

Cambridge Primary Science

**Activity
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 Activity Book has the following features:

CHAPTER 8 Magnets and Forces

Activity 8A Make the Toy Car Move

Skills: Use knowledge and understanding to make predictions, sort objects by observation, reach a scientific conclusion from my results

Materials:
 Rubber band Key
 Big bar magnet Refrigerator magnet
 Small toy car Small bar magnet
 Iron nail Steel coin



Method

- Use the rubber band to attach the big bar magnet on top of the toy car, with its North pole facing the front of the toy car.
- Place the toy car on the table, facing you.
- Predict which objects will cause the toy car to move when you place them one by one in front of the toy car.
- Bring each object close to the front of the toy car. Then bring the object close to the back of the toy car. Complete the table below.

Objects that only pull the toy car	Objects that pull and push the toy car

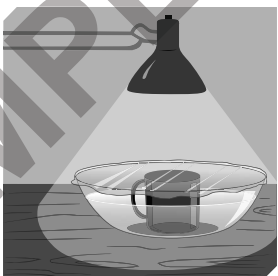
85

Activity

Carry out activities to improve your understanding and skills. Think and work like a scientist and apply science in everyday life!

Activity 9B Make a Water Cycle

Skills: Learn that a model shows the important features of a process and an idea, use a model and diagram to illustrate and explain a scientific event and idea, use science to support my points of view in discussions



Materials:
 Mug Cling wrap
 Large plastic bowl String
 Water Lamp
 Marker

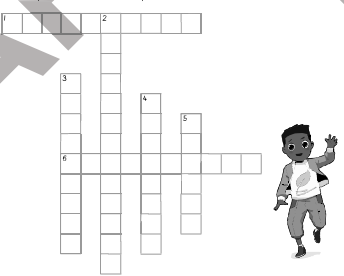
Method

- Place the empty mug in the middle of the large plastic bowl.
- Fill the bowl with water to the half-way mark. Use a marker to mark the water level in the bowl. Ensure that there is no water in the mug.

75

Word Whizz

Help Eddy solve the puzzle!
 Use the clues to complete the crossword puzzle.



Across

- A layer of gas that surrounds the Earth
- The continuous movement of water from the Earth's surface to the sky and back to the Earth's surface (two words)

Down

- Water that falls from clouds onto the Earth, especially as rain or snow
- Water that has no dissolved substances in it (two words)
- A gas that is found in the largest amount in the atmosphere
- A gas found in the atmosphere that is necessary for survival

80

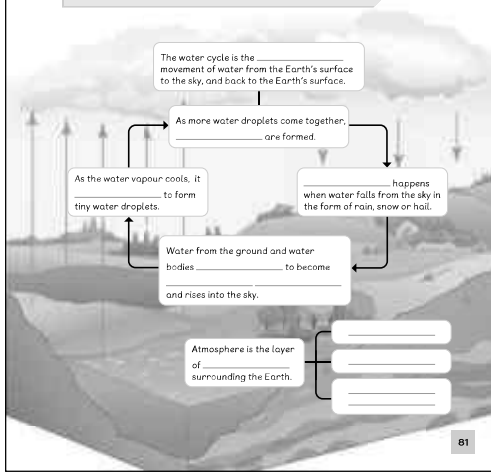
Word Whizz

Practise using science words as you complete crosswords, unscramble letters and fill in the blanks.

Let's Map It!

Fill in the blanks. Use the following words.

carbon dioxide clouds condenses
continuous evaporate gases nitrogen
oxygen precipitation water vapour



Let's Map It!

Let's Map It! helps you put the main ideas together in a mind map.

Let's Review

Let's Review has questions to test your understanding and apply what you have learnt.

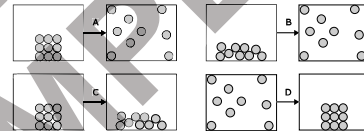
Two Social and Emotional Learning mascots, Lana and Leo, help you to learn how to work with others and take care of your feelings.

