

Cambridge Primary Science

**Student's
Book**

2nd Edition



How to Use This Book

This book is written to help you learn and enjoy science. You will build the knowledge and skills needed to understand the world around you. You will also learn how to think and work like a scientist!

The Student's Book has the following features:



The **Chapter Opener** uses a real-life example and an interesting picture to introduce the topic. A fun language activity will help you build language skills as you learn science.

Sticker activities make the learning of science fun. The stickers can be found at the back of the book.

In this section, I will

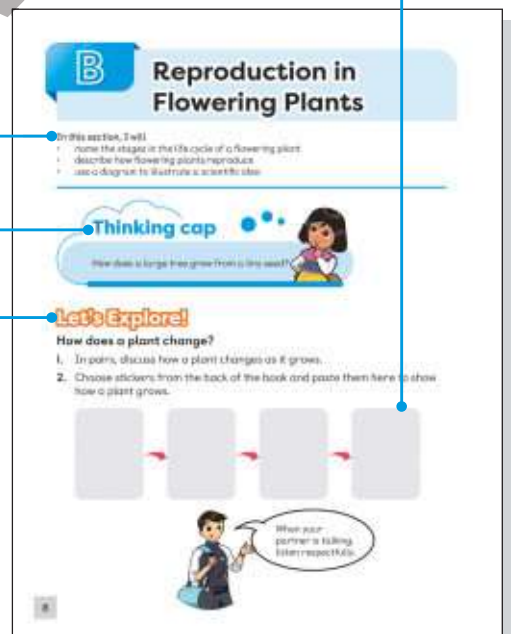
A list of the big ideas show you what you will learn in each section.

Thinking cap

You will think about what you know about the topic and ask questions.

Let's Explore!

You will carry out activities to help you explore and understand the topic.



Let's Learn


Step-by-step explanations and pictures help to make science easier to learn.

Let's Learn

What Is Magnetic Force?

You have learnt in Stage 3 that unlike poles of magnets attract and like poles repel each other. The force that attracts or repels a magnetic object or another magnet is called **magnetic force**. We cannot see magnetic force, but we can see its effect on magnetic materials or other magnets.

Look at the picture of the two bar magnets and the iron filings. Which parts of the magnet are most of the iron filings attracted to?




Iron filings attracted to bar magnet

Most of the iron filings are attracted to the parts of the magnet with the strongest magnetic force. Magnetic force is strongest at the poles of a magnet.

Option

Watch!
Scan this page to watch a video on how magnets exert magnetic force.

Word Boost
Magnet
 filings



Option



Watch!

Exciting video clips and quizzes will make learning “come alive”. The video clips and quizzes can be launched on a smartphone or a tablet by scanning the page using the MCE Cambridge app.



Word Boost

Build your knowledge of words to help you understand the topic better.

Problem-based Learning

Apply your knowledge and skills to solve a problem that affects you, society or the environment.

The **Thinking and Working Scientifically** icon tells you where you will develop science skills, such as using models and doing practical work.

Check Your Learning

Check Your Learning helps you test yourself on what you have learnt in each section.

‘**I can...**’ statements at the end of each section help you think about what you have learnt.

Problem-based Learning

How can we be safe in the bathroom?

Accidents may happen in the bathroom, especially among the elderly and children. People may slip and fall in the bathroom because of smooth surfaces, or if water and soap are present on the floor.

1. Work in groups.
2. Conduct an investigation to find out about ways that make the bathroom safer for us. Come up with a scientific question that you would like to investigate. Discuss and identify the type of scientific enquiry that you can use to answer your question.
3. Consider the possible risks when carrying out the activity. How would you minimise the risks?
4. Present your ideas to the class. Explain how you have used what you have learnt about forces to come up with your ideas.

Check Your Learning

What happens to a moving object when forces acting on it are unbalanced?

Tick (✓) to show what you can do.

- I can recognise that an object may have many forces acting on it, even when at rest.
- I can use force diagrams to show the different forces acting on objects.
- I can use a diagram to explain a scientific idea.
- I can ask a scientific question and find the best scientific way to get to the answer.
- I can describe risks in practical work and ways to minimise them.
- I can recognise the features of different scientific enquiries.

Activity Book
Section 4B p. 83

Tech Talk!



Many scientists look at adaptations of animals to come up with new inventions. There is a type of glue that works underwater. This glue is modelled after how mussels have adapted to living underwater. The glue is made to work well in water so that it can be used to fix cracks in aquariums and swimming pool floors.

Find out what other useful products have been modelled after adaptations that plants and animals have.

Check Your Learning



Describe two adaptations of plants and animals in hot and cold environments.

Tick (✓) to show what you can do.

- I can describe how plants and animals are adapted to different environments.
- I can use science to support my points of view in discussions.

Activity Book
Activity 3A, p. 21

42

Tech Talk!

This feature shows you the latest technologies and helps build thinking skills in you.

Activity Book links lead you to the related activities in the Activity Book.

The Science in Context icon tells you how science is used in the world around you.

Science at Work

Learn about people who use science in their work and how science is found everywhere around us. A question at the end helps you build your IT and research skills.

Science at Work



Hydrologists are scientists who work to solve water-related problems. They often use science and technology to come up with ways to improve the quality, quantity and availability of water. For example, they may develop new ways to find water sources, produce clean water or control flooding. Find out how a water-related problem in your local area was solved using technology.

Check Your Learning



Rainwater is pure water. Do you agree? Explain your answer.

Tick (✓) to show what you can do.

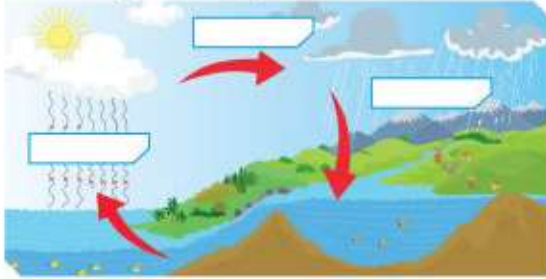
- I can explain that most water on the Earth is not pure.
- I can use evidence I have researched in various sources of information to answer questions.
- I can ask a scientific question and find the best scientific way to get to the answer.
- I can identify people who use science and describe how they use it.
- I can discuss the positive effects of science and technology on my local environment.

