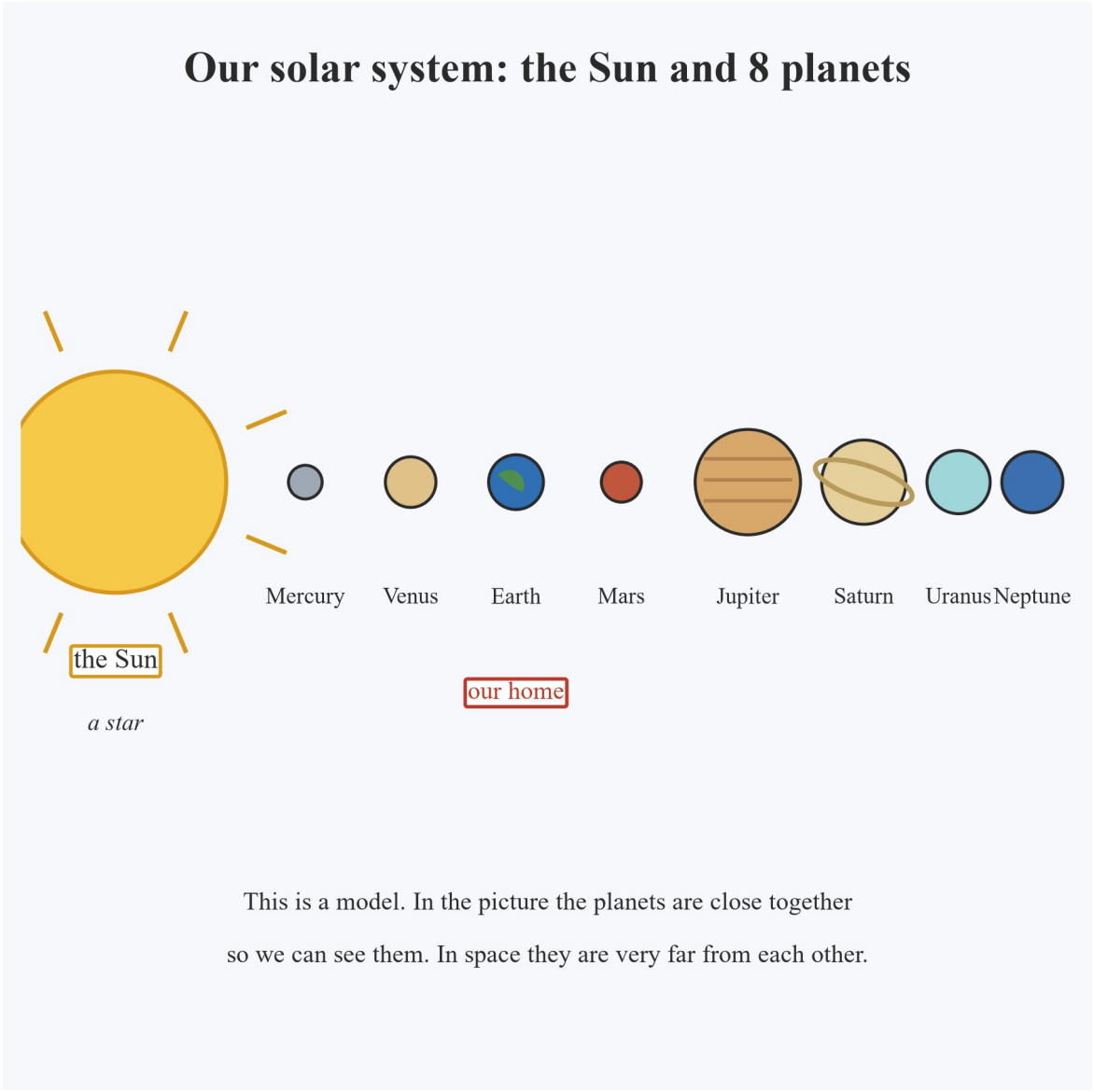
Monday is done as an example. Now we do the rest.

Worked examples

Do these with the teacher. Use what you can see here.

Worked example 1 — the Sun and the 8 planets

Look at the model of our solar system.



A model of our solar system: the Sun on the left, then the 8 planets in a row, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, with Earth marked our home, and a note that in space the planets are very far from each other.

Working	Say why
Point to the Sun.	The Sun is a star. It makes its own light.
Point to Earth.	Earth is a planet. It is our home.
Count the planets: 1, 2, 3, 4, 5, 6, 7, 8.	There are 8 planets.

∴ The Sun is a star. Earth is one of the 8 planets in our solar system.

Worked example 2 — day or night?

Sort the Sun, the stars and the Moon.

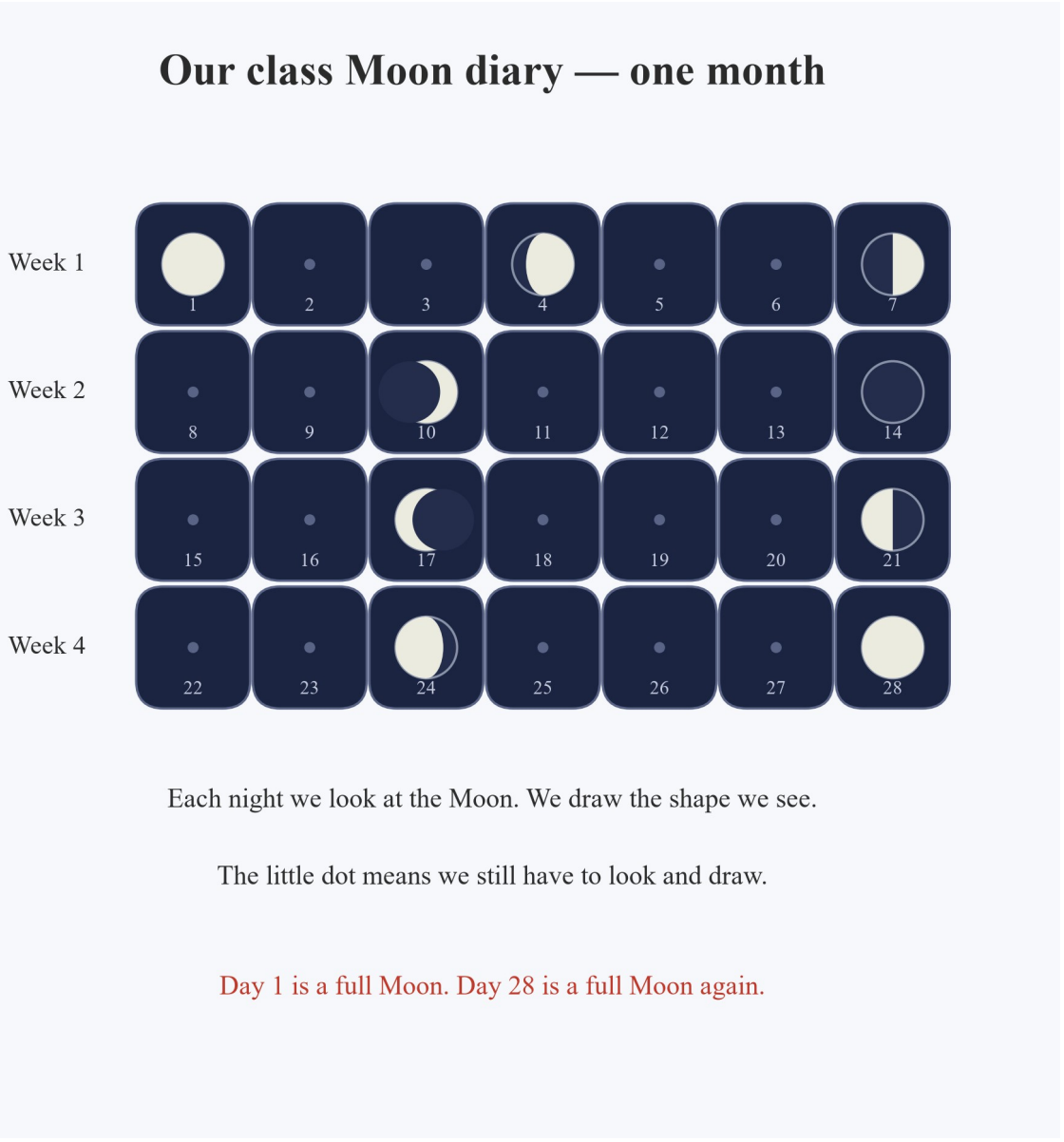
Two cards, in the day and at night, and three tiles to sort: the Sun, the stars and the Moon.

Working	Say why
The Sun goes in the day.	We see the Sun in the day.
The stars go at night.	We see the stars at night.
The Moon goes at night.	We see the Moon at night.

∴ The Sun goes in the day. The Moon and the stars go at night.

Worked example 3 — read the Moon diary

Look at our class Moon diary.



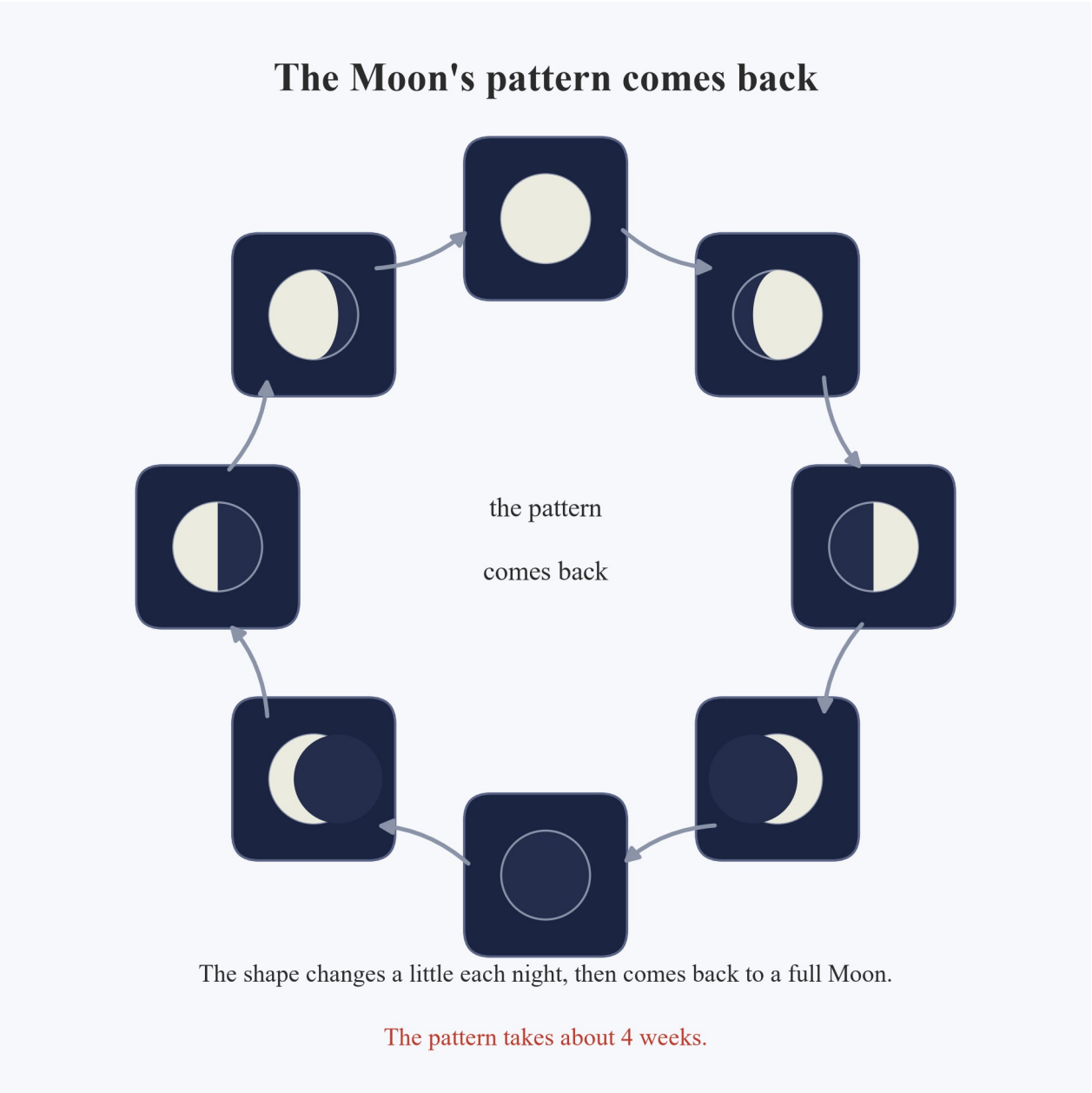
A class Moon diary for one month in four weeks: full Moon on day 1, the shape gets smaller, no Moon on day 14, then more of the Moon, and a full Moon again on day 28.

Working	Say why
Day 1 is a full Moon.	We draw a round Moon.
Day 14: no Moon to see.	The card looks empty.
Day 28 is a full Moon again.	The pattern comes back.

∴ The Moon's pattern takes about 4 weeks.

Worked example 4 — predict the Moon

Look at the pattern ring. Today we see a full Moon.



Eight night cards in a ring with arrows going around: full Moon, then smaller shapes, then no Moon, then more of the Moon, back to the full Moon.

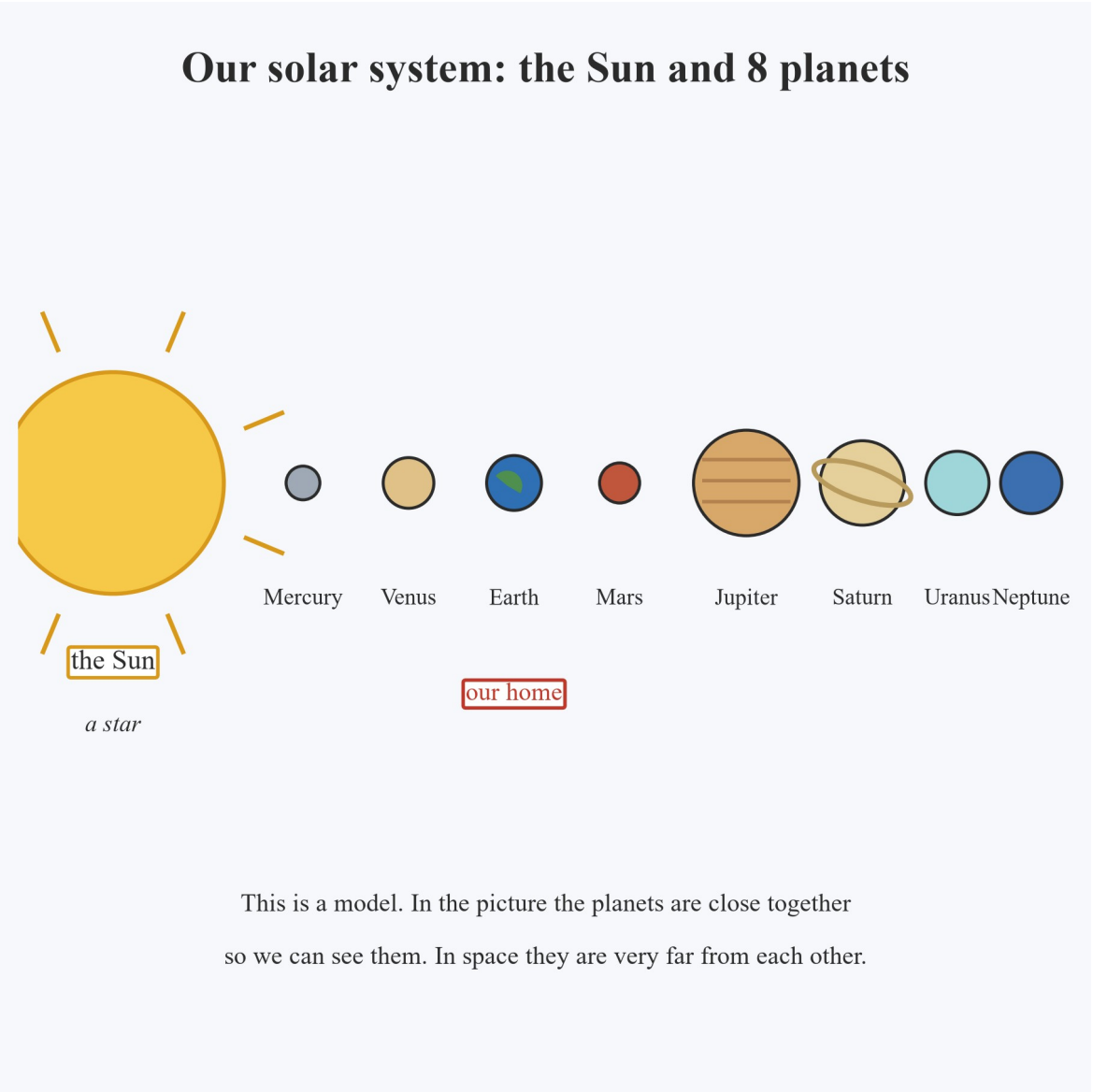
Working	Say why
Today we see a full Moon.	The top card in the ring.
The pattern takes about 4 weeks.	The ring comes back to the full Moon.
We say: a full Moon in about 4 weeks.	To say what will happen next is to predict.