Let's Review

- Which of the following statements about particles in solids is **false**? Circle the letter.
 - The particles in solids are closely packed together.
 - The particles in solids can move around freely.
 - The particles in solids vibrate around a fixed position.
- Armeen poured some lavender oil into an oil burner. She heated it with a candle.



The oil changed its state. Circle the letter that represents this change of state.



Activity 1B Life Cycle of a Flowering Plant

Skills: Learn that a model shows the important features of a process, use a model to illustrate and explain a scientific idea

In this activity, you will be making a model of the life cycle of a flowering plant. This model will help you understand the processes involved in the various stages of the life cycle of a flowering plant. Follow the steps below and use your model to communicate your ideas.

Materials:
Ruler Pen
Paper plate Crayons or coloured pencils

Method

- Use the ruler and the pen to divide the paper plate into four sections.
- Draw a stage of the life cycle of a flowering plant in each section. Ensure that the stages are in the correct order.
- Colour and label the stages. Draw arrows to lead from one stage to another.
- Work in pairs. Point to the correct section on the paper plate where the following processes take place.
 - The first two leaves of the plant grow.
 - Flowers start to grow.
 - Roots start to develop.
 - Flowers are pollinated.
 - The seed is dispersed away from the parent plant.
 - The plant grows taller and more leaves develop.



Thank your partner after completing this activity.



- Use the stopwatch to record the time taken for all the crushed ice to melt. Observe the temperature on the thermometer until all the crushed ice has melted into water.

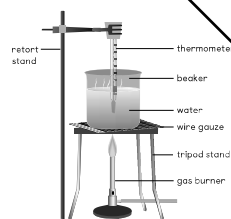
- Time taken for all ice to melt: _____ min
- Temperature of melted crushed ice: _____ °C
- What happened to the temperature of the crushed ice during this period of time? Circle the correct answer.

decreased

increased

remained the same

Your teacher is going to heat the beaker of water over a gas burner as shown in the diagram. A thermometer will be used to record the temperature of the heated water.



The water in the beaker is very hot! Take note of yours and others' safety when you are near the set-up.



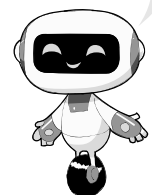
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Get ready to start an exciting learning journey with us!



Flowering Plants

Activity

1A

Flower Parts

**Skills:**

Describe risks in practical work and ways to minimise them, create diagrams to present the results of my observations when appropriate

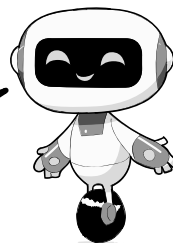
Materials:

Two flowers from two different plants
One piece of cardboard
Magnifying glass (optional)
One pair of tweezers
Two paper plates

Method

- 1 Put the first flower on the piece of cardboard.
- 2 Use the tweezers to separate the parts of the flower. Place them on a paper plate.
- 3 Do the same for the second flower.

What are the possible risks in this activity? How can you reduce the risks? How can you handle the materials safely?



- 4 a Paste the parts of the two flowers in the table below. Label the parts and list their functions.

Flower 1	Flower 2



- b Which parts of the two flowers are similar? How are they similar?

- c Which parts of the two flowers are different? How are they different?

- 5 Not all plants produce flowers. Name **two** non-flowering plants.

Activity

1B

Life Cycle of a Flowering Plant



Skills:

Learn that a model shows the important features of a process, use a model to illustrate and explain a scientific idea

In this activity, you will be making a model of the life cycle of a flowering plant. This model will help you understand the processes involved in the various stages of the life cycle of a flowering plant. Follow the steps below and use your model to communicate your ideas.