Word Boost

quality
quantity
sources

42

3. The water cycle involves many processes.
Label the diagram to show the processes.



Science Words

A
atmosphere
a layer of gases that surrounds the Earth

C
carbon dioxide
a gas found in the atmosphere that plants use to make food

N
nitrogen
a gas that is found in the largest amount in the atmosphere

O
oxygen
a gas found in the atmosphere that is needed for the survival of living things

P
precipitation
water that falls from the clouds onto the Earth, especially as rain or snow

P
pure water
water that has no dissolved substances in it

W
water cycle
the continuous movement of water from the Earth's surface to the sky and back to the Earth's surface

W
water vapour
the gaseous state of water

144

Science Words

The meanings of science words that appear in bold text within each chapter help you learn and understand the topics better.

Practice Worksheet

Answer these questions to test your understanding and apply what you have learnt.

Practice Worksheet

1. Tick (✓) the correct box beside each sentence.

	True	False
We should only eat fruits and vegetables to have a balanced diet.	<input type="checkbox"/>	<input type="checkbox"/>
A balanced diet includes some fats.	<input type="checkbox"/>	<input type="checkbox"/>
We can get proteins only from animal products.	<input type="checkbox"/>	<input type="checkbox"/>
Digestion starts in the stomach.	<input type="checkbox"/>	<input type="checkbox"/>
The large intestine absorbs water from the undigested food.	<input type="checkbox"/>	<input type="checkbox"/>
Digestion of food ends in the anus.	<input type="checkbox"/>	<input type="checkbox"/>
All animals have the same organs in their digestive systems.	<input type="checkbox"/>	<input type="checkbox"/>

2. Which of the following types of food should you eat less of? Circle the two correct answers.



31

Look for some food items in your refrigerator. Using the food packaging as a source of information, find out which food group each of the food items belongs to. Sort the food items into the various food groups on a separate piece of paper.

The plate below shows how you can have a balanced diet.



25

Two Social and Emotional Learning mascots, Lana and Leo, help you to learn how to work with others and take care of your feelings.



Problem-based Learning

How can we prevent wastage of water?

Farmers need water to grow their plants. Many farmers depend on rainfall to water their fields. When there is not enough rainfall, many farms use artificial watering of fields. This is known as irrigation.

Many fields use an irrigation system as shown in this picture. However, some irrigation systems can lead to wastage of water as the plants may not need so much water. You have been tasked to find ways to solve this problem.

1. Work in groups. Start with asking a scientific question about irrigation that can be investigated. Select an appropriate scientific enquiry that you can use to find the answer to your question.
2. Design a method to irrigate fields without wasting water.
3. Design a poster to present your ideas. Keep these questions in mind when designing the poster:
 - (a) How will this system work?
 - (b) Can it be easily set up and used?
4. Share your poster with the class.

When working in a group, take part actively. Encourage your group mates to share their ideas.



Word Boost
wastage

141

Contents

Think and Work Like a Scientist

Page 1

CHAPTER 1

Flowering Plants

Page 3

A Flowers

- What Are Flowering and Non-flowering Plants?
- What Are the Parts of a Flower?
- What Are the Functions of Some Parts of a Flower?

B Reproduction in Flowering Plants

- What Is the Life Cycle of a Flowering Plant?
- What Is Pollination?
- How Are Fruits and Seeds Produced?
- What Is Seed Dispersal?

C Germination of Seeds

- What Is Germination?

- Sort living things by observation.
- Complete a key based on differences that can be observed.
- Learn that a model shows the important features of an object.
- Use a diagram to illustrate a scientific idea.
- Use knowledge and understanding to make predictions.
- Plan a fair test and identify the three types of variables.
- Choose equipment and use it properly during an investigation.
- Recognise the features of different scientific enquiries.
- Describe if a prediction was accurate based on results.
- Create tables and diagrams to present the results of my observations when appropriate.
- Suggest and explain how an investigation could be improved.
- Ask a scientific question and find the best scientific way to get to the answer.



- Identify people who use science and describe how they use it.



- A** A Balanced Diet
- What Is a Healthy Diet?
- B** The Digestive System
- What Is Digestion?
 - Do Other Animals Have a Similar Digestive System?

- Use tables and bar charts to explain my results.
- Use evidence I have researched in various sources of information to answer questions.
- Sort objects by observation.
- Learn that a model shows important features of a process.
- Use a diagram to illustrate a scientific idea.



- A** Adapting to the Environment
- What Are Adaptations?
 - How Are Plants and Animals Adapted in a Hot and Dry Environment?
 - How Are Plants and Animals Adapted in a Cold Environment?
 - How Are Plants and Animals Adapted in a Wet Environment?
- B** Adaptations of Flowering Plants
- What Adaptations Do Flowering Plants Have for Pollination?
 - What Adaptations Do Flowering Plants Have for Seed Dispersal?
- C** Adaptations of Predators and Prey
- What Adaptations Do Predators Have?
 - What Adaptations Do Prey Have?



- Use science to support my points of view in discussions.
- Identify people who use science and describe how they use it.





A Particle Model of Solids, Liquids and Gases

- What Are Gaseous Substances?
- How Can the Particle Model Be Used to Describe Gases?

B Evaporation and Condensation

- What Happens During Evaporation?
- What Factors Affect the Rate of Evaporation?
- What Happens During Condensation?

- Learn that a model shows the important features of an idea. 
- Use a model to explain a process.
- Plan a fair test and identify the three types of variables.
- Choose equipment and use it properly during an investigation.
- Describe risks in practical work and ways to minimise them.
- Use knowledge and understanding to make predictions.
- Decide when to repeat observations to get reliable results.
- Do practical work safely.
- Take measurements accurately.
- Create tables and diagrams to present the results of my observations when appropriate.
- Recognise the features of different scientific enquiries.


- Describe the use of science locally. 


A Properties of Water

- What Are the Melting and Boiling Points of Water?
- What Happens When Water Solidifies?
- How Is Temperature Measured?

B Solutes, Solvents and Solutions

- What Are Solutes, Solvents and Solutions?
- How Can the Particle Model Be Used to Describe Solutions?
- How Can the Solvent and Solute Be Separated From a Solution?

- Choose equipment and use it properly during an investigation. 
- Take measurements accurately.
- Use line graphs to explain my results.
- Describe patterns in results and identify any unexpected results.
- Describe if a prediction was accurate based on results.
- Use a diagram to illustrate a scientific idea.
- Describe risks in practical work and ways to minimise them.
- Do practical work safely.
- Create tables and diagrams to present the results of my observations when appropriate.


- Use science to support my points of view in discussions. 


A Types of Forces

- What Forces Are There Around Us?

B Force Diagrams

- How Do We Show Forces in Diagrams?

- Decide when to repeat observations to get reliable results. 
- Suggest and explain how an investigation could be improved.
- Use a diagram to explain a scientific idea.
- Ask a scientific question and find the best scientific way to get to the answer.
- Describe risks in practical work and ways to minimise them.
- Recognise the features of different scientific enquiries.


