Cambridge Assessment International Education

# Cambridge Primary Progression Test

## Science paper 2

Stage 5

*3226064780*

**45 minutes**

Name .....

Additional materials: Ruler

**READ THESE INSTRUCTIONS FIRST**

Answer **all** questions in the spaces provided on the question paper.

You should show all your working on the question paper.

The number of marks is given in brackets [ ] at the end of each question or part question.

The total number of marks for this paper is 50.

| For Teacher's Use | |
|---|---|
| **Page** | **Mark** |
| **1** | |
| **2** | |
| **3** | |
| **4** | |
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| **6** | |
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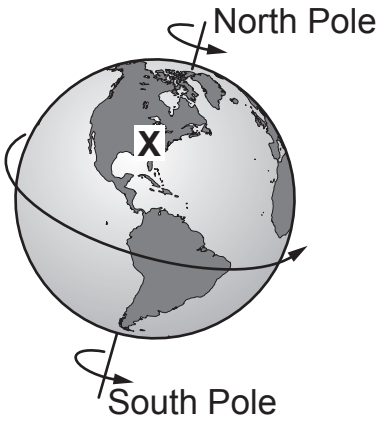
| **9** | |
| **10** | |
| **11** | |
| **12** | |
| **13** | |
| **14** | |
| **15** | |
| **16** | |
| **17** | |
| **18** | |
| **19** | |
| **20** | |
| **Total** | |

For Teacher's Use

**1** The Earth spins on its axis.




At **X** it is the middle of the day.

There is daylight.

What is it like on the opposite side of the Earth?

..... [1]

**2** Perfumes have a boiling point above room temperature.

What is the meaning of the words **boiling point**?

.....

.....

..... [2]

*For Teacher's Use*

**3** Plants have flowers.

**(a)** Why do plants have flowers?

Circle the correct answer.

**excretion**

**growth**

**nutrition**

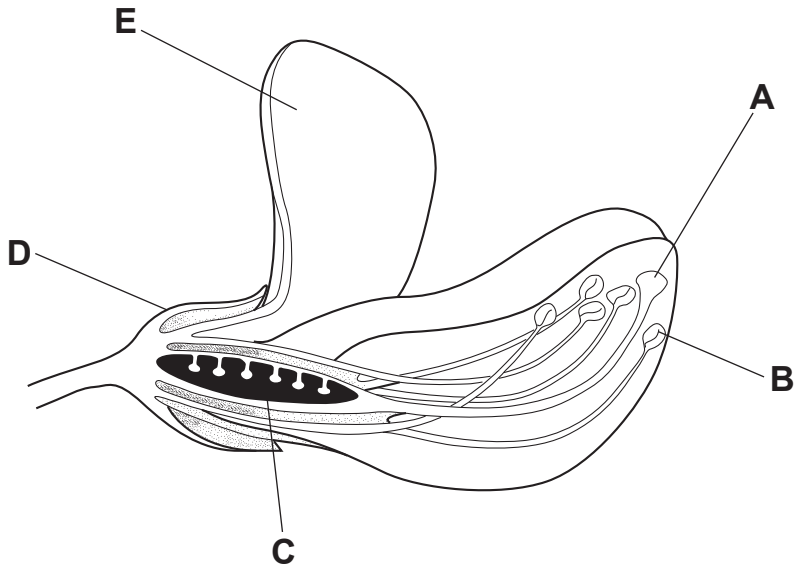
**reproduction**

**respiration**

[1]

**(b)** Flowers have male and female organs.

The diagram shows the parts of a flower.




Which labelled part of the flower is a male organ?

Choose from **A B C D** or **E**.

..... [1]

**(c)** Which **two** labelled parts of the flower are female organs?

Choose from **A B C D** or **E**.

..... and ..... [2]

**4** Blessy and Oliver investigate light.

For Teacher's Use


They investigate how well light passes through different materials.

Oliver uses a flashlight to shine light onto the different materials.

**(a)** Write down **one** way they make this investigation a fair test.

..... [1]

For Teacher's Use

**(b)** Oliver says

**'If all the light passes through the material give it 10 marks.**

**If no light passes through the material give it 0 marks.'**

Blessy says

**'We need to make predictions.'**

Blessy predicts a mark for black card, blue cloth and clear glass.