Materials:

Ruler

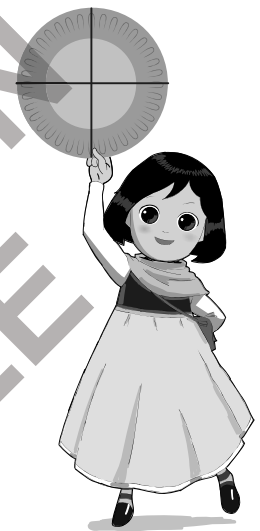
Pen

Paper plate

Crayons or coloured pencils

Method

- 1 Use the ruler and the pen to divide the paper plate into four sections.
- 2 Draw a stage of the life cycle of a flowering plant in each section. Ensure that the stages are in the correct order.
- 3 Colour and label the stages. Draw arrows to lead from one stage to another.
- 4 Work in pairs. Point to the correct section on the paper plate where the following processes take place.
 - a The first two leaves of the plant grow.
 - b Flowers start to grow.
 - c Roots start to develop.
 - d Flowers are pollinated.
 - e The seed is dispersed away from the parent plant.
 - f The plant grows taller and more leaves develop.



Thank your partner after completing this activity.



Activity

1C

Which Seeds Will Germinate?



Skills:

Plan a fair test and identify the three types of variables, ask a scientific question and find the best scientific way to get to the answer, use knowledge and understanding to make predictions, create tables and diagrams to present the results of my observations when appropriate, describe if a prediction was accurate based on results, reach a scientific conclusion from my results

In the Student's Book, you have carried out an investigation to find out if water is needed for seeds to germinate. In this activity, you will be planning an investigation to find out if other factors would affect seed germination.

Materials:

Two plastic cups
Soil
Marker
Four mung beans
Water

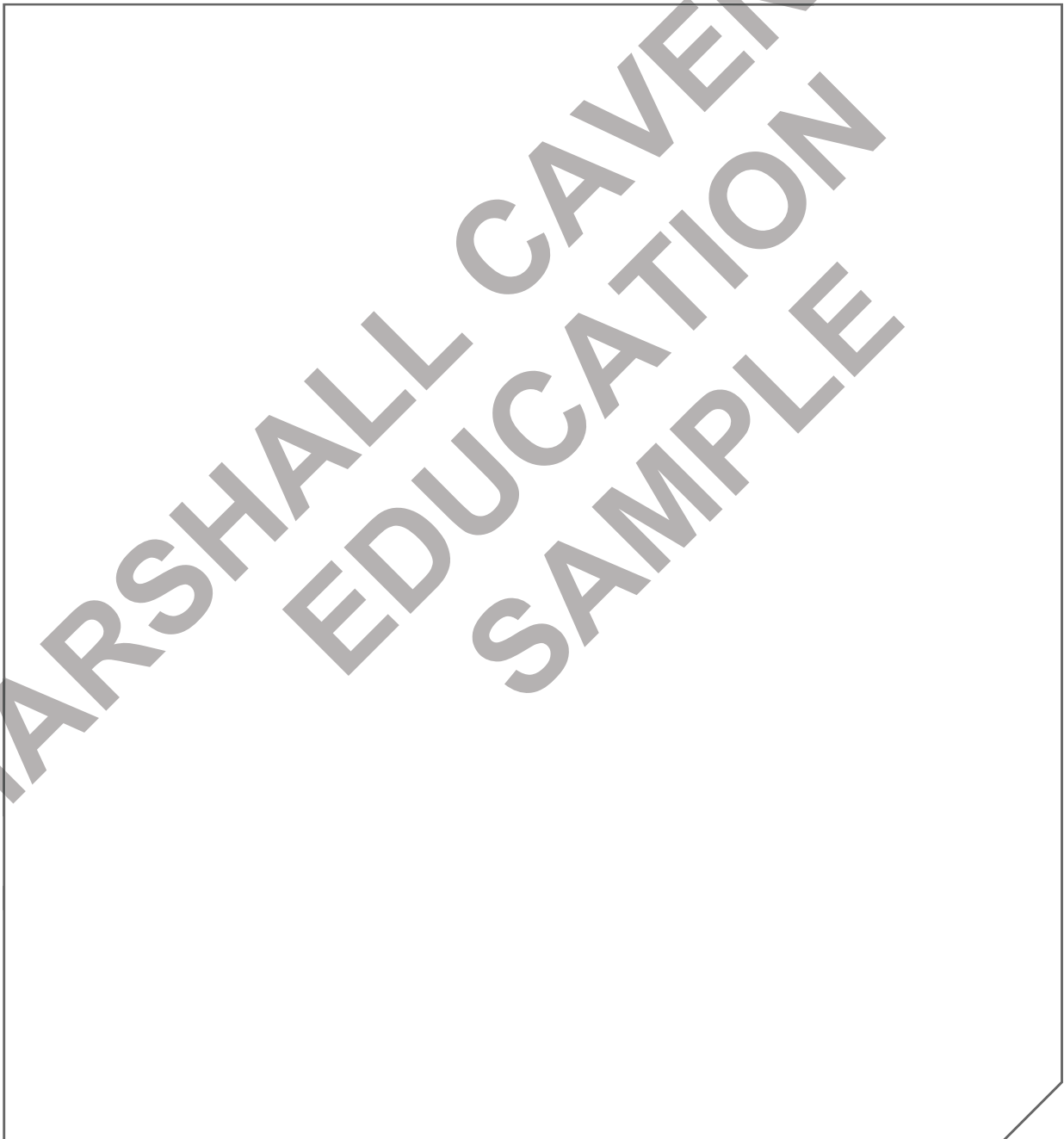
Method

- 1 Work in groups.
 - 2 List down some factors that you think would affect seed germination.
-
- 3 Choose a factor from your list. Think of a question about the factor that can be investigated.
 - 4 Plan an investigation to find out if the chosen factor would affect seed germination. Using the list of materials above, choose the equipment needed to carry out the investigation. You may use more than what is listed.

5 Discuss the following questions:

- What do you need to change?
- What do you need to measure?
- What do you need to keep the same?
- Are there any possible risks in your investigation? What can you do to ensure that the investigation is carried out safely?

6 Write down how you will carry out your investigation.
Draw labelled diagrams to show your set-ups.



- 7 Predict the results of your investigation.
- 8 Carry out the investigation.
- 9 Collect and record your observations in a table or a diagram below.