- Use science to support my points of view in discussions. 
- Identify people who use science and describe how they use it.

A How Sounds Are Made

- How Are Sounds Made?
- Can Sound Travel Through Other States of Matter?

B Pitch and Volume

- Why Do Sounds Have Different Pitches?
- Why Do Sounds Have Different Volumes?

- Do practical work safely. 
- Describe risks in practical work and ways to minimise them.
- Describe patterns in results and identify any unexpected results.
- Reach a scientific conclusion from my results.
- Take measurements accurately.
- Ask a scientific question and find the best scientific way to get to the answer.
- Create tables and diagrams to present the results of my observations when appropriate.
- Recognise the features of different scientific enquiries.



- A** Magnets and Magnetic Materials
- What Are the Differences Between Magnets and Magnetic Materials?
- B** Magnetic Force
- What Is Magnetic Force?
 - Can Magnetic Force Act Over a Distance?
 - What Is Magnetic Strength?

- Sort objects by testing.
- Construct a key based on differences that can be observed.
- Decide when to repeat observations to get reliable results.
- Use dot plots to explain my results.
- Choose equipment and use it properly during an investigation.
- Do practical work safely.
- Create tables and diagrams to present the results of my observations when appropriate.



- Use science to support my points of view in discussions.



- A** The Atmosphere
- What Is the Atmosphere?
- B** The Water Cycle
- What Is the Water Cycle?
- C** Water on the Earth
- What Is in Our Water?

- Learn that a model shows the important features of a process.
- Use a model to illustrate a scientific idea.
- Suggest and explain how an investigation could be improved.
- Use evidence I have researched in various sources of information to answer questions.
- Ask a scientific question and find the best scientific way to get to the answer.



- Identify people who use science and describe how they use it.
- Discuss the positive effects of science and technology on my local environment.



- A** Pollution and Our Environment
- What Is Pollution?
- B** Types of Pollution
- What Are Some Examples of Pollution?

- Use evidence I have researched in various sources of information to answer questions.



- Describe the use of science locally.
- Discuss the positive and negative effects of science and technology on my local environment.
- Identify people who use science and describe how they use it.



A Earth's Orbit

- How Does Earth Move?
- How Does the Tilt of Earth Cause Different Seasons?

B Satellites

- Are There Objects That Orbit a Planet?

- Use a diagram to illustrate and explain a scientific event.
- Learn that a model shows the important features of an idea.



- Use evidence obtained to show how scientific knowledge and understanding have changed over time.

**Acknowledgements**

Page 173

Stickers

Page 179



Eddy



Ron



Ralph

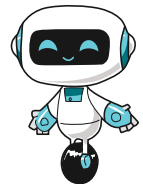


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Izzy

Get ready to start an exciting learning journey with us!



Think and Work Like a Scientist

The learning of science starts with being curious about the world around you.

What Do Scientists Do?

Scientists try to find out things and understand the world around them. They ask questions and find a way to answer the questions. This is called scientific enquiry. There are five types of scientific enquiry that scientists use to answer questions.

To think and work like a scientist, you can do the following:

Research

You research to find out information about the questions you have. To research, you can speak to people or refer to books or the Internet. Then, select and organise the information to make a conclusion in a scientific investigation.

You can use this type of scientific enquiry to find out:

- how many times you have travelled round the Sun each time you have a birthday.
- how much of a certain type of food your classmates eat in a day.



Fair Testing

Fair testing involves carrying out an investigation to find out how one variable is affected when another variable is changed. It is important to keep all other variables the same.



You can use this type of scientific enquiry to find out:

- how the length of a string affects the pitch of the sound produced.
- how the temperature of a liquid affects the rate of dissolving.

Observing over Time

You can observe changes to living things, materials and processes over a period of time. The observations can be made over minutes, hours, days or even years.



You can use this type of scientific enquiry to find out:

- how the temperature of ice changes as it melts.
- the changes in appearance of the Moon over each month.

Identifying and Classifying

When you observe objects, materials and living things, you look at their main features. You can then use the similarities and differences to classify them into groups.



You can use this type of scientific enquiry to find out:

- if an object is a solid, a liquid or a gas.
- if a plant is flowering or non-flowering.

Pattern Seeking

You may find a pattern in your observations or in the information collected. You may observe a sequence or a repetition.

You can use this type of scientific enquiry to find out:

- if the structure of a fruit affects the way its seeds are dispersed.
- if your pulse rate is affected by the types of exercise you do.



As you learn science in this book, you will carry out scientific activities. You need to select the most suitable scientific enquiry to use to help you find the answers to the questions.

Flowering Plants

Look at the two plants.

Do you think all plants have flowers? What differences do you observe between the two flowers? You may have seen insects near flowers.

Which of these flowers would attract more insects? Why?



What colour would you use to paint a flower to make it more attractive?

I would paint the flower _____.

A

Flowers

In this section, I will

- learn that not all plants produce flowers
- identify parts of a flower
- describe the functions of some parts of a flower
- sort living things by observation
- complete a key based on differences that can be observed
- learn that a model shows the important features of an object

Thinking cap

What is inside a flower?



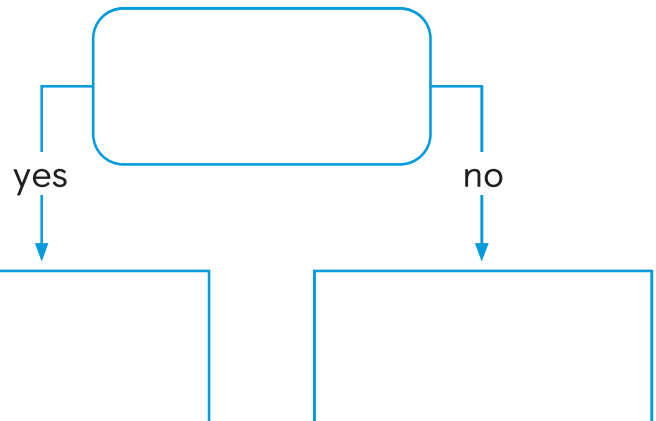
Let's Explore!



Do all plants have flowers?

In groups, take a walk around the school garden or a nearby garden.

1. Ask yourselves the following questions:
 - What do you look out for to tell if something is a plant?
 - What are some of the common parts that all plants have?
 - Do all plants have flowers?
2. Find out the names of the plants in the garden from your teacher. Complete the key to sort the plants into two groups.



Let's Learn

What Are Flowering and Non-flowering Plants?

You have learnt that plants have roots, stems and leaves. Some plants produce flowers too. They are called **flowering plants**.