Draw a line from each **material** to the **mark** she predicts.

| material | mark |
|---|---|
| black card | 9 |
| blue cloth | 1 |
| clear glass | 7 |

[1]

**(c)** Blessy makes two more predictions.

**white card = 1**

**green plastic = 8**

Blessy's predictions are correct.

Explain why these materials have different marks.

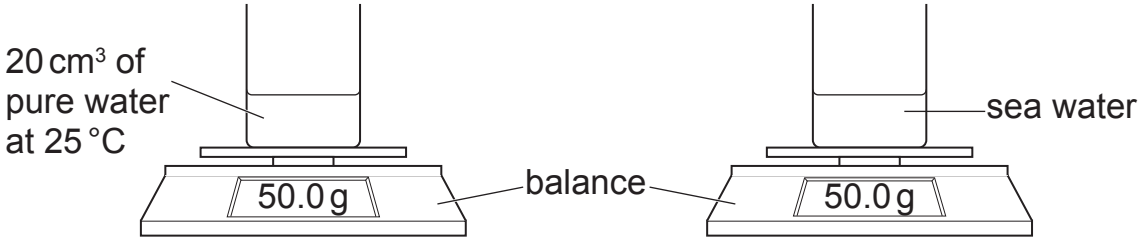
.....

.....

..... [2]

**5** Mia investigates the speed of evaporation of pure water and sea water.

Here is her equipment.




Mia

- measures the masses of the two beakers at the start of her investigation
- leaves the equipment set up for five days
- then measures the masses of the two beakers again.

Here are her results.

| number of days | mass of beaker in g | |
|---|---|---|
| | with pure water | with sea water |
| 0 | 50.0 | 50.0 |
| 5 | 30.0 | 38.0 |

Mia wants to do a fair test.

**(a)** What **volume** of sea water does she use?

..... [1]

**(b)** What should be the **temperature** of the sea water?

..... [1]

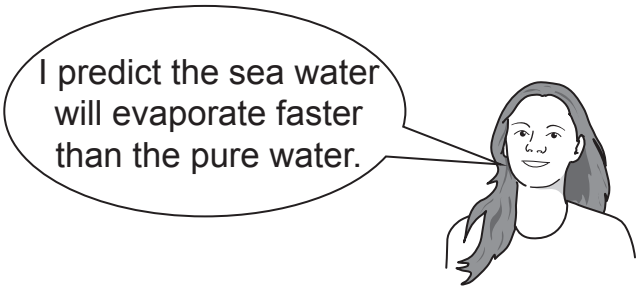
**(c)** After five days some water has evaporated from the sea water.

How many grams of water has evaporated?

..... [1]

**(d)** Mia makes a prediction at the start of the investigation.

*For Teacher's Use*




Is Mia's prediction correct? .....

Explain how you can tell from her results.

.....

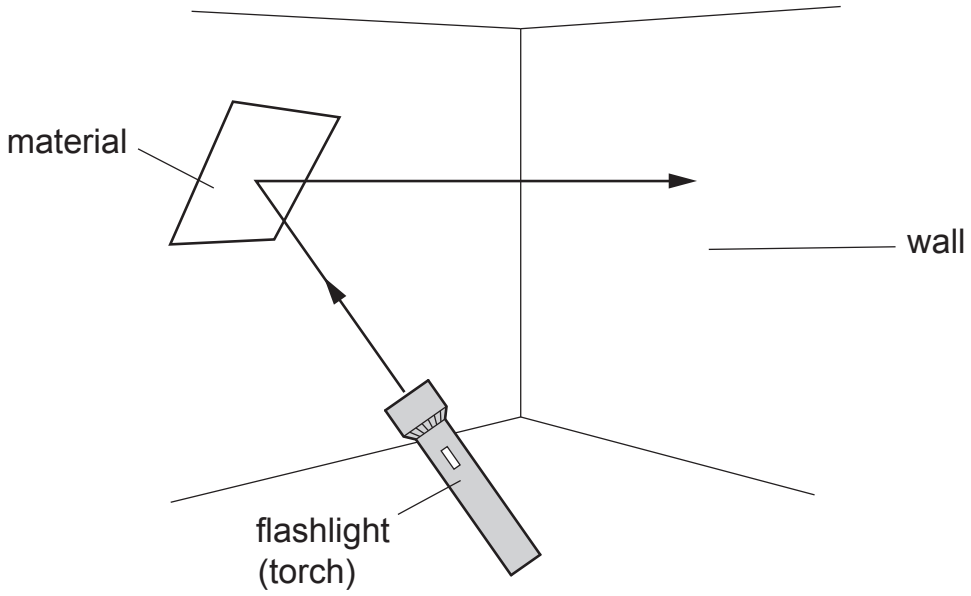
..... [1]