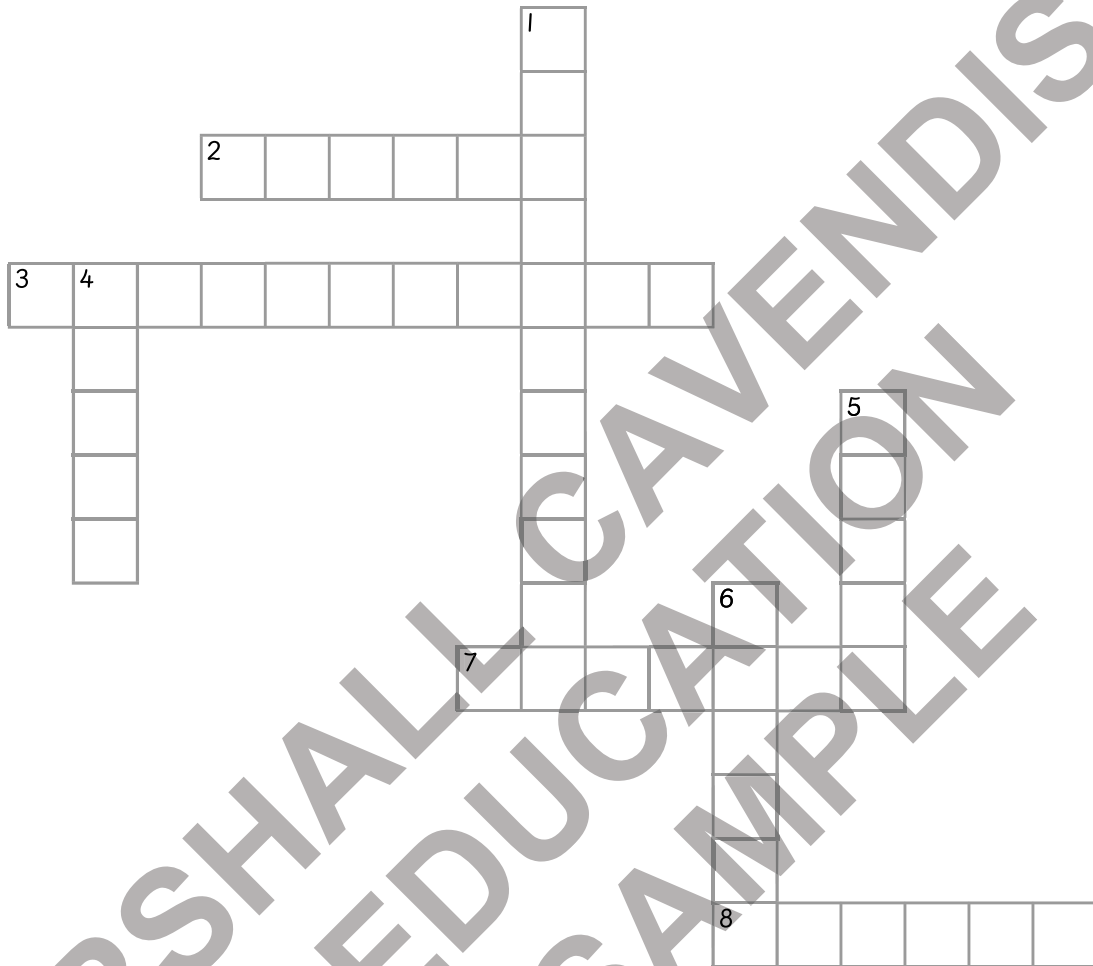


10 Compare the results with your prediction. Was your prediction accurate?

11 Make a conclusion from your results.

Word Whizz

Complete the crossword puzzle using the given clues.



Across

- 2 The reproductive part of the plant
- 3 The process by which pollen grains are transferred from the anther to the stigma
- 7 The parts of the flower that contain pollen grains
- 8 The part of the flower that receives pollen grains