∴ We predict a full Moon in about 4 weeks.

Practice questions

The teacher reads all the words. The child says or does the answer. The teacher puts the answer down.

Q1. *(Foundation)* Look at the model of our solar system.

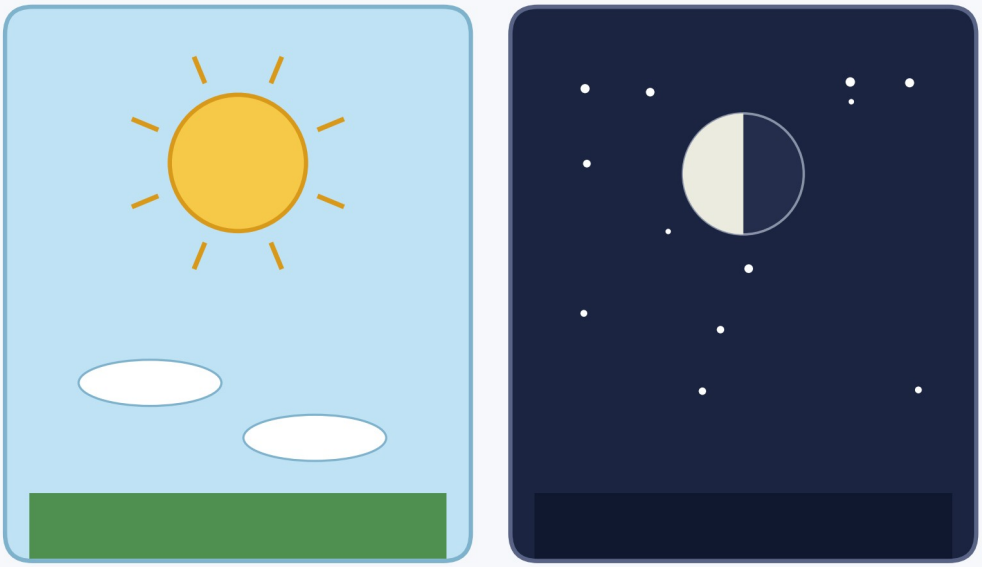


A model of our solar system: the Sun on the left, then the 8 planets in a row, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, with Earth marked our home, and a note that in space the planets are very far from each other.

a. Point to the Sun.
b. Point to Earth.
c. Say how many planets there are.

Q2. *(Foundation)* Look at the day sky and the night sky.

The day sky and the night sky



the day sky

the night sky

We see the Sun in the day. We see the Moon and the stars at night.

Two cards: the day sky with the Sun and clouds, and the night sky with the Moon and stars.

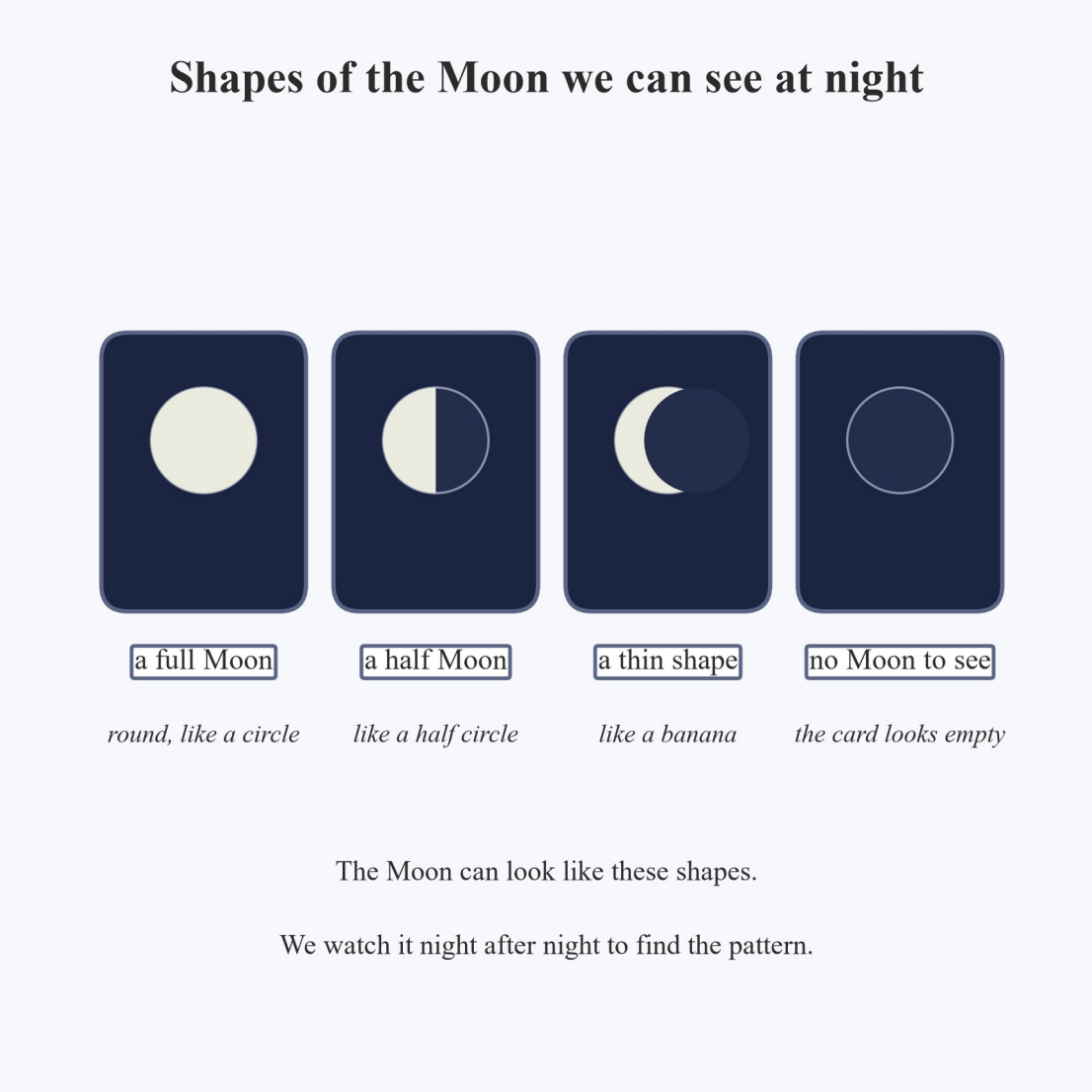
a. Say what we see in the day sky.
b. Say two things we see in the night sky.

Q3. *(Foundation)* Look at the day and night sort.

Two cards, in the day and at night, and three tiles to sort: the Sun, the stars and the Moon.

a. Point to where the Sun goes.
b. Point to where the stars go.
c. Point to where the Moon goes.

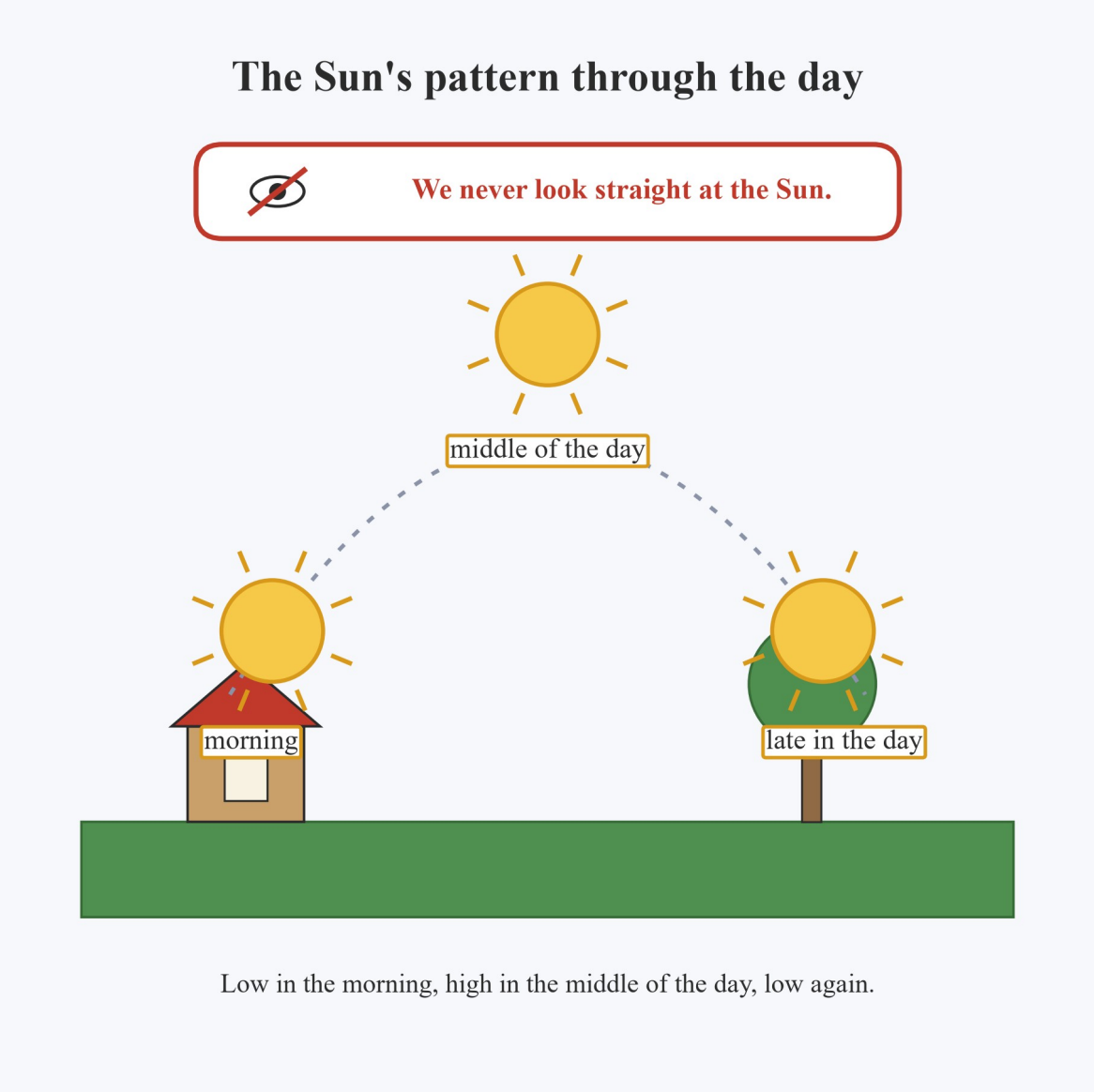
Q4. *(Foundation)* Look at the shapes of the Moon.



Four night cards: a full Moon round like a circle, a half Moon, a thin shape like a banana, and a card with no Moon to see.

a. Point to the full Moon.
b. Point to the thin shape.
c. Point to the half Moon.

Q5. *(Level 1)* Look at the Sun's pattern through the day.



Low in the morning, high in the middle of the day, low again.

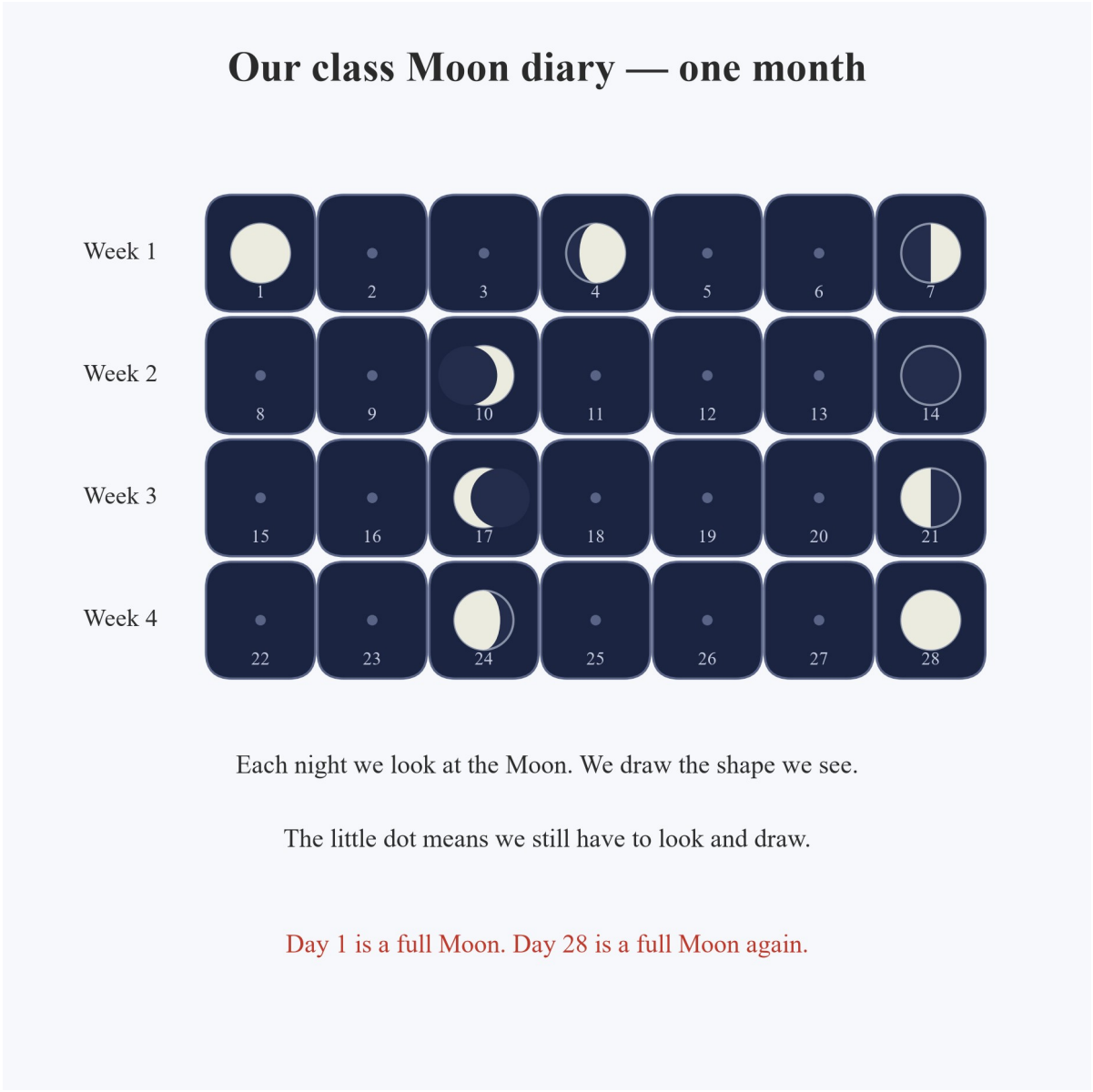
The Sun low in the morning, high in the middle of the day and low again late in the day over a house and a tree, with a red badge: We never look straight at the Sun.

a. When is the Sun high?
b. Say two times when the Sun is low.