Rose and daisy are flowering plants.

Not all plants produce flowers. Plants that do not produce flowers are called **non-flowering plants**.




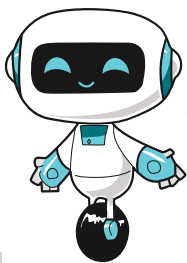
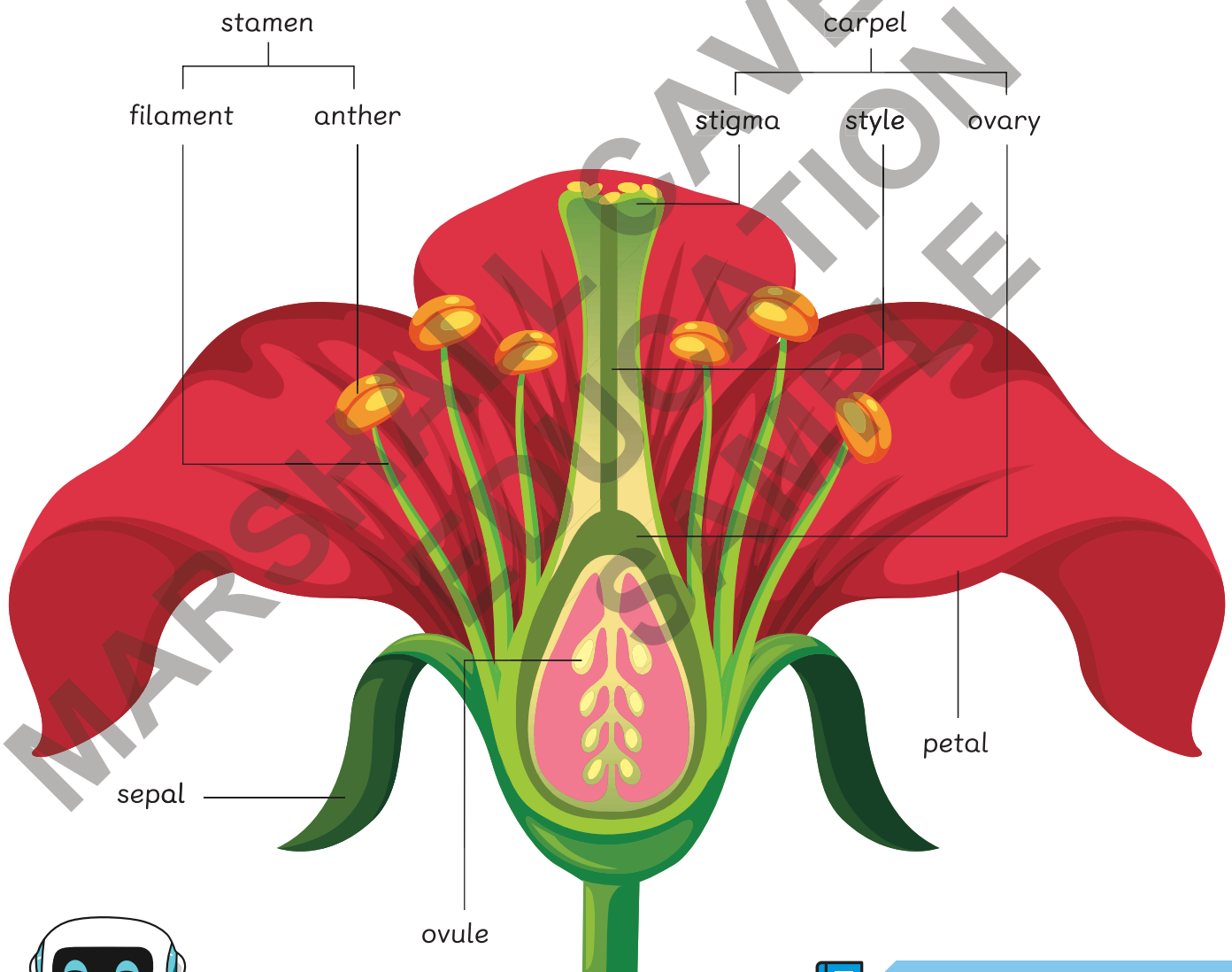
Ferns and conifers are non-flowering plants.

What Are the Parts of a Flower?

Flowers are the parts of a plant that help it reproduce. They are the reproductive parts of the plant.

The petals of a flower surround its male and female parts. The **stamen** of the flower includes the male parts. The **carpel** includes the female parts. Each part of the flower has a different function.

 The labelled diagram below is a model of a flower. As some flowers look different from others, a model helps us understand the common features of flowers.



How do you think non-flowering plants reproduce?



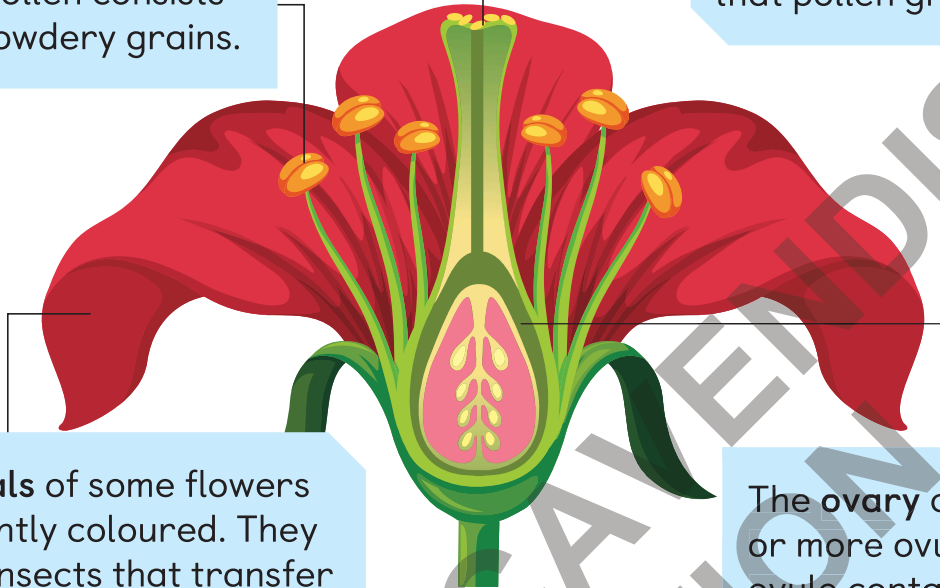
Word Boost

surround
function

What Are the Functions of Some Parts of a Flower?

The **anther** contains pollen. Pollen consists of tiny powdery grains.

The **stigma** is the part that pollen grains land on.