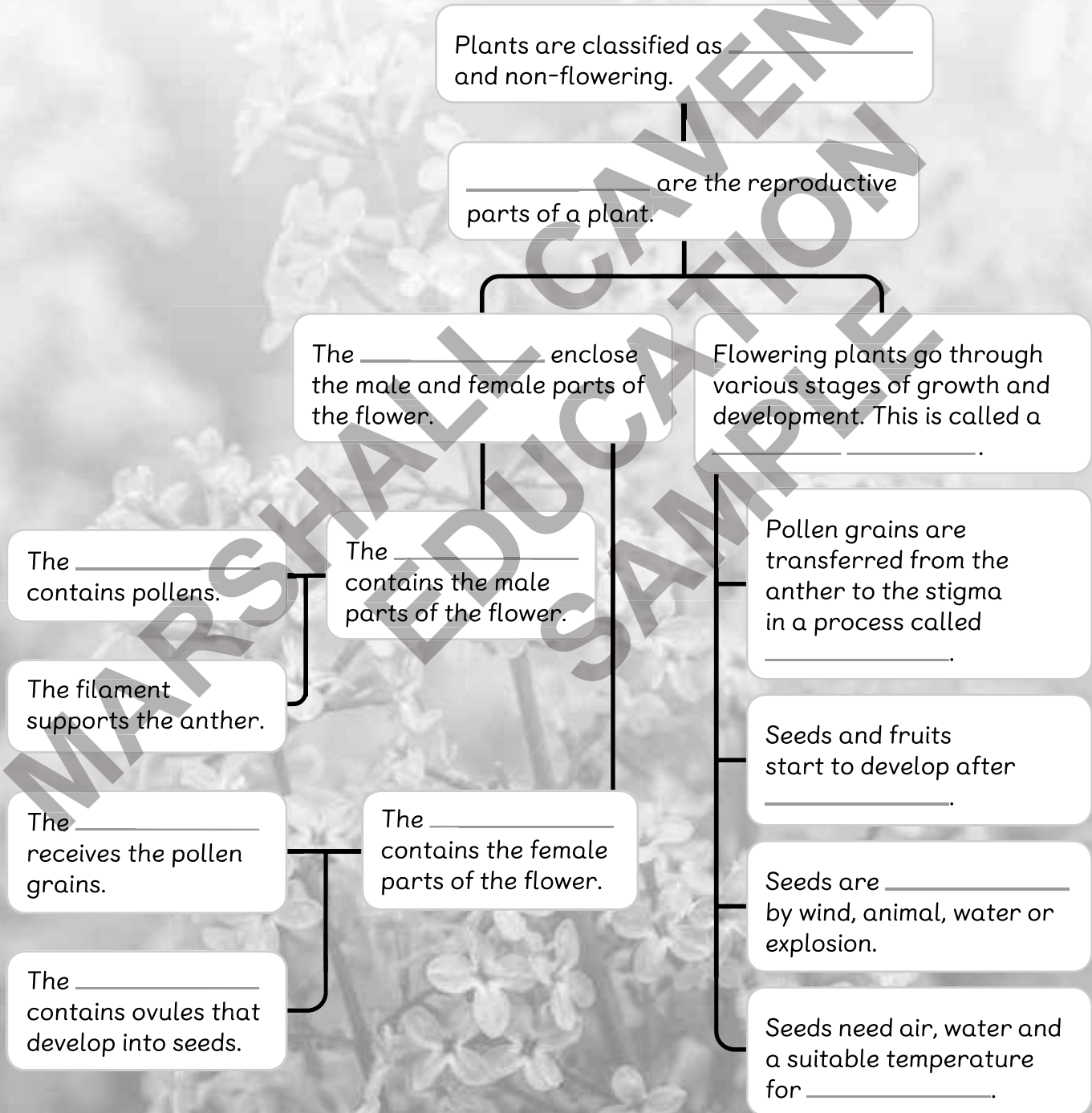
Down

- 1 The process by which a seed develops into a young plant
- 4 The part of the flower where seeds are developed
- 5 The parts of the flower that develop from ovules and that grow into new plants
- 6 The colourful parts of a flower

Let's Map It!

Fill in the blanks. Use the following words.

anther carpel dispersed fertilisation flowering
 flowers petals germination life cycle ovary
 stamen stigma