Q6. *(Level 1)* Circle the star.

Sun · Earth · Moon

Q7. *(Level 1)* Look at the class Moon diary.



A class Moon diary for one month in four weeks: full Moon on day 1, the shape gets smaller, no Moon on day 14, then more of the Moon, and a full Moon again on day 28.

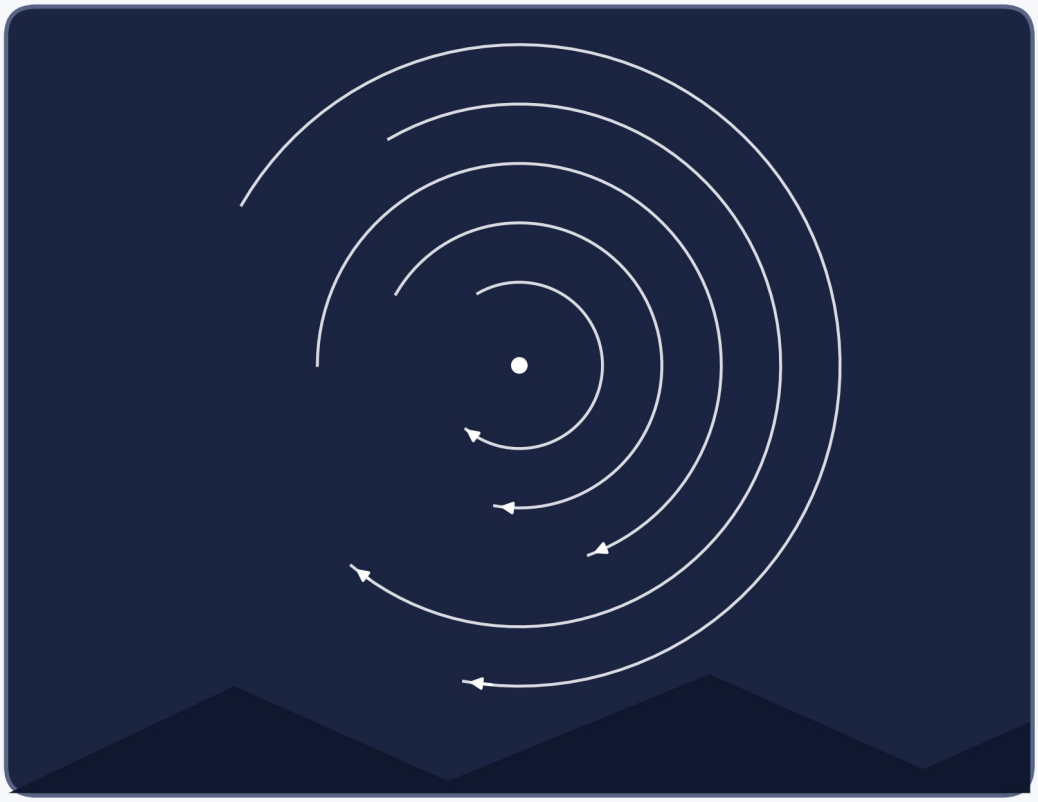
a. What shape is the Moon on day 1?
b. What do we see on day 14?
c. What shape is the Moon on day 28?

Q8. *(Level 1)* Circle the special Moon that looks red.

blue Moon · blood Moon · super Moon

Q9. *(Level 1)* Look at the star trails.

Star trails: the stars go around in circles

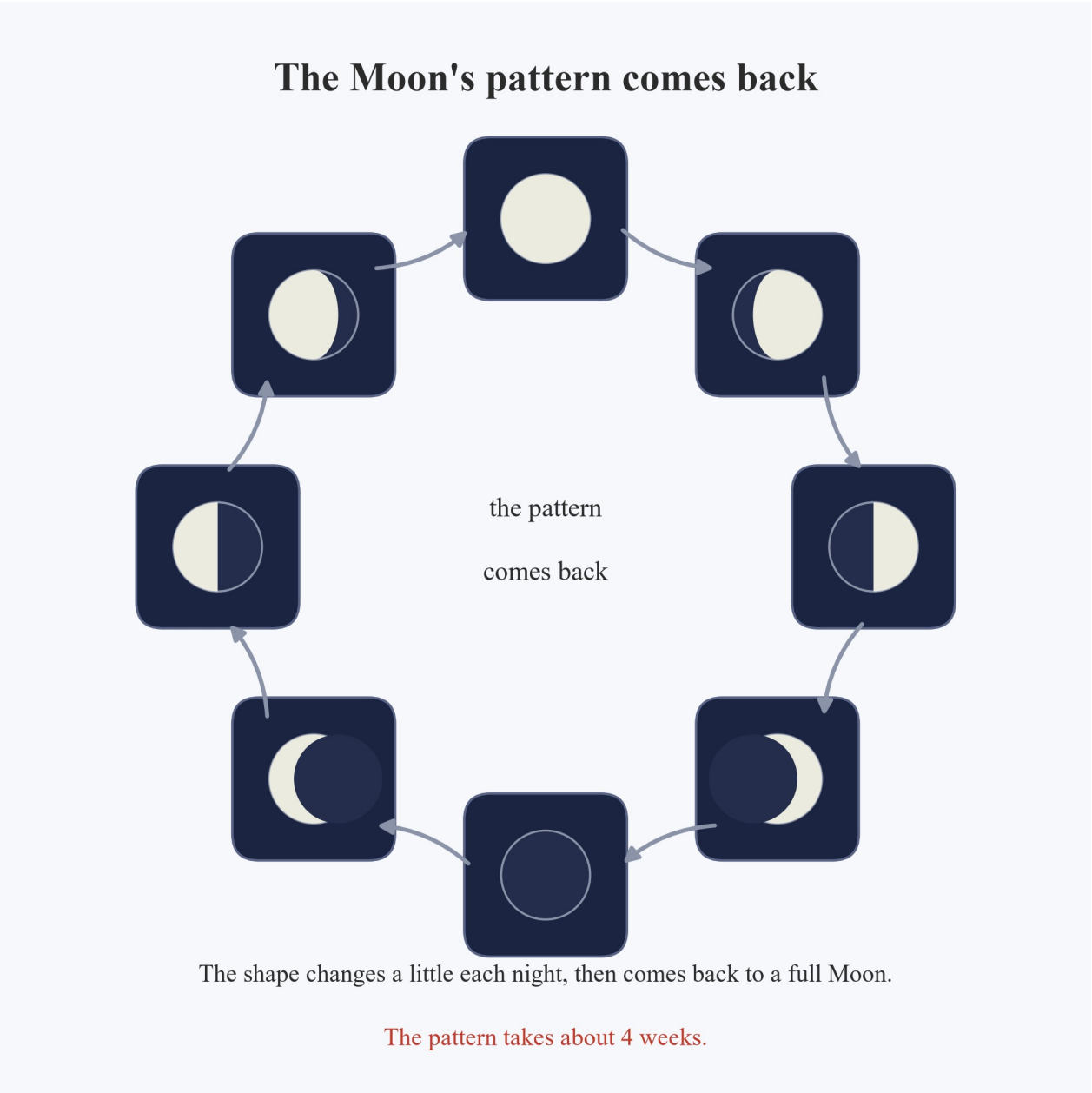


This is what a photo of the night sky looks like when the camera looks up for many hours. The stars make circles around one point in the sky. That is a pattern too.

Star trails: white circle lines around one bright point in a dark sky over hills.

a. Say what the stars make in the photo.
b. Say how many points the circles go around.

Q10. *(Level 2)* Look at the pattern ring. Today we see a full Moon.

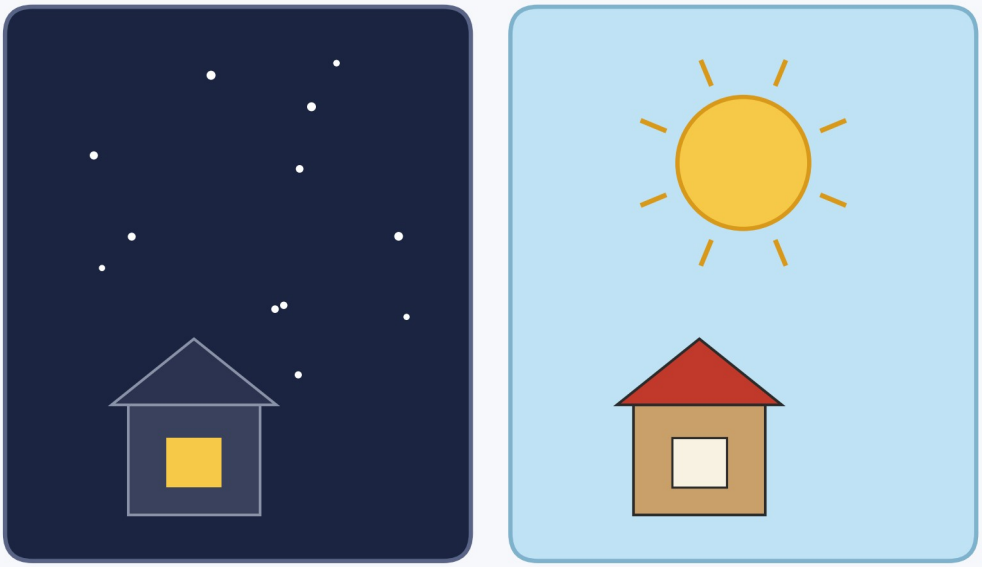


Eight night cards in a ring with arrows going around: full Moon, then smaller shapes, then no Moon, then more of the Moon, back to the full Moon.

a. Say what we predict in about 4 weeks.
b. Say why we can predict it.

Q11. *(Level 2)* Look at the winter and summer afternoons.

A winter afternoon and a summer afternoon



winter afternoon

summer afternoon

In winter it gets dark early. In summer the Sun stays up late.

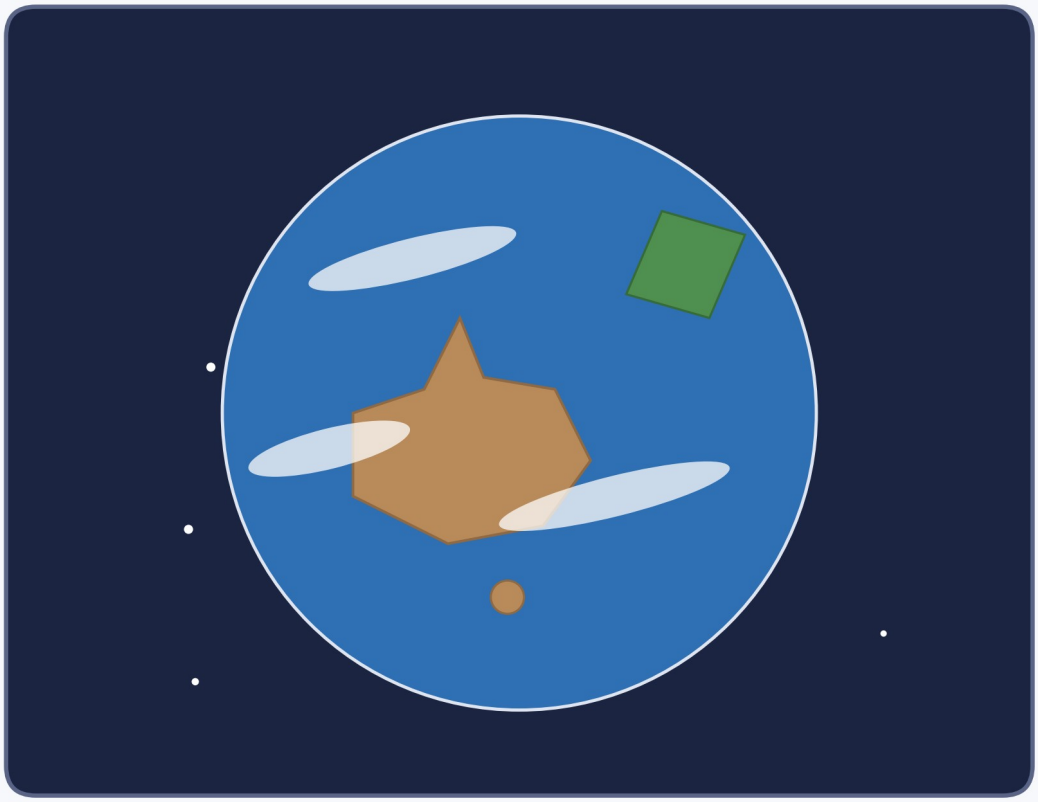
This pattern comes back every year.

Two cards: a winter afternoon already dark with stars and a light in a window, and a summer afternoon still bright with the Sun up.

a. Point to the winter afternoon.
b. Say what happens in winter.
c. Say what happens in summer.

Q12. *(Level 2)* Look at Earth from space.

Earth, seen from space



The blue parts are water. The brown and green parts are land. We live on the land. Earth is one of the 8 planets.

Earth seen from space as a ball in a dark sky with stars: blue water, brown and green land, and white cloud.

a. Say what the blue parts show.
b. Is Earth a star or a planet?
c. Say the names of two other planets.

Answers

Q1. a. the Sun, the star on the left b. Earth, the planet marked our home c. 8.

Q2. a. the Sun b. the Moon and the stars.

Q3. a. the Sun goes in the day b. the stars go at night c. the Moon goes at night.

Q4. a. the round Moon, like a circle b. the shape like a banana c. the Moon like a half circle.

Q5. a. in the middle of the day b. in the morning and late in the day.

Q6. Sun.

Q7. a. a full Moon b. no Moon to see c. a full Moon.

Q8. blood Moon.

Q9. a. circles b. one point.

Q10. a. a full Moon b. the Moon's pattern comes back about every 4 weeks.

Q11. a. the dark card, with stars b. it gets dark early c. the Sun stays up late.

Q12. a. water b. a planet c. any two of Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune.

Fully-worked solutions

Q1.

a. The Sun makes its own light. Point to the Sun.
b. Earth is our home. Point to the planet marked our home.
c. Count: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.

∴ There are 8 planets.

Q2.

a. We see the Sun in the day.
b. We see the Moon and the stars at night.

∴ Day sky: the Sun. Night sky: the Moon and the stars.

Q3.

a. We see the Sun in the day, so the Sun goes in the day.
b. We see the stars at night, so the stars go at night.
c. We see the Moon at night, so the Moon goes at night.

∴ Sun: day. Moon and stars: night.

Q4.

a. The full Moon is round, like a circle. Point to it.
b. The thin shape is like a banana. Point to it.
c. The half Moon is like a half circle. Point to it.

∴ Round: full Moon. Banana shape: thin Moon. Half circle: half Moon.

Q5.

a. The Sun is high in the middle of the day.
b. The Sun is low in the morning and low again late in the day.