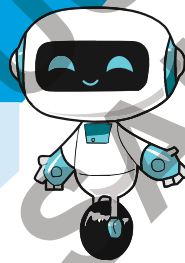


The **petals** of some flowers are brightly coloured. They attract insects that transfer pollen from the male part to the female part. This helps the plant to reproduce.

The **ovary** contains one or more ovules. Each ovule contains an egg.

Check Your Learning

Name some parts of a flower and describe their functions.



Tick (✓) to show what you can do.

- I can state that not all plants produce flowers.
- I can identify parts of a flower.
- I can describe the functions of some parts of a flower.
- I can sort living things through observation.
- I can complete a key based on differences that can be observed.
- I can explain that a model shows the important features of an object.

Activity Book
Activity IA, p. 1

B

Reproduction in Flowering Plants

In this section, I will

- name the stages in the life cycle of a flowering plant
- describe how flowering plants reproduce
- use a diagram to illustrate a scientific idea

Thinking cap

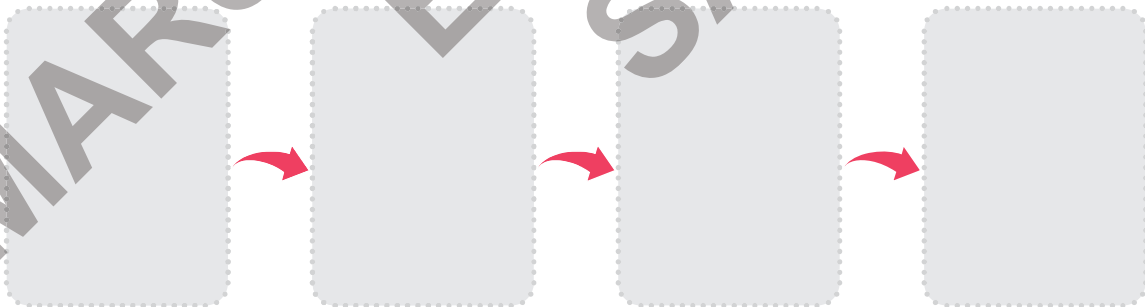
How does a large tree grow from a tiny seed?



Let's Explore!

How does a plant change?

1. In pairs, discuss how a plant changes as it grows.
2. Choose stickers from the back of the book and paste them here to show how a plant grows.



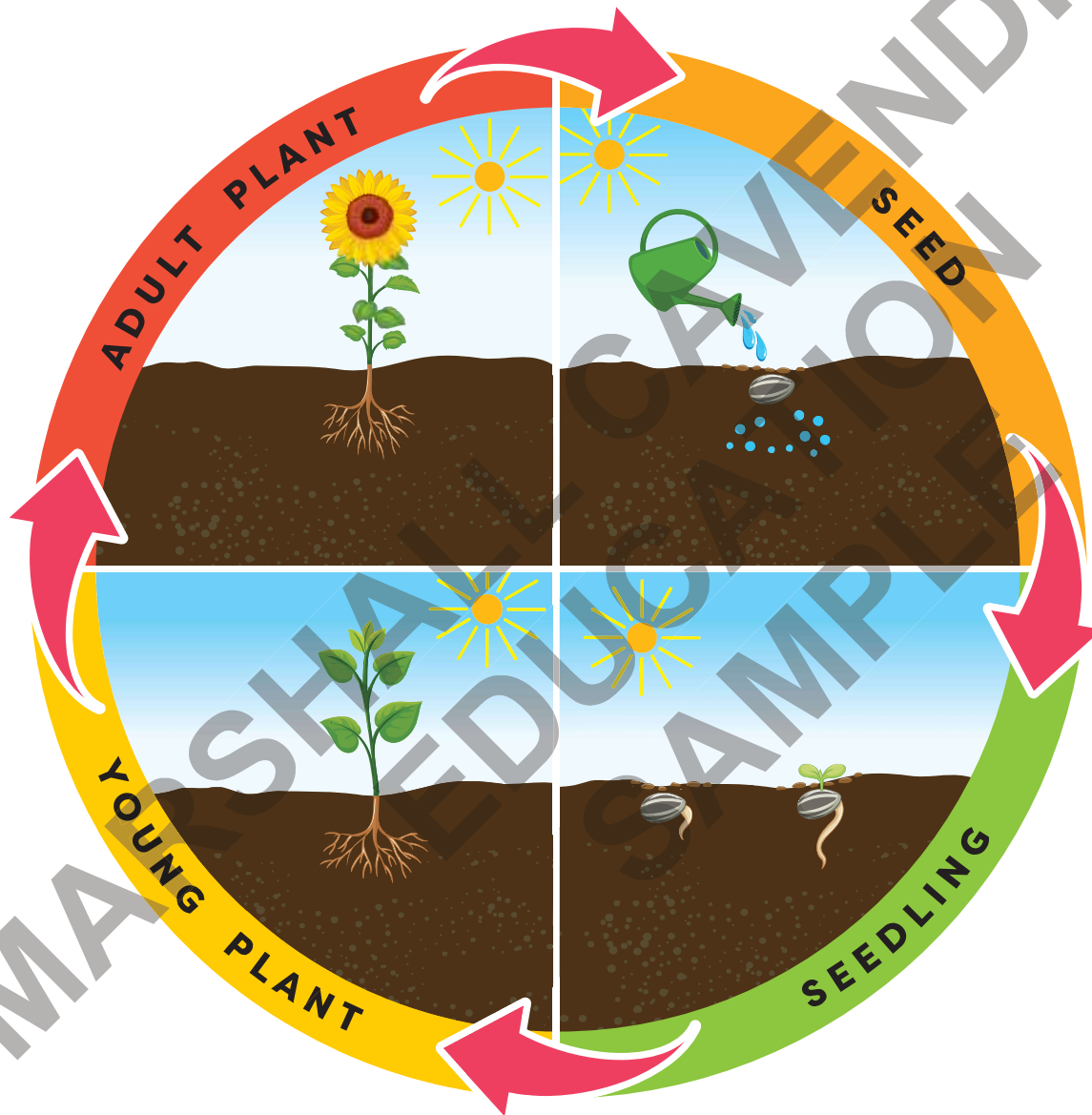
When your partner is talking, listen respectfully.

Let's Learn

What Is the Life Cycle of a Flowering Plant?



Scientists use diagrams to represent certain scientific ideas. The diagram below shows how a seed goes through various stages of growth and development before it develops into an adult plant. These stages repeat in a cycle and make up the **life cycle** of the flowering plant.



With the help of the diagram above, share with a partner what is happening in the various stages of the life cycle of the flowering plant.