For Teacher's Use

**6** Mike and Lily use a flashlight.

They shine the light from the flashlight onto different materials.

The light then travels onto the wall.




**(a)** Write down the name of **one** material that can be used in this investigation.

..... [1]

**(b)** Complete the sentences.

Choose the **best** words from the following.

**absorbed** **bounced** **colour** **direction**

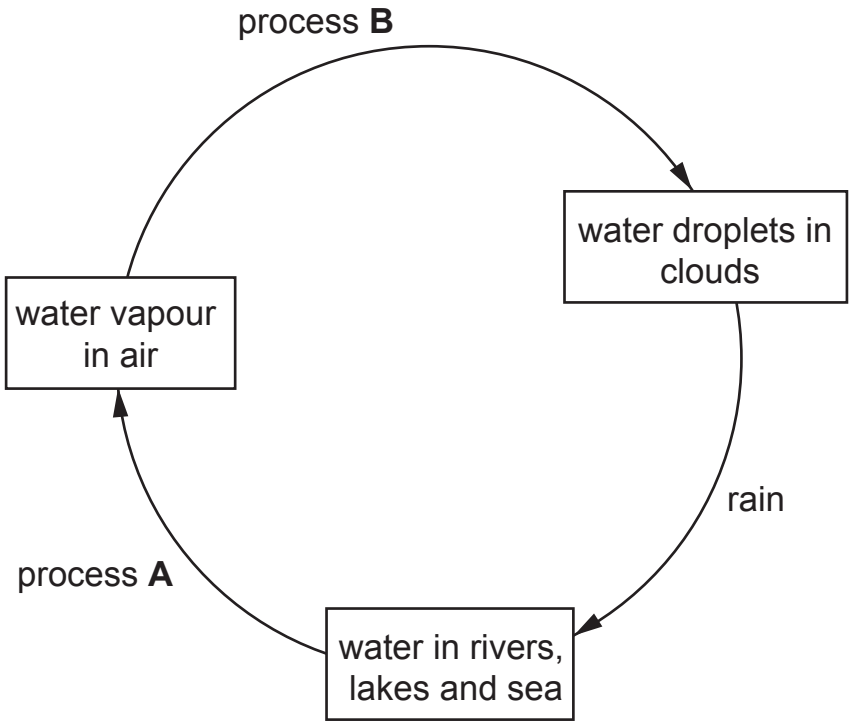
**reflected** **shape**

The light from the flashlight is ..... by the material.

When this happens the light changes ..... . [2]

**7** The diagram shows a simple water cycle.

For Teacher's Use




Explain how water vapour in the air becomes water droplets.

Include in your answer the name of process **B**.

.....

.....

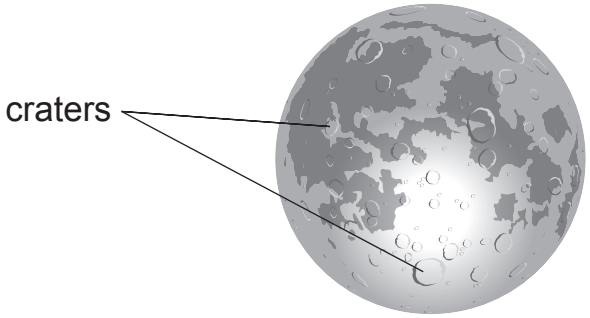
..... [2]

For Teacher's Use

**8** Scientists explore the Solar System.

**(a)** Galileo Galilei was a scientist.

He discovered that there are craters on the Moon.




What equipment did he use to see the craters on the Moon?