∴ High: middle of the day. Low: morning and late in the day.

Q6.

The Sun is a star. It makes its own light. Earth and the Moon are not stars.

∴ Circle Sun.

Q7.

a. Day 1 shows a round Moon: a full Moon.
b. Day 14 shows an empty card: no Moon to see.
c. Day 28 shows a round Moon: a full Moon.

∴ a. full Moon b. no Moon c. full Moon.

Q8.

A blood Moon is a full Moon that looks red. A blue Moon is not blue, and a super Moon looks very big.

∴ Circle blood Moon.

Q9.

a. In the photo, the stars make circles.
b. The circles go around one point in the sky.

∴ Circles around one point.

Q10.

a. The pattern takes about 4 weeks, so in about 4 weeks we predict a full Moon.
b. We can predict it because the Moon's pattern comes back.

∴ A full Moon; the pattern comes back.

Q11.

a. In winter it gets dark early, so the winter card is the dark one with stars.
b. In winter it gets dark early.
c. In summer the Sun stays up late.

∴ Dark card: winter. Winter: dark early. Summer: Sun up late.

Q12.

a. The blue parts are water.
b. Earth is a planet. It does not make its own light.
c. Any two of the other planets, e.g. Mars and Jupiter.

∴ a. water b. a planet c. e.g. Mars and Jupiter.

Caring for Earth's water, land and air: reduce, re-use, recycle

This is read with the teacher. The teacher reads all the words. The child looks, says, points and does. The child does not need to read.

> *taking care of Earth's water, land and air involves consideration of reducing, re-using and recycling materials to conserve Earth's resources* — VC2S2U09
>
> **Evidences:** They suggest ways that the use of common materials can be reduced, re-used and recycled, and explain the importance of these actions for sustainability.

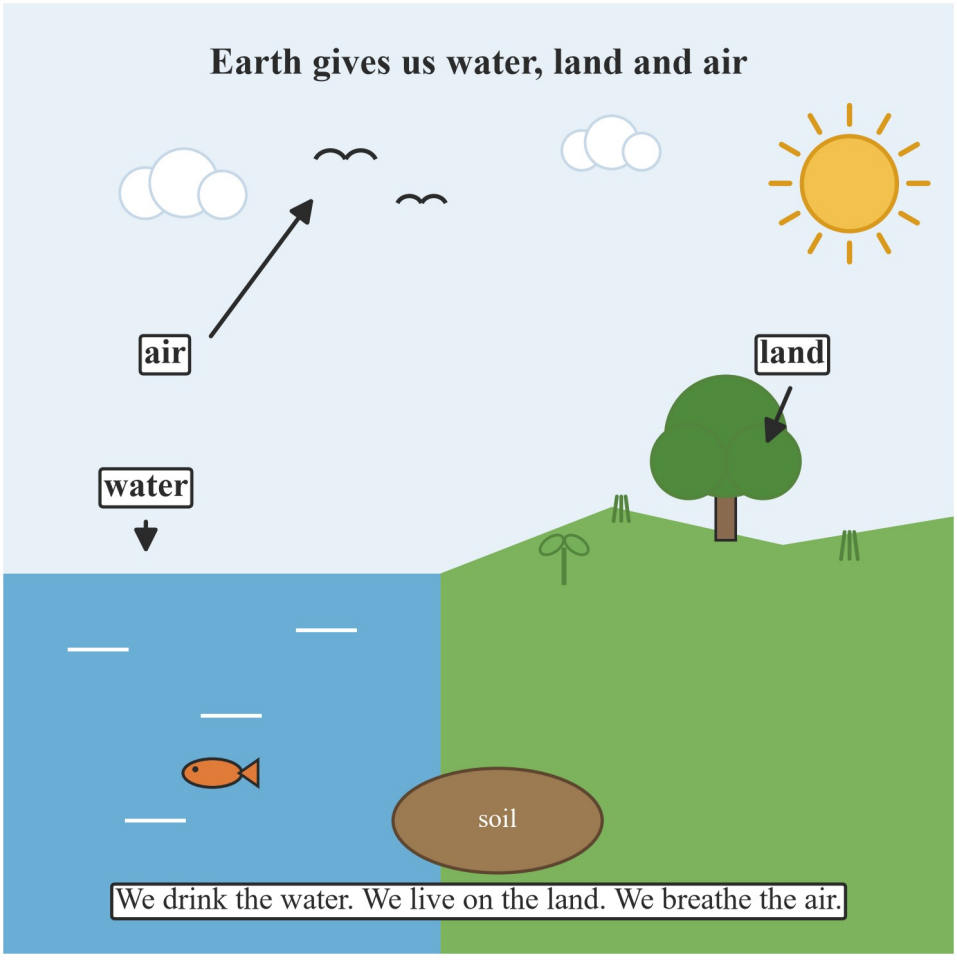
In this topic we will:

- look at Earth's water, land and air, and learn the three ways we care for them: reduce, re-use and recycle
- hear what happens when balloons are let go, and see better ideas for special days (E01)
- make a toy that can move, from old things we re-use (E02)
- see how compost keeps food scraps out of landfill (E03)
- find ways to use less water at home and at school (E04)
- change materials with our hands so we can use them again and make less rubbish (E05)
- look at where food grows and how far it travels to us, and why food in season is a good pick (E06)

Theory

Earth's water, land and air

Earth gives us three big gifts.



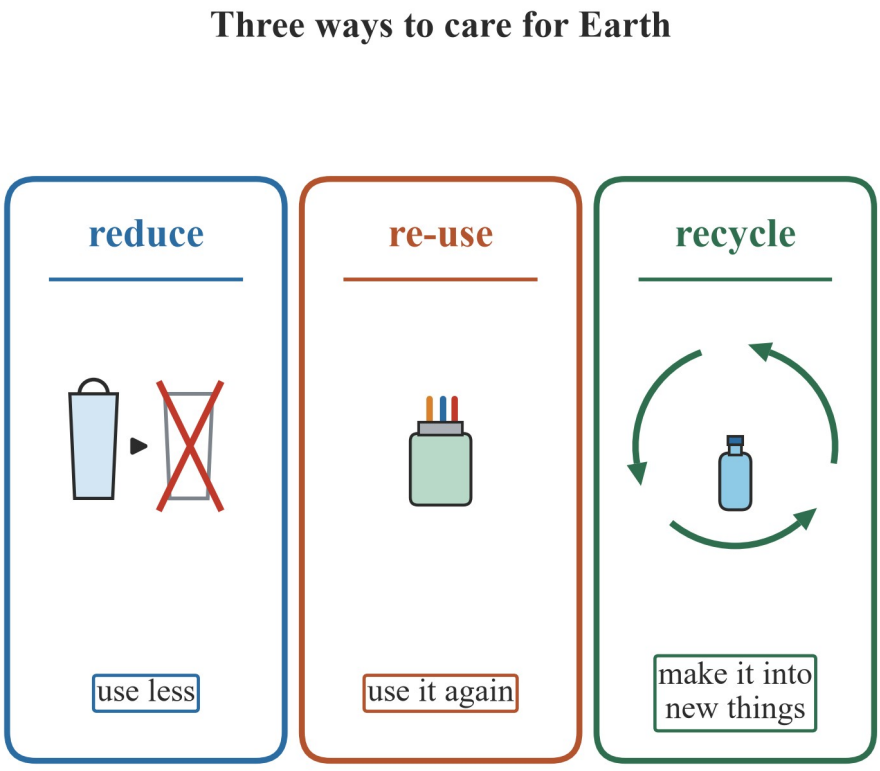
A picture of Earth's three gifts: water on the left with a fish in it, land on the right with a tree, grass and soil, and air above with the sun, clouds and birds; labels point to air, water and land, and a line at the bottom reads We drink the water, we live on the land, we breathe the air.

- **Water** is the sea, the rivers and the rain. We drink water. Plants and animals need water.
- **Land** is the ground we live on. **Soil** is part of the land. Plants grow in soil.
- **Air** is all around us. We breathe air. Clean air is hard to see, but it is there.

We care for all three. We keep them clean.

Reduce, re-use, recycle

Three little words do a big job.



Three cards, one for each way to care for Earth: reduce (use less) with a picture of one bag instead of two, re-use (use it again) with a jar used as a pencil cup, and recycle (make it into new things) with a bottle inside a three-arrow recycling wheel; at the bottom, reduce first, then re-use, then recycle.

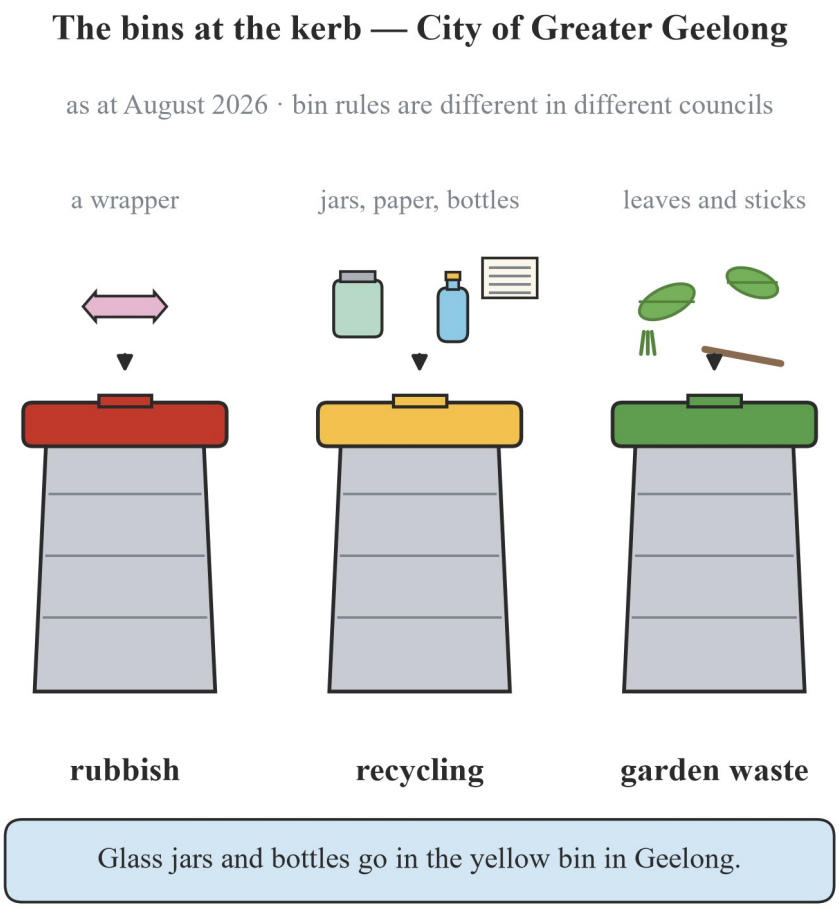
- **Reduce** means use less, so we make less rubbish.
- **Re-use** means use it again.
- **Recycle** means old things are made into new things.

We reduce first. Then we re-use. Then we recycle.

The three bins

At home, our bins wait at the **kerb**. The kerb is the edge of the road where the path meets it. A **council** is the group of people who look after the place where you live. Each council has its own bin rules.

We look at one real council: the City of Greater Geelong, as at August 2026.



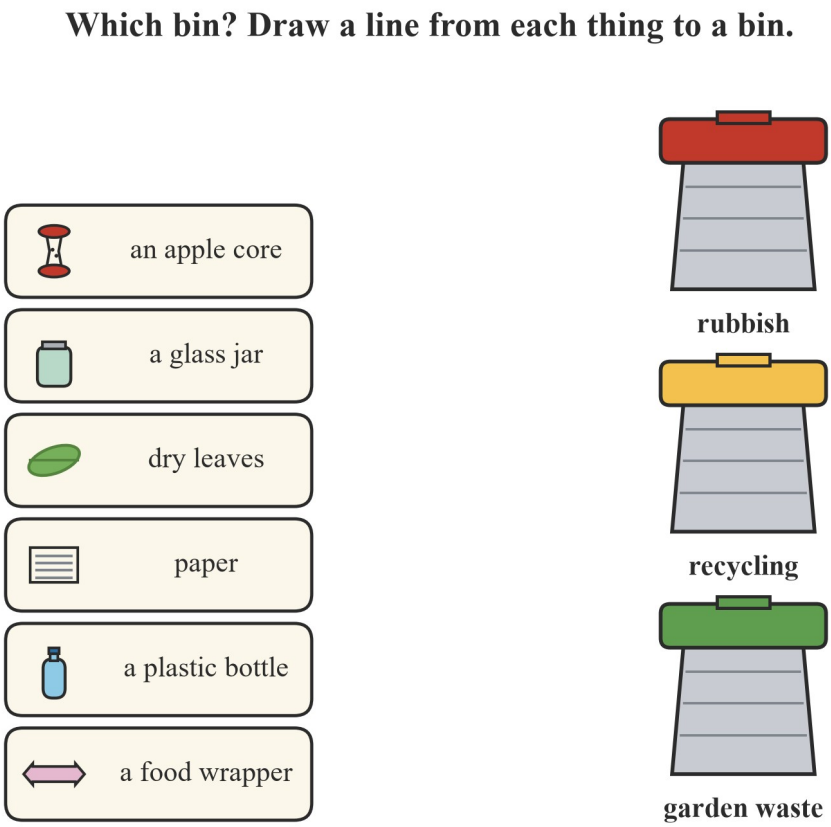
The three bins at the kerb in the City of Greater Geelong as at August 2026: a red-lid rubbish bin taking a wrapper, a yellow-lid recycling bin taking jars, paper and bottles, and a green-lid garden waste bin taking leaves and sticks; a note says bin rules are different in different councils, and glass jars and bottles go in the yellow bin in Geelong.

- The **red-lid bin** is for rubbish.
- The **yellow-lid bin** is for recycling: jars, paper and bottles.
- The **green-lid bin** is for garden waste: leaves and sticks.

In Geelong, glass jars and bottles go in the yellow bin. In some other councils they go somewhere else. That is why we check our own council's rules.

Source: City of Greater Geelong, Your recycling bin, 2026. Retrieved 2026-08-21. Source: City of Greater Geelong, Your garden waste bin, 2026. Retrieved 2026-08-21.

Which bin?



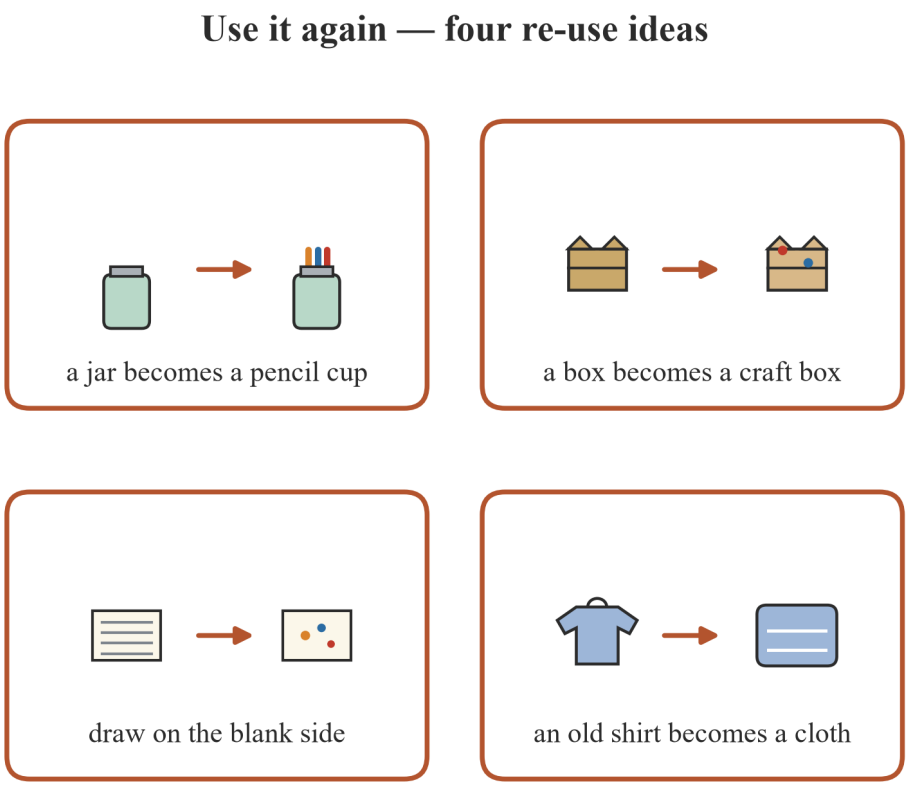
A sorting activity: six things in a column (an apple core, a glass jar, dry leaves, paper, a plastic bottle, a food wrapper) and three bins on the right (rubbish with a red lid, recycling with a yellow lid, garden waste with a green lid); the child draws a line from each thing to a bin.