Word Boost

develops
repeat
cycle

The reproduction of flowering plants involves many processes. Pollination, fertilisation, fruit and seed production, and dispersal are some of them.

What Is Pollination?

Pollen grains need to be transferred from the anther to the stigma of the same flower or another flower. This transfer of pollen grains is known as **pollination**.

Insects, birds and wind play an important part in pollinating flowers. As insects and birds travel from one flower to another, pollen gets stuck to their bodies. Thus, they help transfer pollen from the anther to the stigma.



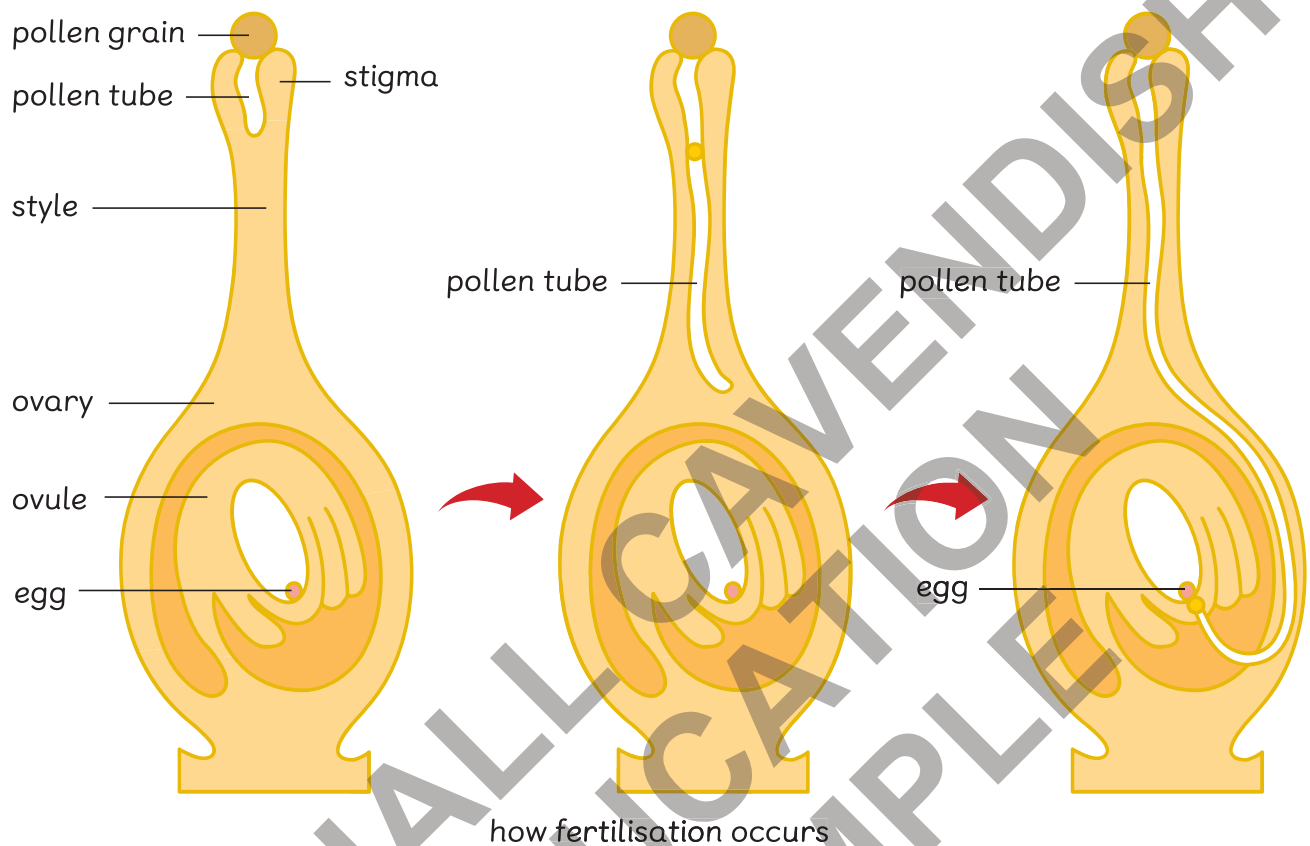
an insect and a bird pollinating flowers

Some flowers are also pollinated by wind. The light pollen grains are easily carried by the wind from one flower to another.

pollination by wind

How Are Fruits and Seeds Produced?

After pollination, the pollen and egg join in a process called **fertilisation**. The diagram below shows what happens after a pollen grain lands on a stigma.



1.

When a pollen grain lands on the stigma, it develops a tiny tube called a pollen tube.

2.

The pollen tube grows downwards into the ovary.

3.

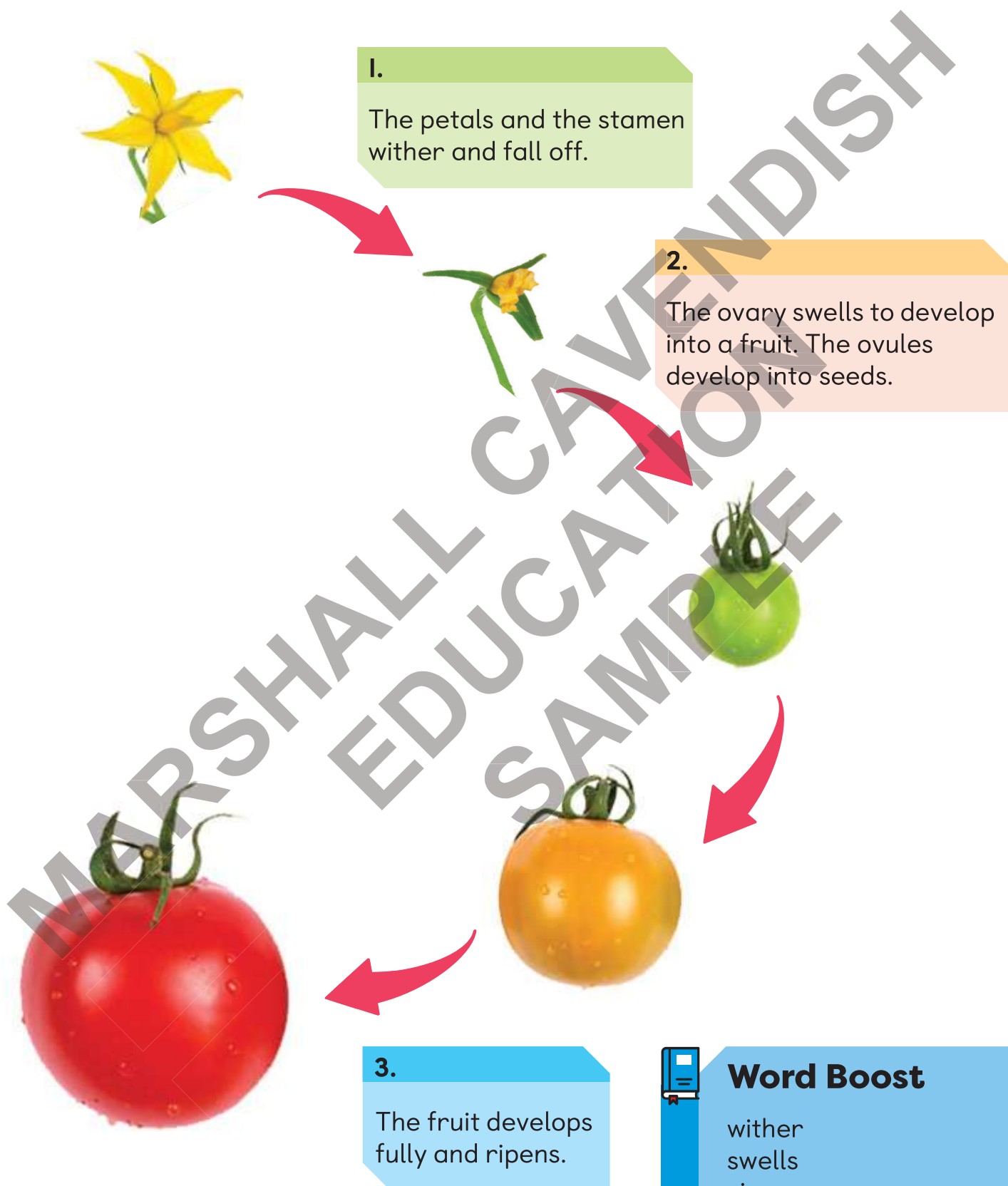
The pollen and the egg join. Fertilisation occurs.