Let's Review

1 Circle the correct group that shows the parts of a flower.

anther, stem, ovary

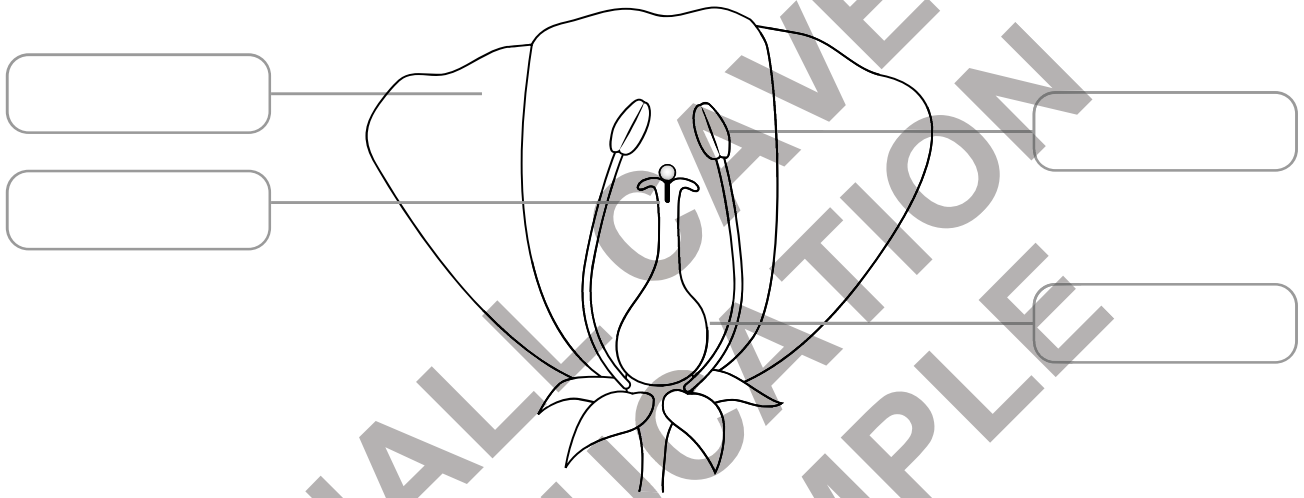
anther, stigma, root

petal, anther, stigma

petal, root, ovary

2 The diagram below shows a flower.

a Label the parts of the flower.



b What happens during pollination?

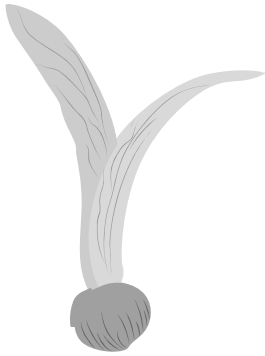
3 Write the correct seed dispersal method for each picture. Choose from the following words.

animal

explosion

water

wind



helicopter seeds



lady's fingers



lotus seeds



berries

- 4 In which of the following scenarios will the seeds germinate?
Tick (✓) the correct answer.

Matt wraps some seeds in dry cotton wool. He keeps the cotton wool on his table for a week.

Erica wraps some seeds in dry cotton wool. She sprinkles some water on the cotton wool once a day. She keeps the cotton wool on her table for a week.

Lee wraps some seeds in moist cotton wool. She keeps the cotton wool in the refrigerator for a week.

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For over 60 years, Marshall Cavendish Education has been empowering educators and students in more than 85 countries with high-quality, research-based, Pre-K–12 educational solutions. We nurture world-ready global citizens by equipping students with crucial 21st century skills through our resources for schools and education centres worldwide, including Cambridge schools, catering to national and international curricula.

Within the *Marshall Cavendish Education Cambridge Primary Science* series, you will find Singapore's tried-and-tested methodologies embodied in high-quality resources that support the Cambridge Primary Science curriculum framework. This programme includes a range of supporting resources customisable for both online and face-to-face learning, in order to consistently deliver outstanding learning and teaching experiences.

The 2nd edition has retained the active learning approach, easy-to-understand language and rich visuals. It builds on the previous edition by incorporating the new Thinking and Working Scientifically strand in order to nurture active learners who understand the relevance of science to the world around them.

AB The **Activity Book**:

- Includes a variety of hands-on activities in which students carry out investigations, research, predictions and analysis, helping them develop critical and creative thinking skills
- Provides reinforcement of concepts and skills covered in the Student's Book, as well as additional practice through activities with real-life connections
- Builds scientific literacy through crosswords, word jumbles and fill-in-the-blanks activities
- Supports the consolidation of key concepts through concept maps
- Allows students to monitor their learning through formative questions of different levels, ranging from simple recall questions to more challenging structured questions

Series architecture

- Student's Book (Stages 1–6)
- Activity Book (Stages 1–6)
- Teacher's Guide (Stages 1–6)
- e-book (Stages 1–6)

This resource is endorsed by
Cambridge Assessment International Education

✓ Provides learner support as part of a set of resources for the Cambridge Primary Science curriculum framework (0097) from 2020

✓ Has passed Cambridge International's rigorous quality-assurance process

✓ Developed by subject experts

✓ For Cambridge schools worldwide

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