A **core** is what is left of a fruit after you eat it.

Point to each thing. Say which bin it goes in.

- A glass jar goes in the yellow-lid bin.
- Paper and a plastic bottle go in the yellow-lid bin too.
- Dry leaves go in the green-lid bin.
- A food wrapper goes in the red-lid bin.
- An apple core goes in the red-lid bin — or, even better, into compost at home. We meet compost next.

Re-use: use it again

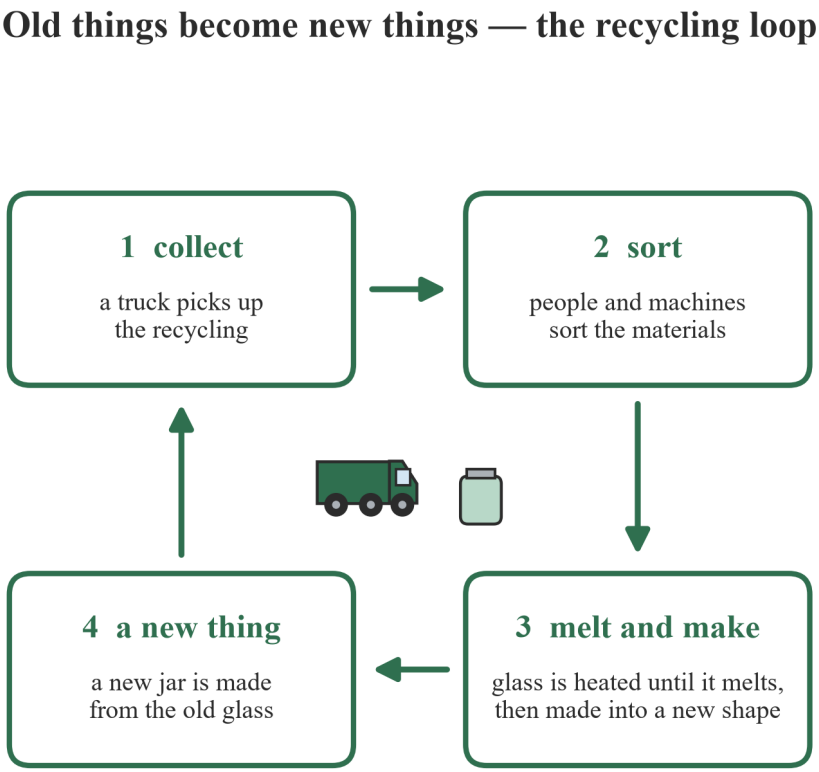


Four re-use ideas in four cards: a jar becomes a pencil cup, a box becomes a craft box, we draw on the blank side of paper with writing on one side, and an old shirt becomes a cloth; at the bottom, re-using means we use less new stuff, that helps Earth.

- A jar becomes a pencil cup.
- A box becomes a craft box.
- Paper with writing on one side? We draw on the other side.
- An old shirt becomes a cloth for cleaning.

When we re-use, we change the thing a little. We cut it, fold it, or give it a new job. Changing materials with our hands helps us use them again, and that makes less rubbish.

Recycle: old things become new things



The loop goes round and round. Old glass can become new glass, again and again.

The recycling loop in four steps joined by arrows in a circle: 1 collect (a truck picks up the recycling), 2 sort (people and machines sort the materials), 3 melt and make (glass is heated until it melts, then made into a new shape), 4 a new thing (a new jar is made from the old glass); at the bottom, the loop goes round and round, old glass can become new glass again and again.

- **1 collect.** A truck picks up the recycling.
- **2 sort.** People and machines sort the materials.
- **3 melt and make.** To **melt** means to get so hot it turns soft and runny, like ice-cream in the sun. Glass is heated until it melts, then made into a new shape.
- **4 a new thing.** A new jar is made from the old glass.

The steps go round in a **loop** — a circle that comes back to the start. Old glass can become new glass, again and again.

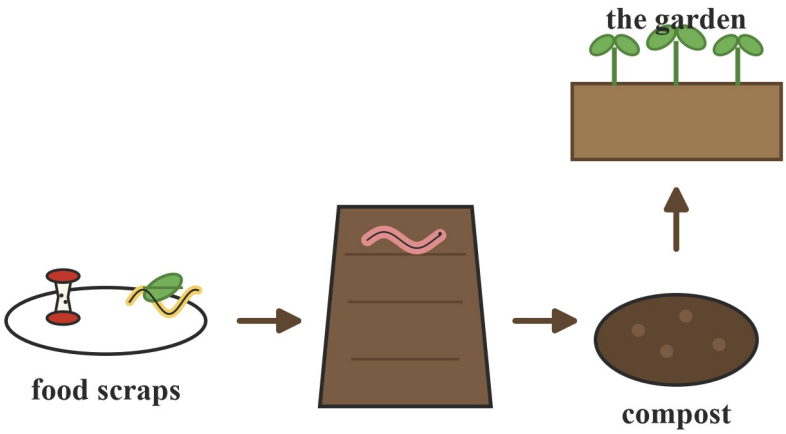
In Geelong, garden waste is recycled too. Each year, about 35,000 tonnes from the green-lid bins becomes compost. A **tonne** is very heavy — about as heavy as a small car.

Source: City of Greater Geelong, Bin services, 2026. Retrieved 2026-08-21.

Compost: food scraps become soil

Food **scraps** are the bits we do not eat, like an apple core or a banana skin. **Compost** is the dark, soft stuff that food scraps turn into. It looks like soil, and it helps soil.

Food scraps become soil for the garden



a compost bin

Tiny animals and very small living things help break the scraps down.

Compost helps soil so plants can grow well.

A compost bin keeps food scraps out of the rubbish bin.

Food scraps on a plate (an apple core, a banana skin, leaves) go into a compost bin with a worm, become dark compost, and the compost goes on a garden bed with little plants; notes say tiny animals and very small living things help break the scraps down, compost helps soil so plants can grow well, and a compost bin keeps food scraps out of the rubbish bin.

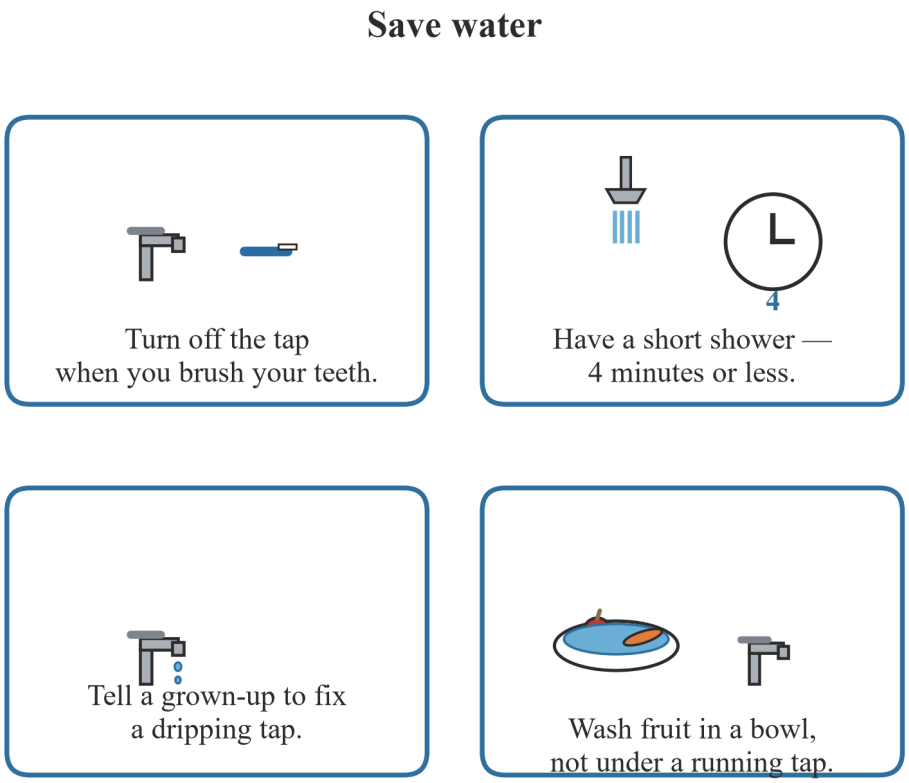
- Food scraps, like apple cores and banana skins, go into a compost bin.
- Worms and tiny living things break the scraps down.
- The scraps become compost. Compost goes on the garden, so plants grow well.

A compost bin keeps food scraps out of the rubbish bin and out of **landfill**. Landfill is a big hole in the ground where rubbish is put and covered. Less food in landfill is good for Earth.

Safety. Wash your hands after touching compost or soil.

Source: Sustainability Victoria, Avoid food waste at home, 2022. Retrieved 2026-08-21.

Save water



Clean water is one of Earth's gifts. Saving water helps keep it safe.

Four ways to save water: turn off the tap when you brush your teeth; have a short shower of 4 minutes or less; tell a grown-up to fix a dripping tap; wash fruit in a bowl, not under a running tap; at the bottom, clean water is one of Earth's gifts, saving water helps keep it safe.

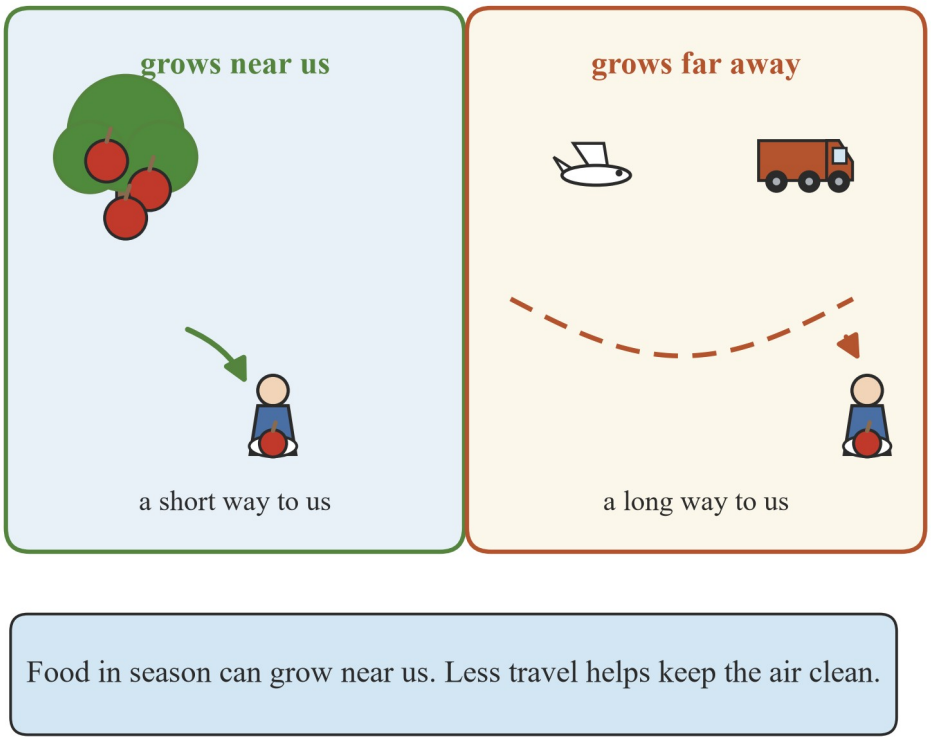
- Turn off the tap when you brush your teeth.
- Have a short shower — 4 minutes or less.
- Tell a grown-up about a tap that drips, so it gets fixed.
- Wash fruit in a bowl, not under a running tap.

Each one means we use less water. Clean water is one of Earth's gifts. Saving water helps keep it safe.

Food: near or far?

Food travels to get to us. The trip food takes is called its **food miles**.

Food that grows near us travels a short way



Two cards: food that grows near us (an apple tree close to a person with a bowl of apples) travels a short way, and food that grows far away (a plane and a truck on a long path) travels a long way; at the bottom, food in season can grow near us, less travel helps keep the air clean.

- Food that grows near us travels a short way.
- Food that grows far away travels a long way. Some of it comes in trucks, and some comes in planes. A **plane** is a flying machine that carries things far away.

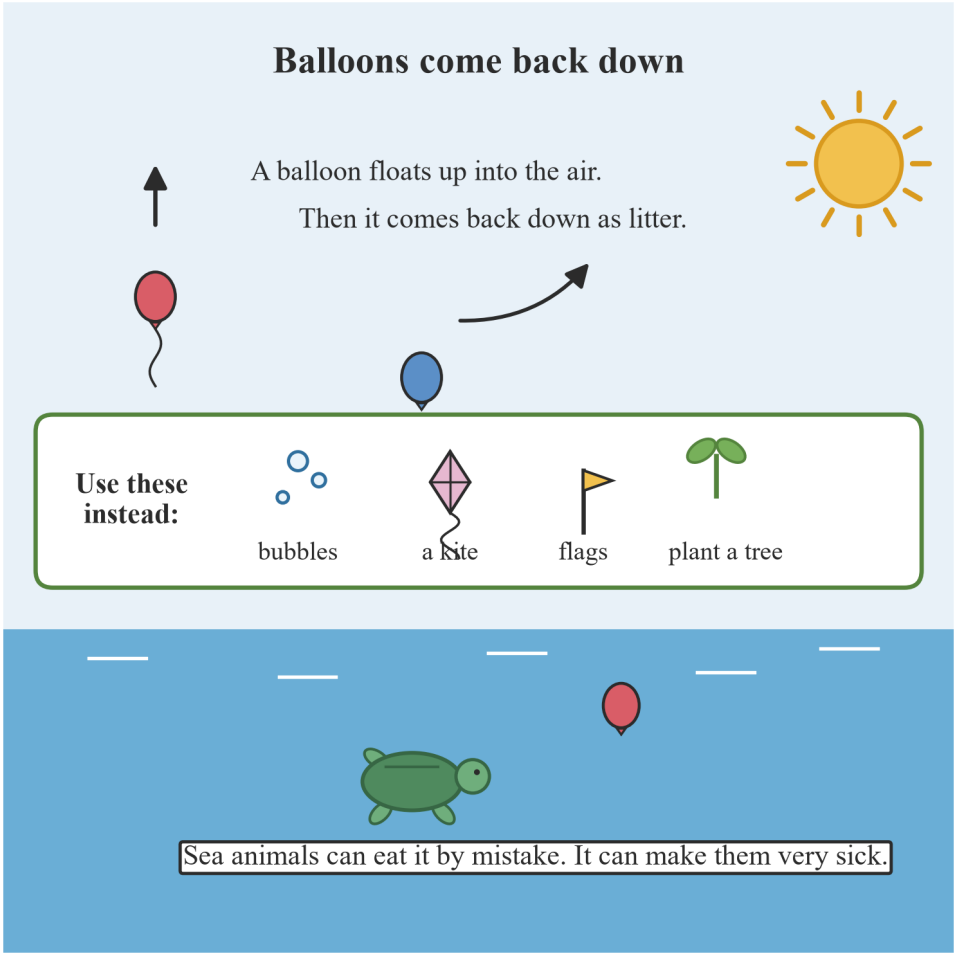
Food is **in season** when it is ready to pick near us at that time of year. Food in season can grow near us, so its trip is shorter. Less travel helps keep the air clean.