**a flashlight**

**a lamp**

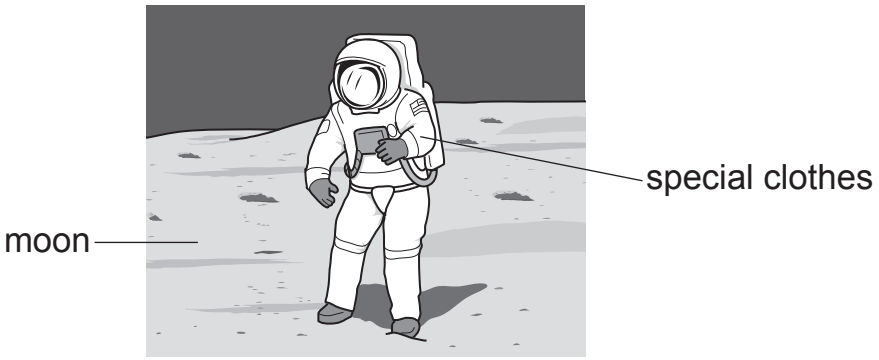
**a telescope**

**his eyes**

**his spectacles**

[1]

**(b)** Buzz Aldrin was a scientist who walked on the Moon.




Complete the sentences.

Buzz Aldrin travelled to the Moon by .....

..... .

He wears special clothes because .....

..... . [2]

**9** Mike has a sample of butter.

He finds that the butter melts at a temperature of 36 °C.

**(a)** Will butter melt if placed in boiling water?

Explain your answer.

.....

..... [2]

**(b)** What is the freezing point of butter?

..... °C [1]

For Teacher's Use

**10** The picture shows a seed.

**(a)** Describe how seeds are formed.

.....

.....

.....

..... [3]

**(b)** Seeds need water to germinate.

Write down **one** other factor seeds need to germinate.

..... [1]

**11** Blessy makes some salt crystals by leaving a salt solution at room temperature.

She waits for all of the water to evaporate. This takes a long time.

She wants to make the salt crystals from the salt solution in a shorter time.

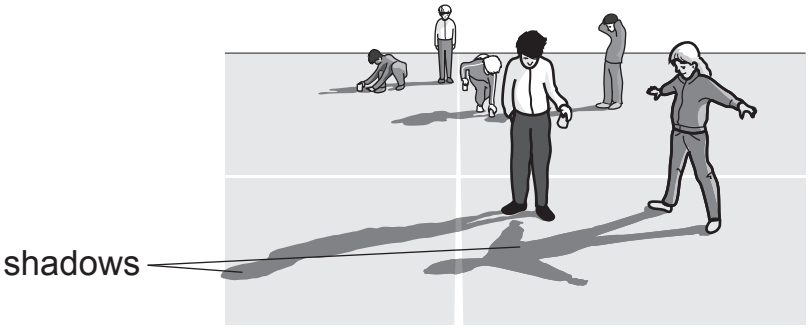
Suggest one way she can do this.

.....

..... [1]

**12** Class 5 look at their shadows in the playground.

*For Teacher's Use*




**(a)** The children make shadows.

Explain how shadows are formed.

.....

..... [1]

**(b)** The children go inside.

They come back out to the playground 3 hours later.

They stand in the same places and stand in the same way.

Their shadows have changed.

Describe two ways their shadows have changed.

1 .....

2 ..... [2]

For Teacher's Use

**13** Aiko puts 1.0 g of salt into 20 $cm^3$ of water to make a salt solution.

She finds that the boiling point of the salt solution is 104 °C.

**(a)** What is the boiling point of pure water?

..... °C [1]

**(b)** What is the effect of adding salt on the boiling point of water?

..... [1]

**(c)** Aiko adds 2.0 g of salt to 20 $cm^3$ of water to make a more concentrated salt solution.

Predict the boiling point of this more concentrated salt solution.

..... °C

Explain your answer.

.....