Word Boost

tube

This diagram shows how fruits and seeds start to develop after fertilisation.



development of fruit and seeds after fertilisation

What Is Seed Dispersal?

Seeds need to be scattered away from the parent plant. Growing close to the parent plant can result in overcrowding. This can cause plants to compete with the parent plant and one another for water, light and space. The plants may not grow healthily and may die.

The scattering of seeds away from the parent plant is known as **seed dispersal**. Seed dispersal allows the plants to have enough water, light and space.

Different seeds are dispersed in various ways, such as by wind, water, animals or explosion.



Word Boost

overcrowding
compete
scattering



Some seeds are dispersed by wind.



Some seeds are dispersed by water.

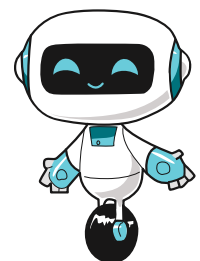


Some seeds are dispersed by animals.



Some fruits explode to disperse their seeds.

What characteristics do you think the respective seeds have for the various methods of dispersal?



Using some science books or the Internet, find out how the following seeds are dispersed.



spanish needles



violet



maple



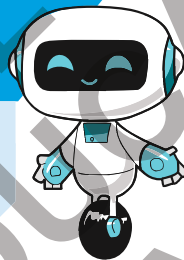
cattail

Group the seeds under the correct method of dispersal.

Wind	Water	Animals	Explosion

Check Your Learning

How are seeds formed?
Name the different ways in which seeds can be dispersed.



Option



Watch!

Scan this page to watch a video on the life cycle of a flowering plant.

Tick (✓) to show what you can do.

- I can name the stages in the life cycle of a flowering plant.
- I can describe how flowering plants reproduce.
- I can use a diagram to represent scientific ideas.

Activity Book
Activity IB, p. 3

C

Germination of Seeds

In this section, I will

- describe seed germination and the conditions required for it
- use knowledge and understanding to make predictions
- plan a fair test and identify the three types of variables
- choose equipment and use it properly during an investigation
- recognise the features of different scientific enquiries
- describe if a prediction was accurate based on results
- create tables and diagrams to present the results of my observations when appropriate
- suggest and explain how an investigation could be improved
- ask a scientific question and find the best scientific way to get to the answer
- identify people who use science and describe how they use it

Thinking cap

Do all dispersed seeds grow into new plants?



Let's Explore!



What do seeds need?

1. Work in pairs.
2. Plan an investigation to find out if seeds need water to grow into new plants.
3. Consider the materials and equipment needed when planning the investigation.
4. Identify the type(s) of scientific enquiry that you would use in this investigation.
5. Predict the results of the investigation.
6. Carry out the investigation and record your results in a table. Use your results to help you write a conclusion.
7. Use the results of your investigation to describe the accuracy of your prediction.
8. Compare your method with some other groups. How could you improve on your investigation? Explain why you would like to have those changes.