At the shop or the market, look and see where food comes from. With your family, make a list of foods that are in season now.

Source: Sustainability Victoria, Shop sustainably, n.d. Retrieved 2026-08-21.

Balloons come back down

A balloon that is let go floats up into the air. Then it comes back down as **litter**. Litter is rubbish that is out in the world where it should not be.



A balloon floats up into the air and then comes back down as litter and lands in the sea near a turtle; a note says sea animals can eat it by mistake and it can make them very sick; a strip of better ideas shows bubbles, a kite, flags and planting a tree.

- A balloon that is let go always comes back down somewhere.
- It can land in rivers and the sea.
- Sea animals, like turtles and sea birds, can eat it by mistake. It can make them very sick.

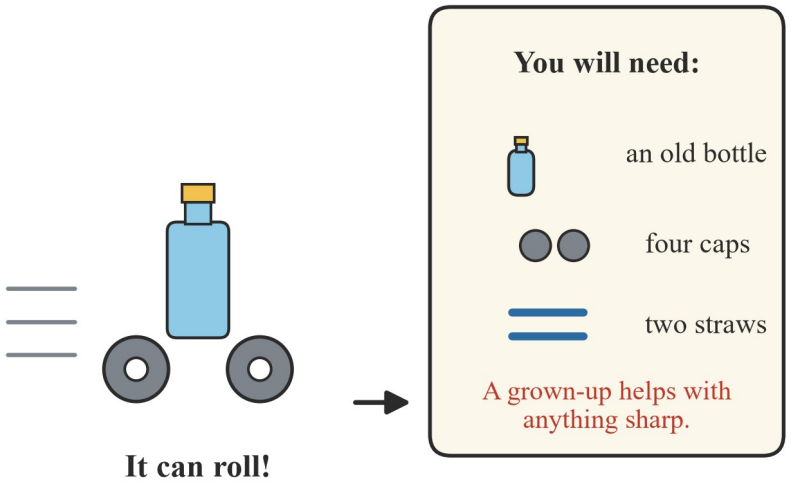
So we do not let balloons go. For special days we use better ideas: bubbles, a kite, flags, or planting a tree.

Source: Zoos Victoria, When Balloons Fly, 2026. Retrieved 2026-08-21.

Make a toy that moves

We can re-use old things to make a toy that can move.

Make a toy that can move from old things



A toy car made from an old bottle with four bottle-cap wheels, and a list of what you will need: an old bottle, four caps, two straws; a red note says a grown-up helps with anything sharp; at the bottom, you changed old things and made a new toy, that is re-using and making less rubbish.

- You will need: an old bottle, four caps and two straws.
- The straws hold the caps. The caps become wheels. The bottle is the body.
- It can roll!

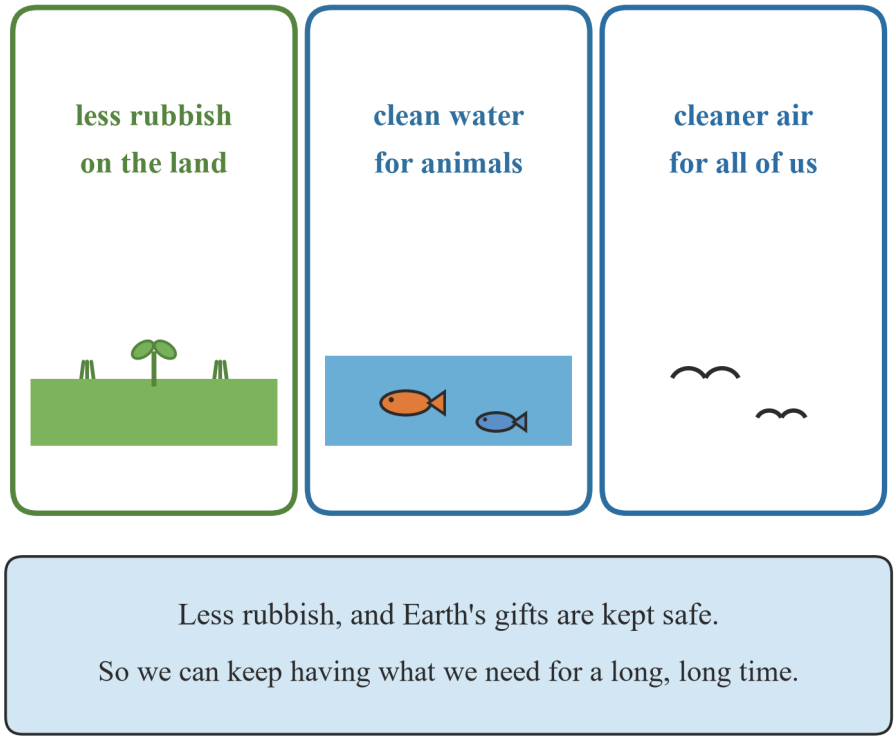
Safety. A grown-up helps with anything sharp.

You changed old things and made a new toy. That is re-using, and it makes less rubbish.

Why it matters — sustainability

Why do we reduce, re-use and recycle?

Why do we reduce, re-use and recycle?



Three cards showing why we reduce, re-use and recycle: less rubbish on the land (clean grass with a little plant), clean water for animals (fish in clean water), cleaner air for all of us (birds in a clear sky); at the bottom, less rubbish and Earth's gifts are kept safe, so we can keep having what we need for a long, long time.

- Less rubbish on the land.
- Clean water for animals.
- Cleaner air for all of us.

The big word for this is **sustainability**. In our book's words: looking after Earth so it keeps giving us what we need — the water, the land, the air, food and materials — for a long, long time.

Here is a real number from Victoria (as at 2022). Each year, families in Victoria throw out 250,000 tonnes of food — food that was good to eat, most of it. And one family throws out about $2,200 worth of food a year. When we eat what we buy and compost the scraps, we help.

Source: Sustainability Victoria, Avoid food waste at home, 2022. Retrieved 2026-08-21.

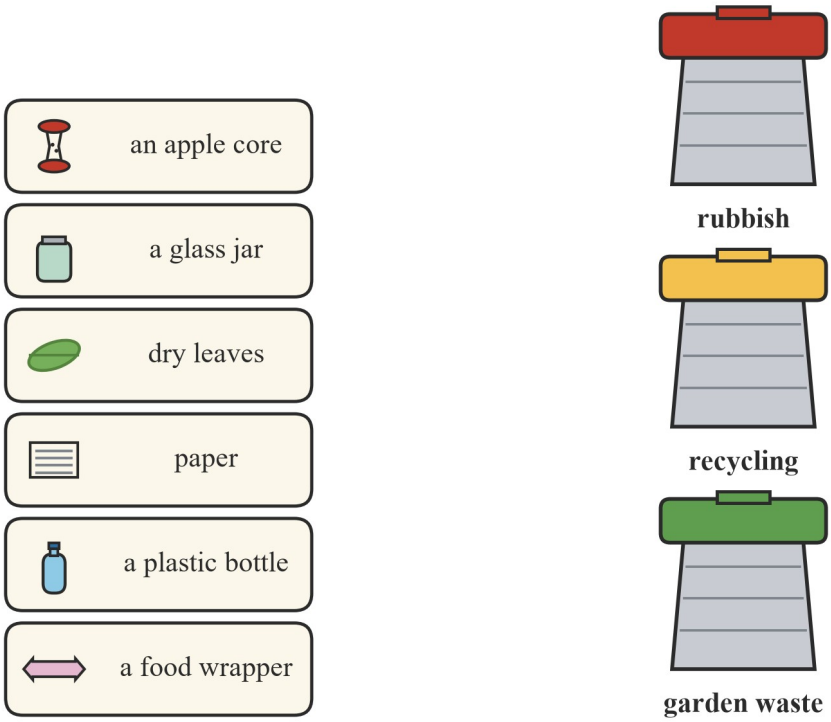
Worked examples

Do these with the teacher. Use what you can see here.

Worked example 1 — which bin? (Geelong, as at August 2026)

Look at the sorting picture.

Which bin? Draw a line from each thing to a bin.



A sorting activity: six things in a column (an apple core, a glass jar, dry leaves, paper, a plastic bottle, a food wrapper) and three bins on the right (rubbish with a red lid, recycling with a yellow lid, garden waste with a green lid); the child draws a line from each thing to a bin.

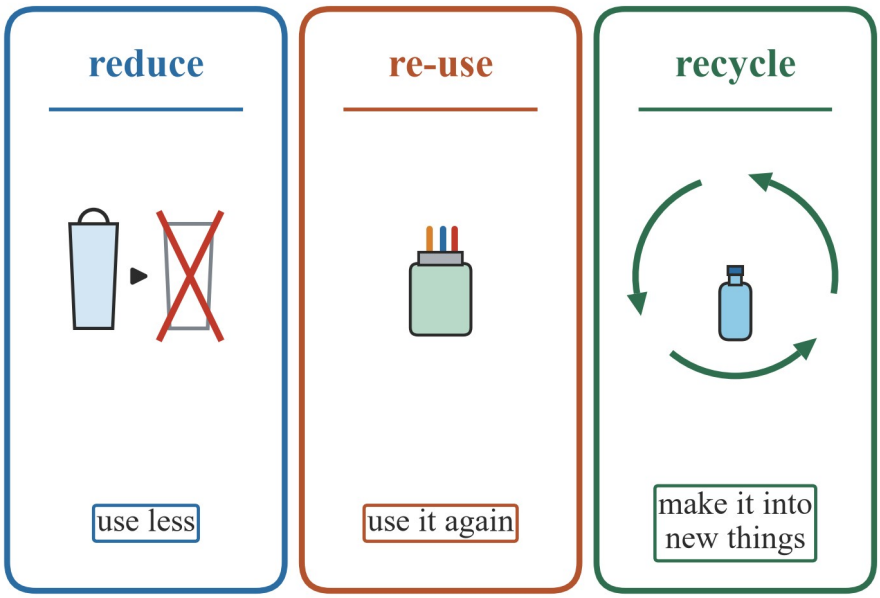
Working	Say why
Point to the glass jar. Draw a line to the yellow-lid bin.	In Geelong, glass jars and bottles go in the recycling bin.
Point to the dry leaves. Draw a line to the green-lid bin.	Leaves and sticks are garden waste.
Point to the food wrapper. Draw a line to the red-lid bin.	A wrapper cannot be recycled. It is rubbish.

∴ Jar: yellow-lid. Leaves: green-lid. Wrapper: red-lid.

Worked example 2 — reduce, re-use or recycle?

Sort each one into reduce, re-use or recycle.

Three ways to care for Earth



Reduce first. Then re-use. Then recycle.

Three cards, one for each way to care for Earth: reduce (use less) with a picture of one bag instead of two, re-use (use it again) with a jar used as a pencil cup, and recycle (make it into new things) with a bottle inside a three-arrow recycling wheel; at the bottom, reduce first, then re-use, then recycle.

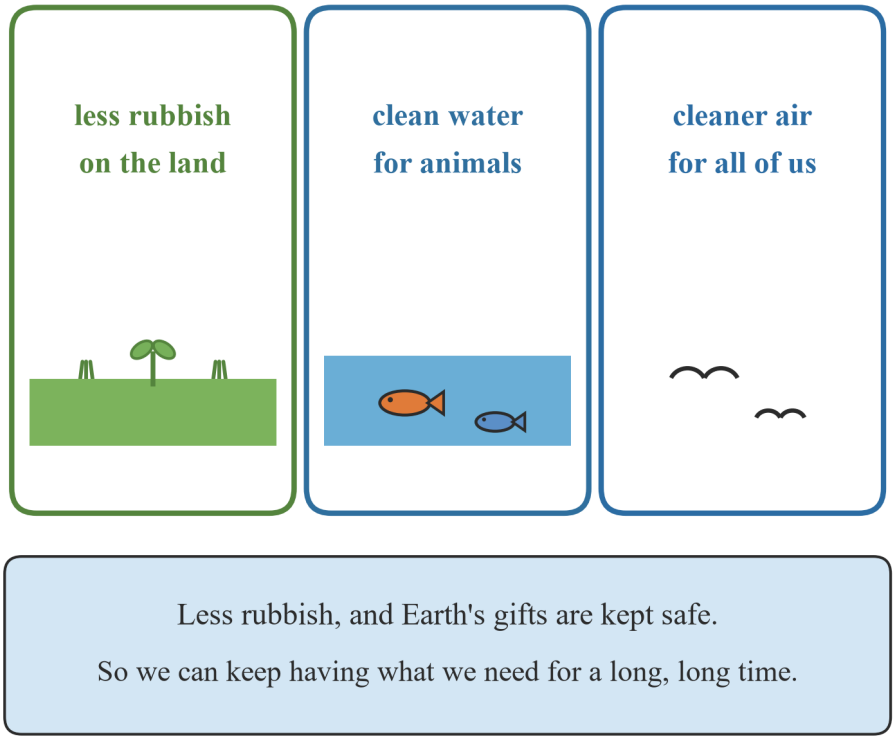
Working	Say why
A jar becomes a pencil cup.	We use the jar again. That is re-use.
An old glass jar goes in the yellow bin and becomes a new jar.	Old things made into new things is recycle.
We have a short shower, not a long one.	We use less water. That is reduce.

∴ Re-use: use it again. Recycle: made into new things. Reduce: use less.

Worked example 3 — why it matters

Use the real number from Victoria.

Why do we reduce, re-use and recycle?



Three cards showing why we reduce, re-use and recycle: less rubbish on the land (clean grass with a little plant), clean water for animals (fish in clean water), cleaner air for all of us (birds in a clear sky); at the bottom, less rubbish and Earth's gifts are kept safe, so we can keep having what we need for a long, long time.