..... [1]

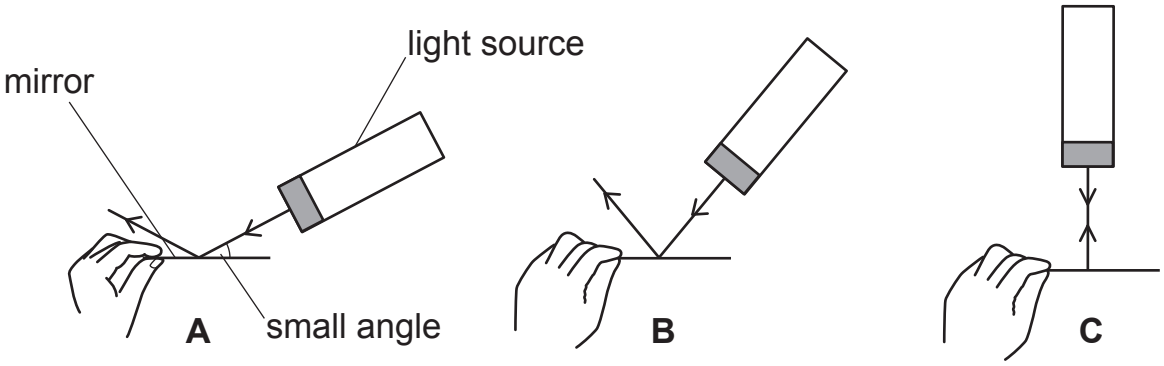
**(d)** Aiko heats the more concentrated salt solution until all of the water has gone.

How many grams of salt are left behind?

..... [1]

**14** Hassan investigates light.

For Teacher's Use




Hassan

- holds a mirror in his hand
- points a ray of light towards the mirror
- increases the angle that the ray of light makes with the mirror.

Write down what you can see in each picture.

The first one has been done for you.

| |
|---|
| In picture **A** the ray of light hits the mirror at a small angle.<br><br>The ray of light is reflected at the same small angle. |

In picture B .....

.....

.....

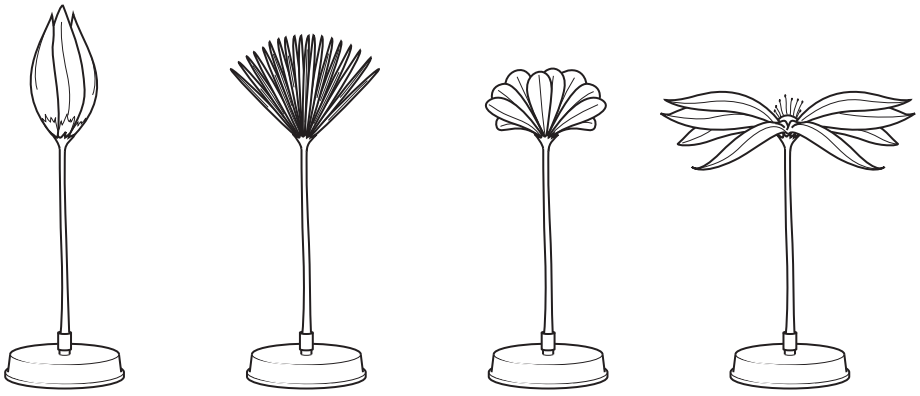
In picture C .....

.....

..... [3]

**15** Priya and Rajiv investigate pollination of flowers by insects.

They make models of four different flowers.