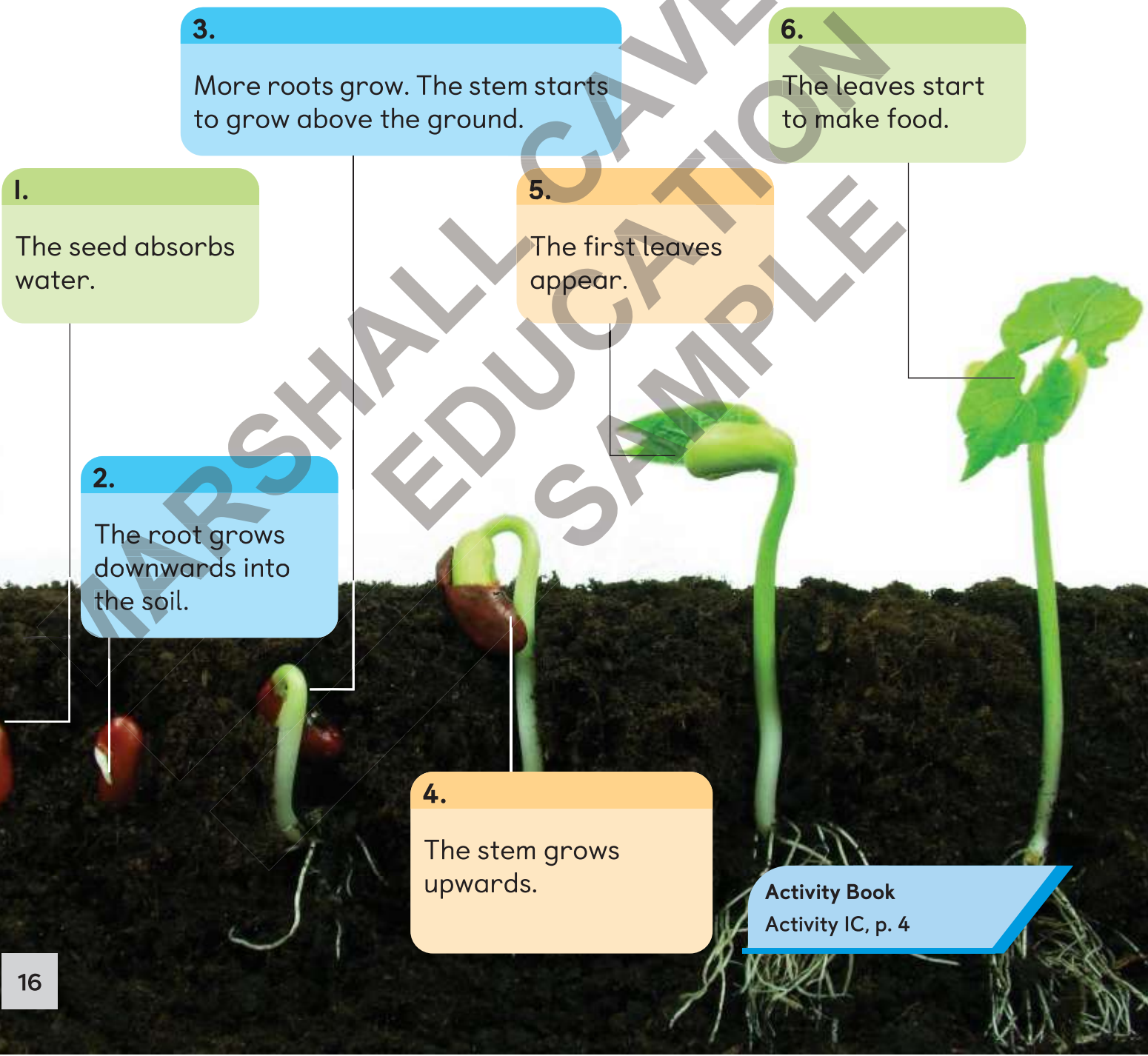
Let's Learn

What Is Germination?

The process by which a seed develops into a young plant is known as **germination**.

Seeds need air, water and a suitable **temperature** to germinate. If the temperature is too high or too low, seeds may not germinate.

This diagram shows how a seed germinates.



1.
The seed absorbs water.

2.
The root grows downwards into the soil.

3.
More roots grow. The stem starts to grow above the ground.

5.
The first leaves appear.

6.
The leaves start to make food.

4.
The stem grows upwards.

Activity Book
Activity IC, p. 4

Problem-based Learning



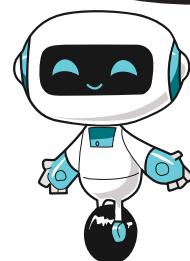
Help pollinate the plants!



Many of the plants grown for food depend on pollination. Honeybees play an important role in pollinating the flowers, but their population is reducing. We need to find other ways to pollinate flowers so we can produce enough food.

1. Work in groups. Design a machine that can be used for pollination. It could be hand-powered or wind-powered, or use another way to transfer pollen.
2. List down a scientific question that your group wishes to investigate in order for you to understand the pollination process better. Select the appropriate scientific enquiry to use to find the answer.
3. Which type of scientific enquiry has your group chosen to use? Why?
4. Present your idea or model to the class.

Can you think of any other ways we can help pollinate the flowers?



Science at Work

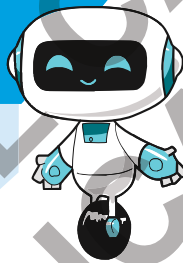


Agronomists study how plants can be grown in different ways. They work to increase the quality and quantity of plants produced, particularly those used as food.

Agronomists carry out experiments on plants to help them live longer and survive harsh conditions.

How can plants that live longer be useful to us?

Check Your Learning



What does a *seed* need for germination?

Tick (✓) to show what you can do.

- I can describe seed germination and the conditions required for it.
- I can use knowledge and understanding to make predictions.
- I can plan a fair test and identify the three types of variables.
- I can choose equipment and use it properly during an investigation.
- I can recognise the features of different scientific enquiries.
- I can describe if a prediction was accurate based on results.
- I can create tables and diagrams to present the results of my observations when appropriate.
- I can suggest and explain how an investigation could be improved.
- I can ask a scientific question and find the best scientific way to get to the answer.
- I can identify people who use science and describe how they use it.

Practice Worksheet

1. Tick (✓) the correct box beside each sentence.

	True	False
Leaves are the reproductive parts of flowering plants.	<input type="checkbox"/>	<input type="checkbox"/>
The anther contains pollen grains.	<input type="checkbox"/>	<input type="checkbox"/>
The transfer of pollen grains from the anther to the stigma is known as fertilisation.	<input type="checkbox"/>	<input type="checkbox"/>
The ovary develops into a fruit after fertilisation.	<input type="checkbox"/>	<input type="checkbox"/>
Seeds are dispersed only by animals.	<input type="checkbox"/>	<input type="checkbox"/>
Seeds need light to germinate.	<input type="checkbox"/>	<input type="checkbox"/>

2. Draw lines to match the parts of flowers to their functions.

part

function

anther

attract insects for pollination

ovary

the part where pollen lands

petals

contains pollen grains

stigma

contains ovules that may develop into seeds

3. This plant has brightly coloured flowers that are useful for a process.



Which process is it?

Tick (✓) the correct answer.

germination

pollination

seed dispersal

4. Reza and Vinit placed some bean seeds in identical pots of soil and gave them an equal amount of water. Reza kept his pot in the refrigerator. Vinit kept his pot at the window sill. The pictures below show what they observed a few days later.



Reza's pot



Vinit's pot

Give **one** reason why the seeds in Reza's pot did not germinate.

Science Words

A

anther

the male part of a flower that contains pollen grains

C

carpel

the part of a flower that contains the female parts

F

fertilisation

the process in which the pollen and the egg join

flowering plants

plants that bear flowers

flowers

parts of a flowering plant that help it reproduce

G

germination

the development of a plant from a seed

L

life cycle

the stages of growth and development in the life of a living thing

N

non-flowering plants

plants that do not bear flowers

O

ovary

the female part of a flower that contains ovules

P

petals

parts of a flower that usually have bright colours

pollination

the transfer of pollen from the anther of a flower to the stigma of the same or a different flower

S

seeds

small, hard parts of a plant from which new plants grow

seed dispersal

the scattering of seeds away from the parent plant

stamen

the part of a flower that contains the male parts

stigma

the female part of a flower where pollen is received

T

temperature

a measure of how hot or cold something is

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