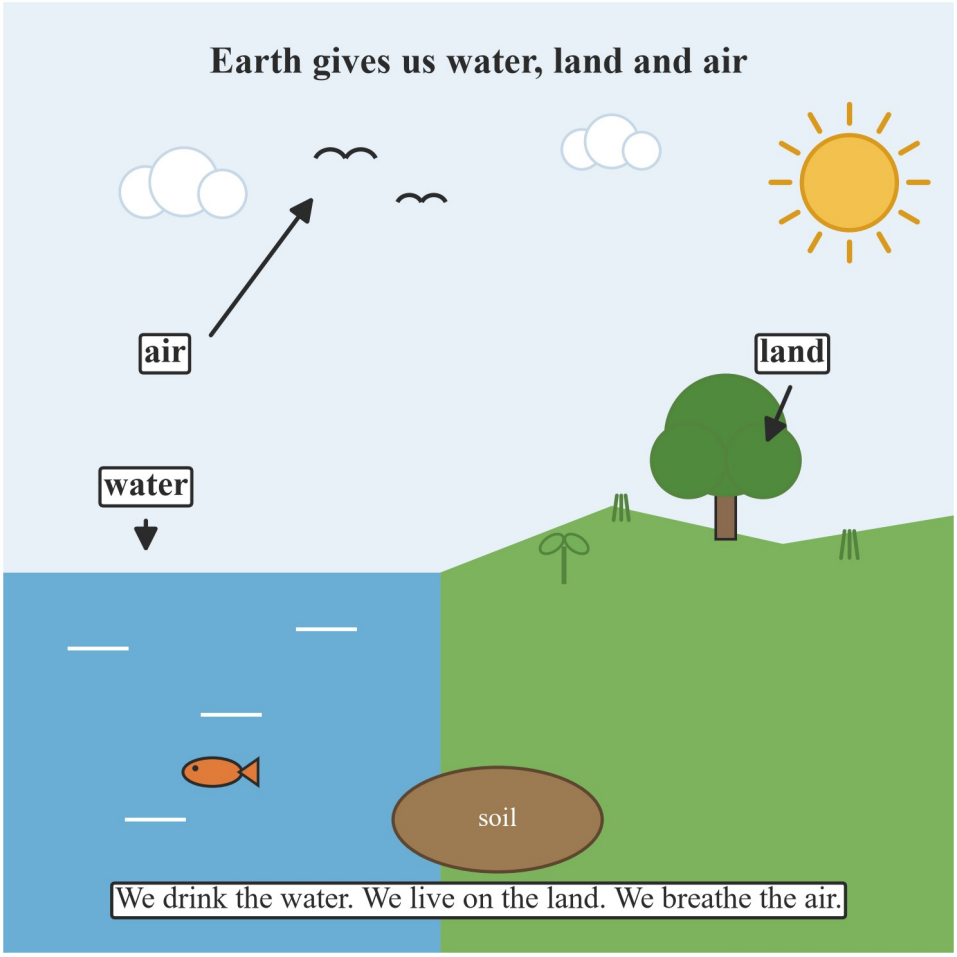
Working	Say why
Families in Victoria throw out 250,000 tonnes of food a year.	That is a lot. A tonne is as heavy as a small car.
Most of that food was good to eat.	We can eat what we buy, so less is thrown out.
Scraps go to compost, not to landfill.	That keeps food scraps out of the rubbish bin.

∴ Reducing, re-using and recycling keep Earth's water, land and air clean. That is sustainability.

Practice questions

The teacher reads all the words. The child says or does the answer. The teacher puts the answer down.

Q1. *(Foundation)* Look at Earth's three gifts.

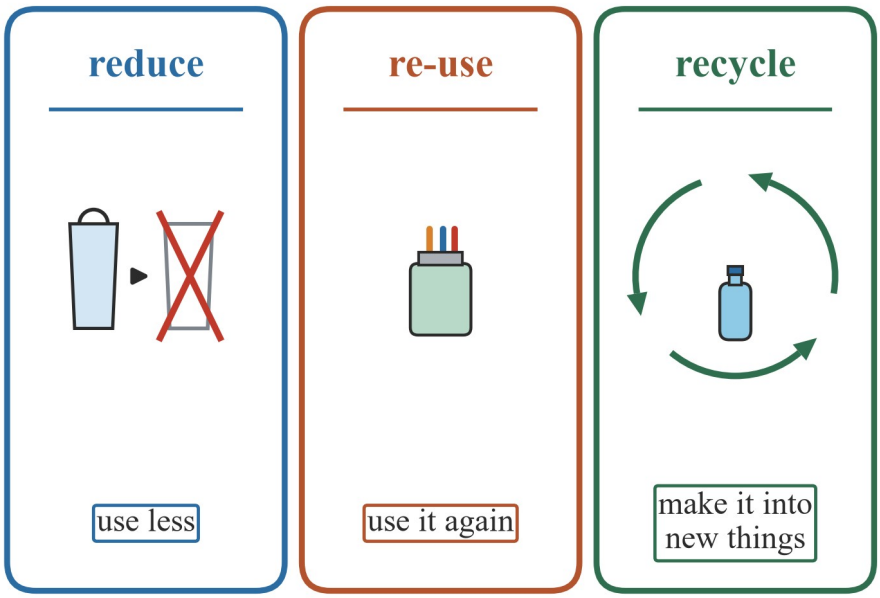


A picture of Earth's three gifts: water on the left with a fish in it, land on the right with a tree, grass and soil, and air above with the sun, clouds and birds; labels point to air, water and land, and a line at the bottom reads We drink the water, we live on the land, we breathe the air.

a. Point to the water.
b. Point to the land.
c. Say what we do with air.

Q2. *(Foundation)* Look at the three ways to care for Earth.

Three ways to care for Earth

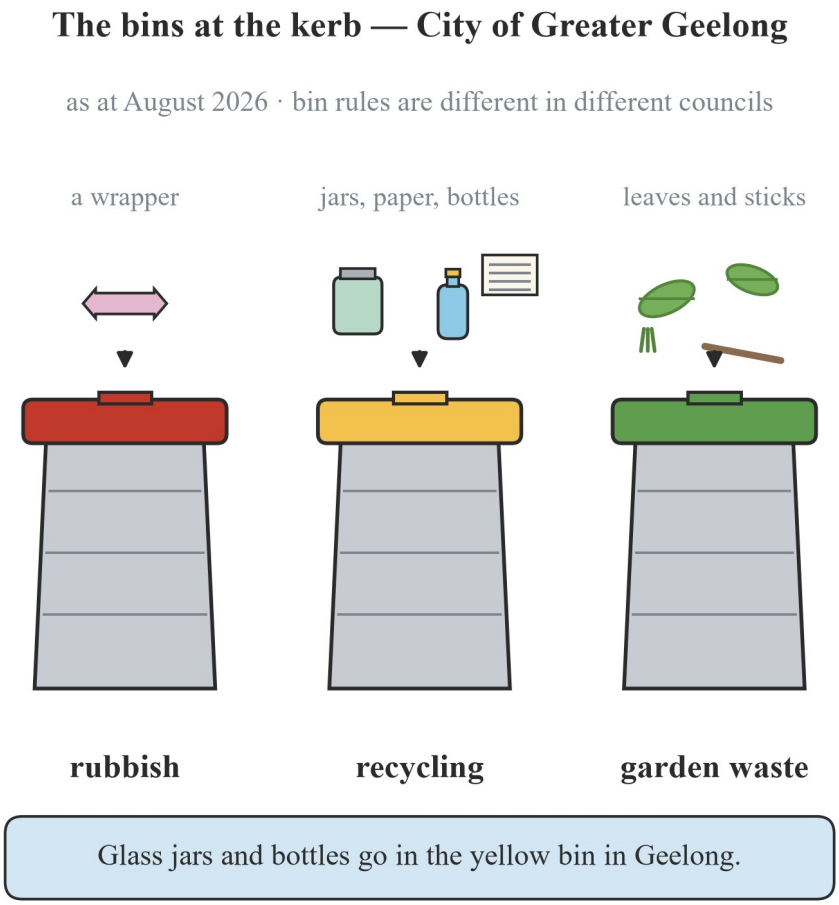


Reduce first. Then re-use. Then recycle.

Three cards, one for each way to care for Earth: reduce (use less) with a picture of one bag instead of two, re-use (use it again) with a jar used as a pencil cup, and recycle (make it into new things) with a bottle inside a three-arrow recycling wheel; at the bottom, reduce first, then re-use, then recycle.

a. Point to reduce.
b. Point to recycle.
c. Say what re-use means.

Q3. *(Foundation)* Look at the bins for Geelong.

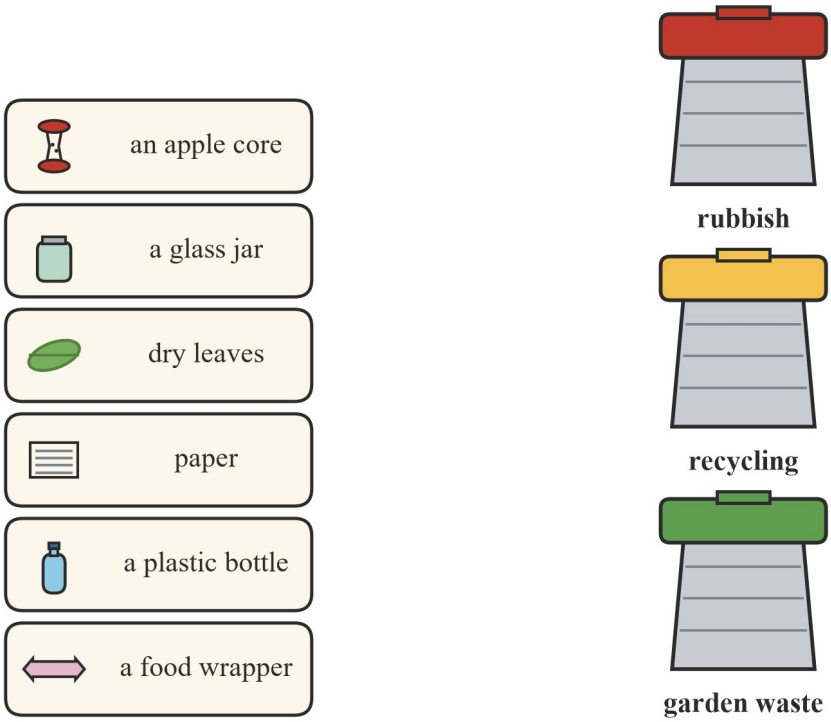


The three bins at the kerb in the City of Greater Geelong as at August 2026: a red-lid rubbish bin taking a wrapper, a yellow-lid recycling bin taking jars, paper and bottles, and a green-lid garden waste bin taking leaves and sticks; a note says bin rules are different in different councils, and glass jars and bottles go in the yellow bin in Geelong.

a. Point to the recycling bin.
b. Point to the garden waste bin.
c. Say which bin a glass jar goes in, in Geelong.

Q4. *(Foundation)* Look at the sorting picture.

Which bin? Draw a line from each thing to a bin.



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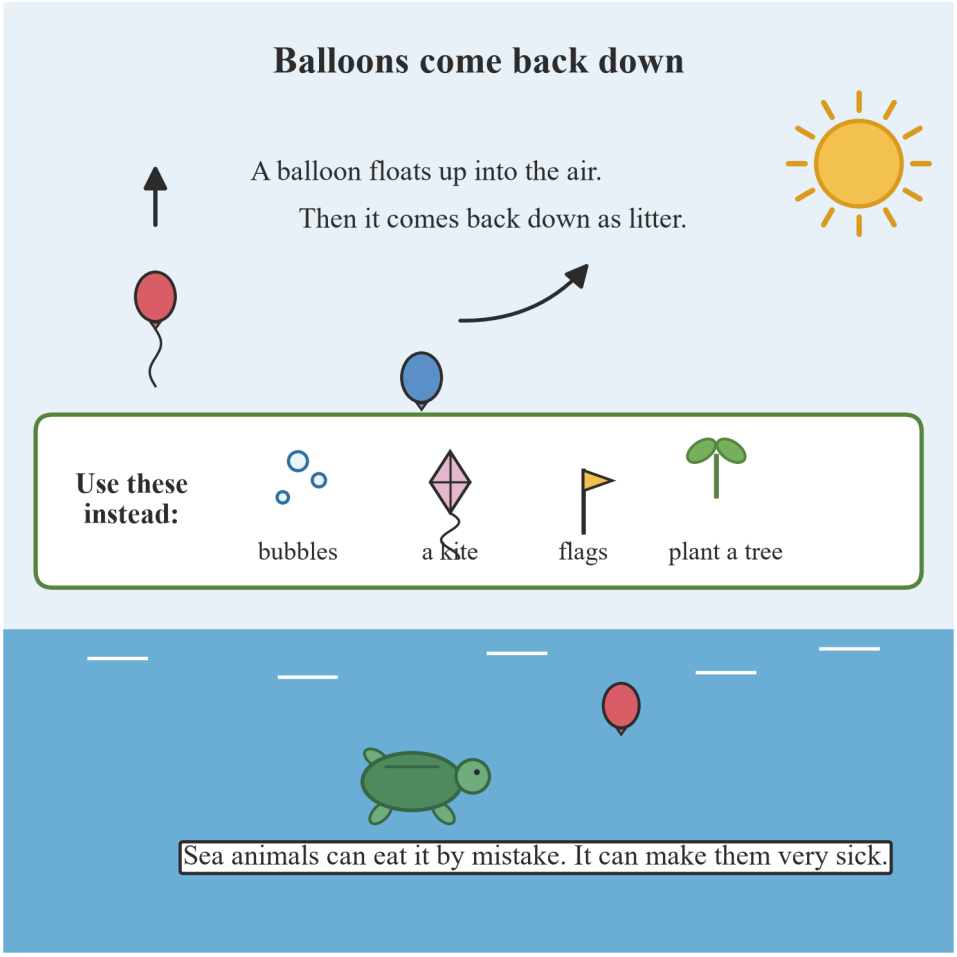
a. Say where the plastic bottle goes.
b. Say where the dry leaves go.
c. Say where the food wrapper goes.

Q5. *(Foundation)* Look at the balloon picture.



A balloon floats up into the air and then comes back down as litter and lands in the sea near a turtle; a note says sea animals can eat it by mistake and it can make them very sick; a strip of better ideas shows bubbles, a kite, flags and planting a tree.

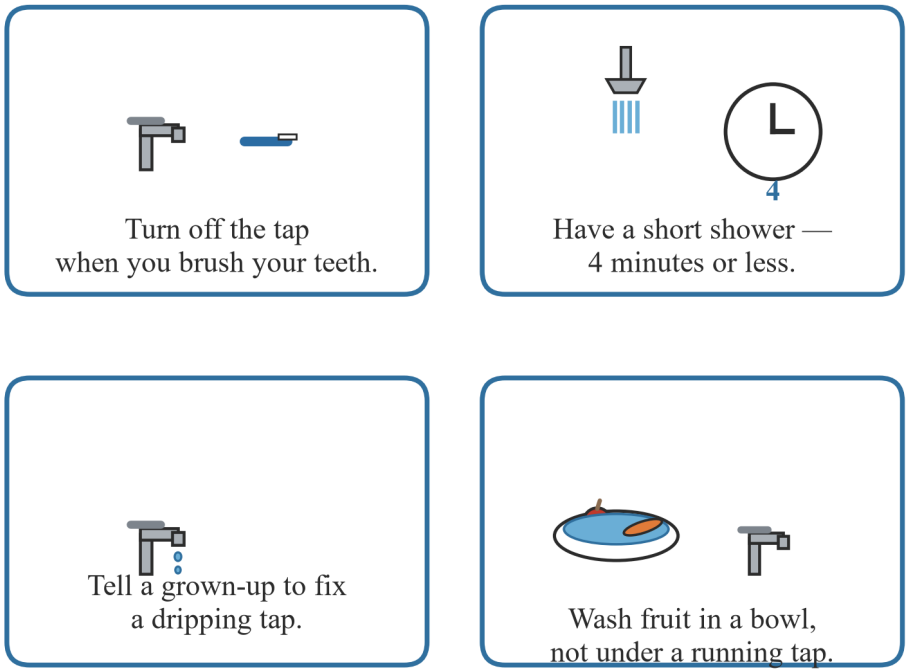
a. Point to a kite.
b. Point to bubbles.
c. Say what happens to a balloon that is let go.

Q6. *(Level 1)* Say if each one is reduce, re-use or recycle.

a. A box becomes a toy box.
b. An old bottle is made into a new bottle.
c. We take one bag, not two.

Q7. *(Level 1)* Look at the save-water picture.