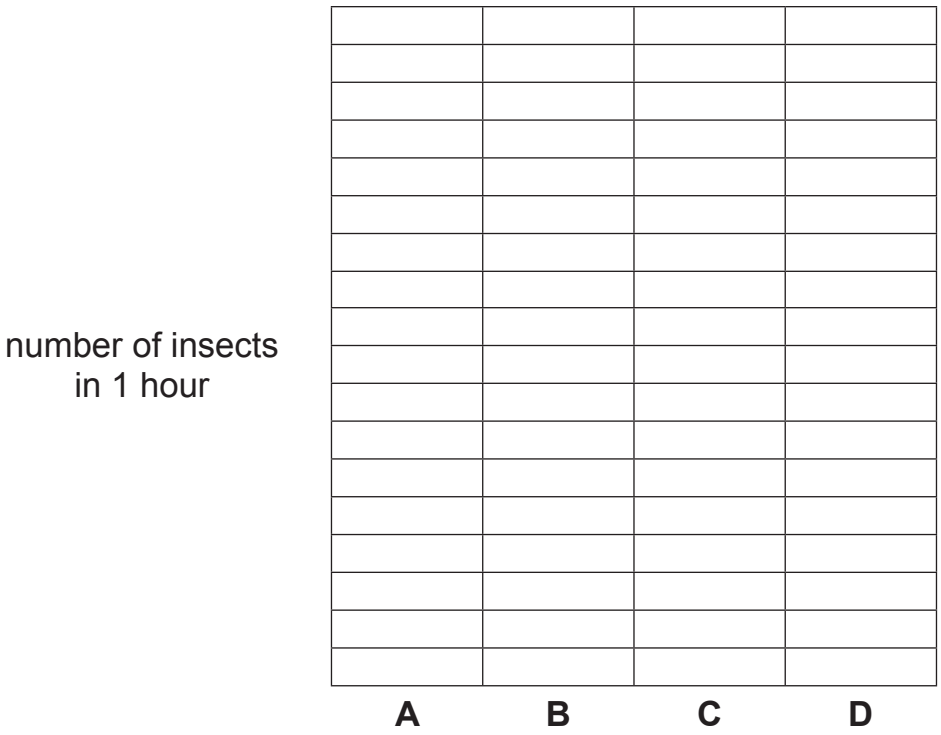

They count the number of insects near each model.

Here are their results.

| flower model | description of flowers | number of insects in 1 hour |
|---|---|---|
| **A** | closed petals | 18 |
| **B** | thin spiky petals | 3 |
| **C** | small rounded petals | 2 |
| **D** | long flat petals | 15 |

**(a)** Draw a bar chart of their results.

Write the scale on the (vertical) y-axis.




[3]

**(b)** Which description of flowers attracts the most insects?

Circle the correct answer.

**closed petals** **small rounded petals**

**thin spiky petals** **long flat petals**

[1]

**(c)** Priya says

**'Small rounded petals do NOT attract many insects for pollination.'**

Describe how the results show this.

..... [1]





**[Turn over**

**(d)** Flowering plants have a life cycle.

Put the **three** words in the correct order in the table.

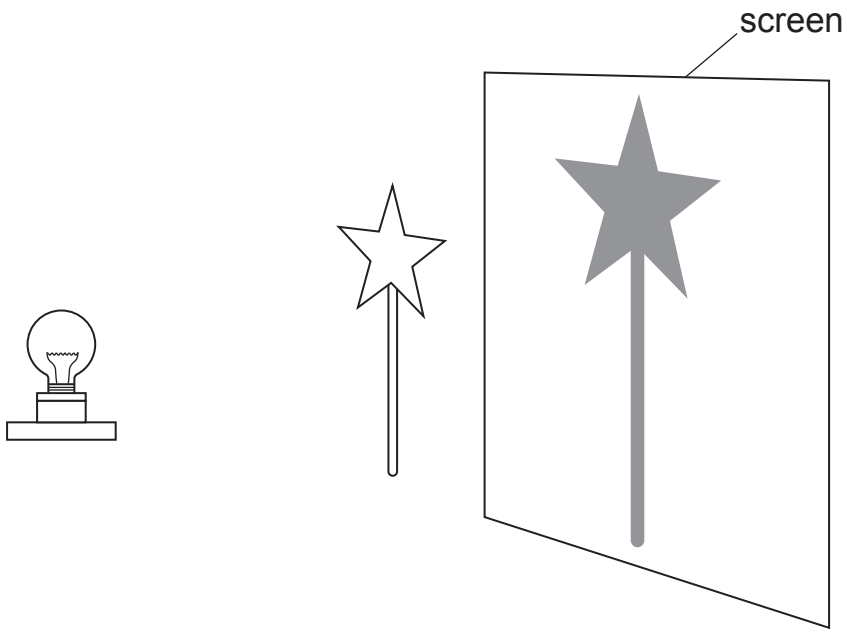
**fertilisation** **germination** **pollination**

| **life cycle order** |
| --- |
| ..... |
| ..... |
| seed production |
| seed dispersal |
| ..... |

[2]

**16** Jamila is teaching Gabriella about shadows.

They set up the apparatus shown.




Gabriella wants to know what factors affect the size of the shadow.

Tick (✓) the **three** correct factors.

colour of the object ☐

distance from the object to the screen ☐

distance of the light source to the object ☐

material of the object ☐

size of the object ☐

strength of the light source ☐

[2]

*For Teacher's Use*

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