Save water

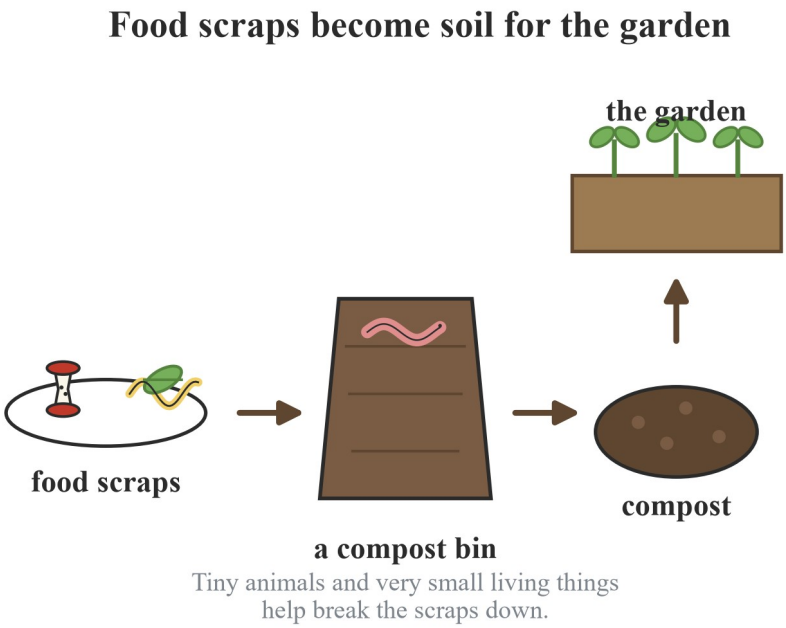


Clean water is one of Earth's gifts. Saving water helps keep it safe.

Four ways to save water: turn off the tap when you brush your teeth; have a short shower of 4 minutes or less; tell a grown-up to fix a dripping tap; wash fruit in a bowl, not under a running tap; at the bottom, clean water is one of Earth's gifts, saving water helps keep it safe.

a. Say two ways to save water.
b. Say what we do with a tap that drips.

Q8. *(Level 1)* Look at the compost picture.



Compost helps soil so plants can grow well.

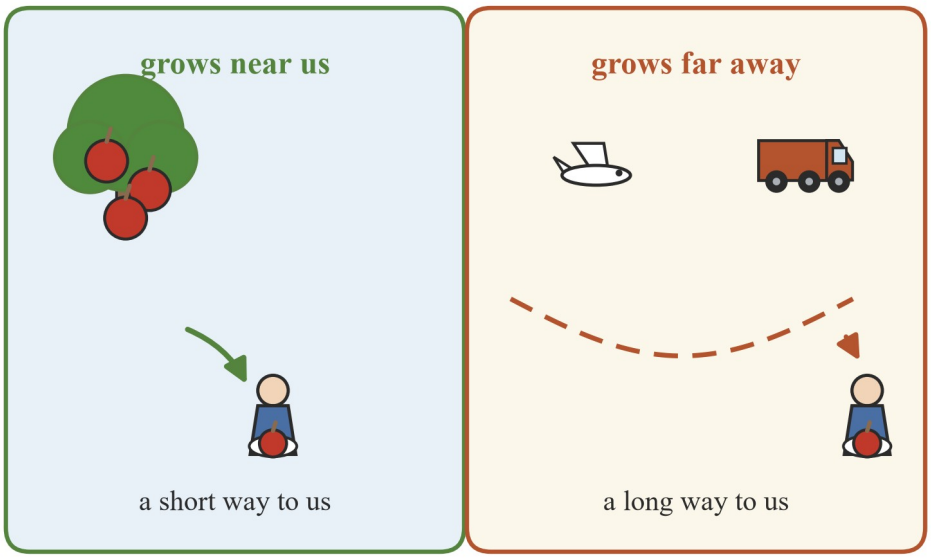
A compost bin keeps food scraps out of the rubbish bin.

Food scraps on a plate (an apple core, a banana skin, leaves) go into a compost bin with a worm, become dark compost, and the compost goes on a garden bed with little plants; notes say tiny animals and very small living things help break the scraps down, compost helps soil so plants can grow well, and a compost bin keeps food scraps out of the rubbish bin.

a. Name one thing that goes into compost.
b. Say what the scraps become.
c. Say how compost helps.

Q9. *(Level 1)* Look at the food picture.

Food that grows near us travels a short way



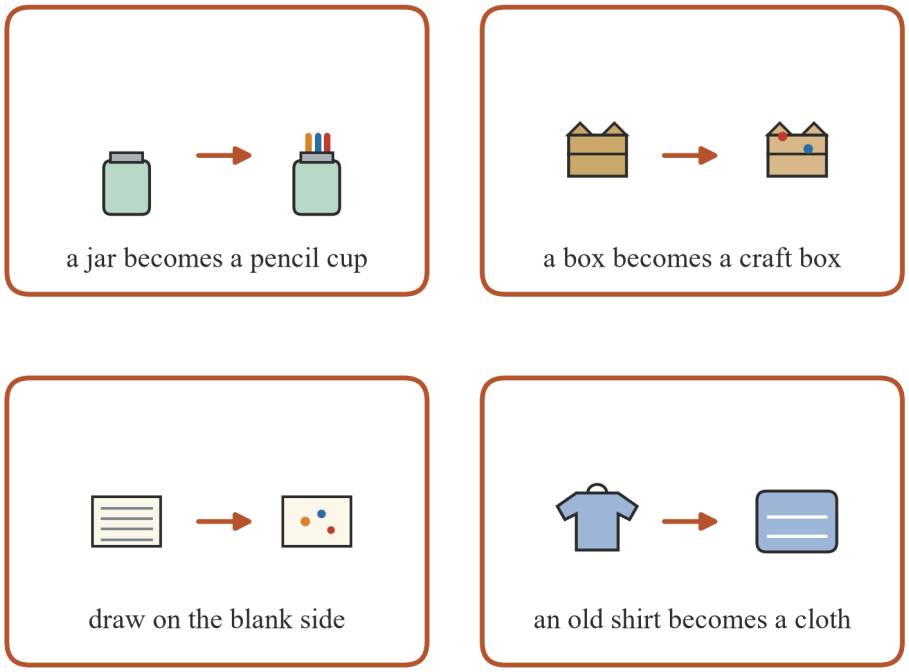
Food in season can grow near us. Less travel helps keep the air clean.

Two cards: food that grows near us (an apple tree close to a person with a bowl of apples) travels a short way, and food that grows far away (a plane and a truck on a long path) travels a long way; at the bottom, food in season can grow near us, less travel helps keep the air clean.

a. Point to the food that travels a short way.
b. Say how food from far away travels to us.
c. Say what in season means.

Q10. *(Level 2)* Look at the re-use ideas.

Use it again — four re-use ideas



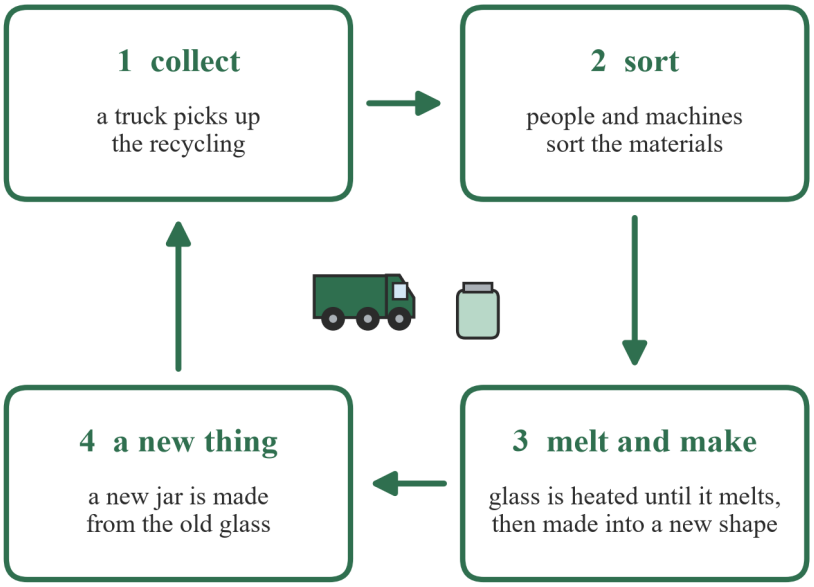
Re-using means we use less new stuff. That helps Earth.

Four re-use ideas in four cards: a jar becomes a pencil cup, a box becomes a craft box, we draw on the blank side of paper with writing on one side, and an old shirt becomes a cloth; at the bottom, re-using means we use less new stuff, that helps Earth.

a. Pick one re-use from the picture.
b. Say why it is re-use, not recycle.

Q11. *(Level 2)* Look at the recycling loop.

Old things become new things — the recycling loop



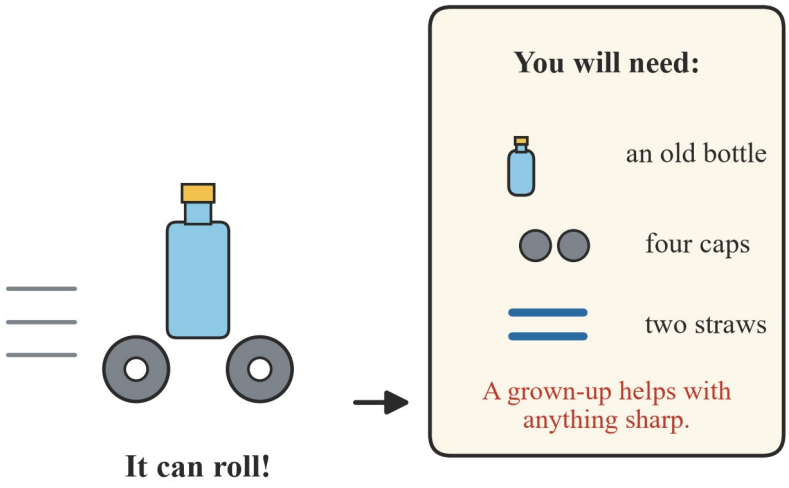
The loop goes round and round. Old glass can become new glass, again and again.

The recycling loop in four steps joined by arrows in a circle: 1 collect (a truck picks up the recycling), 2 sort (people and machines sort the materials), 3 melt and make (glass is heated until it melts, then made into a new shape), 4 a new thing (a new jar is made from the old glass); at the bottom, the loop goes round and round, old glass can become new glass again and again.

a. Say what happens first in the loop.
b. Say what old glass becomes.
c. Say why it is called a loop.

Q12. *(Level 2)* Look at the toy made from old things.

Make a toy that can move from old things



You changed old things and made a new toy.

That is re-using and making less rubbish.

A toy car made from an old bottle with four bottle-cap wheels, and a list of what you will need: an old bottle, four caps, two straws; a red note says a grown-up helps with anything sharp; at the bottom, you changed old things and made a new toy, that is re-using and making less rubbish.

a. Say what the toy is.
b. Say what the wheels are made from.
c. Say why making this toy is good for Earth.

Q13. *(Level 2)* Say why it matters.

a. Say one reason we reduce, re-use and recycle.
b. Say the big word for looking after Earth.
c. Say one way to waste less food at home.

Answers

Q1. a. the sea, rivers and rain on the left b. the ground with the tree and the soil c. we breathe it.

Q2. a. the first card, use less b. the third card, make it into new things c. use it again.

Q3. a. the yellow-lid bin b. the green-lid bin c. the yellow-lid bin.

Q4. a. the yellow-lid bin b. the green-lid bin c. the red-lid bin.

Q5. a. the kite in the strip of better ideas b. the bubbles c. it comes back down as litter.

Q6. a. re-use b. recycle c. reduce.

Q7. a. any two of: turn off the tap when brushing teeth, a short shower, fix a tap that drips, wash fruit in a bowl b. tell a grown-up, so it gets fixed.

Q8. a. any one of: an apple core, a banana skin, leaves b. compost c. it helps soil, so plants grow well.

Q9. a. the apples that grow near us b. in trucks and planes c. ready to pick near us at that time of year.

Q10. a. any one of the four, e.g. a jar becomes a pencil cup b. because we use the thing again as it is; it is not made into a new thing.

Q11. a. collect — a truck picks up the recycling b. a new thing, e.g. a new jar c. because the steps come back to the start, round and round.

Q12. a. a car that can roll b. caps c. it re-uses old things and makes less rubbish.

Q13. a. any one of: less rubbish on the land, clean water for animals, cleaner air for all of us b. sustainability c. any one of: eat what we buy, compost the scraps.

Fully-worked solutions

Q1.

a. The blue part with the fish is the water. Point to it.
b. The green part with the tree and the soil is the land. Point to it.
c. Air is all around us. We breathe air.

∴ We drink the water, we live on the land, we breathe the air.

Q2.

a. Reduce is the first card: use less.
b. Recycle is the third card: make it into new things.
c. Re-use means use it again.

∴ Reduce: use less. Re-use: use it again. Recycle: new things.

Q3.

a. The recycling bin has the yellow lid.
b. The garden waste bin has the green lid.
c. In Geelong, glass jars and bottles go in the yellow-lid bin.

∴ Yellow lid: recycling. Green lid: garden waste. Jar: yellow.

Q4.

a. A plastic bottle can be recycled: the yellow-lid bin.
b. Dry leaves are garden waste: the green-lid bin.
c. A food wrapper cannot be recycled: the red-lid bin.

∴ Bottle: yellow. Leaves: green. Wrapper: red.

Q5.

a. The kite is in the strip of better ideas. Point to it.
b. The bubbles are there too. Point to them.
c. A balloon that is let go comes back down as litter.

∴ Better ideas: bubbles, a kite, flags, planting a tree. A let-go balloon becomes litter.

Q6.

a. A box becomes a toy box: we use the box again. Re-use.
b. An old bottle made into a new bottle: old things into new things. Recycle.
c. One bag, not two: we use less. Reduce.

∴ a. re-use b. recycle c. reduce.

Q7.

a. Any two of the four tips: turn off the tap when brushing teeth; a short shower; fix a tap that drips; wash fruit in a bowl.
b. A tap that drips wastes water. Tell a grown-up, so it gets fixed.

∴ Two tips, and fix drips: less water is wasted.

Q8.

a. Food scraps go in: an apple core, a banana skin, leaves.
b. Worms and tiny living things break them down into compost.
c. Compost helps soil, so plants grow well.

∴ Scraps in, compost out, plants grow well.

Q9.

a. The apples on the tree near us travel a short way. Point to them.
b. Food from far away comes in trucks and planes.
c. In season means ready to pick near us at that time of year.

∴ Near: short way. Far: trucks and planes. In season: ready to pick near us.

Q10.

a. Pick one, e.g. a jar becomes a pencil cup.
b. We use the jar again as it is. Nobody melts it or makes it into a new thing. So it is re-use, not recycle.

∴ Re-use: the thing is used again as it is.

Q11.

a. First is collect: a truck picks up the recycling.
b. Old glass becomes a new thing, e.g. a new jar.
c. The steps come back to the start, round and round. A circle like that is a loop.

∴ Collect first; new jar; the steps go round in a circle.

Q12.

a. The toy is a car. It can roll.
b. The wheels are made from caps.

c. We re-used an old bottle and caps, so less rubbish is made.

∴ A rolling car; caps for wheels; re-using makes less rubbish.

Q13.

a. Any one of the three cards: less rubbish on the land; clean water for animals; cleaner air for all of us.
b. The big word is sustainability.
c. Any one of: eat what we buy; compost the scraps.

∴ We reduce, re-use and recycle to care for Earth's water, land and air.