



**Cambridge International Examinations**  
Cambridge Primary Checkpoint

CANDIDATE  
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CENTRE  
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**SCIENCE**

**0846/01**

Paper 1

**For Examination from 2014**

SPECIMEN PAPER

**45 minutes**

Candidates answer on the Question Paper.

Additional Materials:

Pen  
Pencil  
Ruler

Calculator

**READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

Answer **all** questions.

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

You should show all your working in the booklet.

The total number of marks for this paper is 50.

This document consists of **18** printed pages and **2** blank pages.

1 All living things have different life processes.

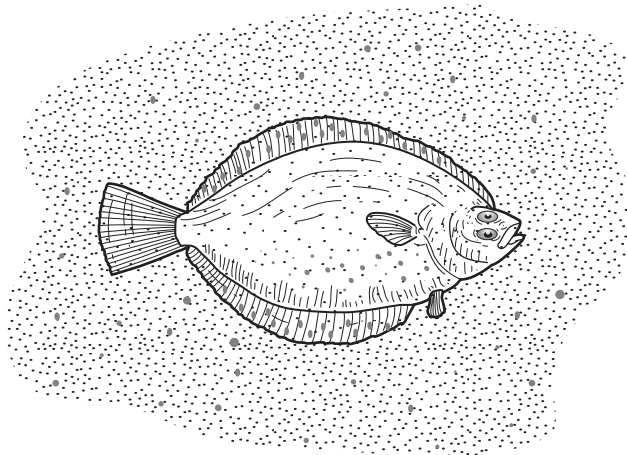
Write down the **life process** in the table next to the **definition**.

The first one has been done for you.

definition	life process
responding and reacting	sensitivity
producing young/offspring	.....
turning food into energy	.....

[2]

2 A flounder is a flatfish that lives on the bottom of the sea.



(a) Name **one** feature that you can see in the drawing which makes the fish suited to living on the sea-bed.

Explain how this feature is useful.

Feature .....

Explanation .....

[2]

- (b) These fish can be caught by fishermen with a rod and line **or** by dragging large nets across the sea-bed.

Which of these methods is most likely to conserve **this** variety of fish?

Explain your answer.

method .....

explanation ..... [1]

3 The Earth rotates on its axis.

- (a) Write down how long the Earth takes to make **one** complete rotation on its axis.

..... [1]

- (b) Which of these sentences is true?

Tick (✓) **one** box.

The Sun does not move.

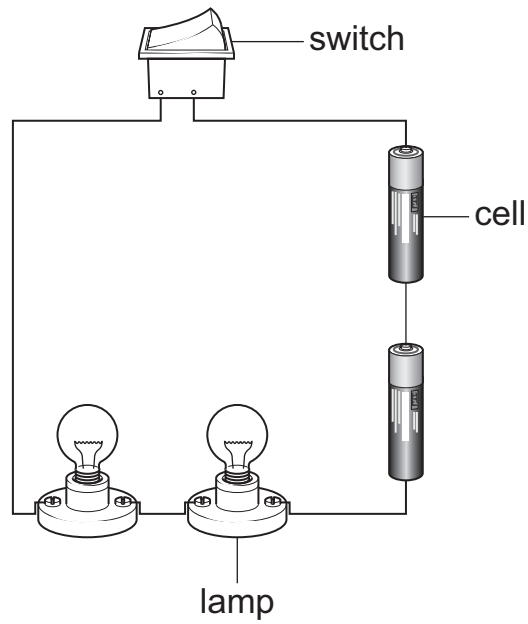
The Sun goes round the Moon.

The Sun orbits the Earth.

The Sun travels round the Earth.

[1]

4 Kofi has built an electrical circuit.



(a) The lamps are **off**.

What does Kofi do to turn the lamps **on**?

.....

[1]

(b) In the space below draw the circuit diagram for this electrical circuit.

Use circuit symbols.

[2]

5 Complete these sentences.

Cables and wires need to be **good** electrical conductors.

They are made of .....

For safety, wires are covered with materials that do not conduct electricity.

The wires are covered with .....

Any material that is a non-conductor is an ..... [3]

6 Rosie is playing a drum.



(a) She increases the pitch of the note made.

What does Rosie have to do to increase the pitch?

Tick (✓) **one** box.

tighten the drum skin

slacken the drum skin

strike the drum harder

strike the drum softer

[1]

(b) Which of these statements is true?

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

	<b>true</b>	<b>false</b>
Sound <b>can</b> travel around corners.	<input type="checkbox"/>	<input type="checkbox"/>
Sound <b>can</b> spread out in all directions.	<input type="checkbox"/>	<input type="checkbox"/>
Sound <b>cannot</b> travel through solids.	<input type="checkbox"/>	<input type="checkbox"/>
Sound <b>can</b> travel through liquids.	<input type="checkbox"/>	<input type="checkbox"/>
Sound <b>can</b> travel in a vacuum.	<input type="checkbox"/>	<input type="checkbox"/>

[3]

7 Elena is investigating the melting point of different salt solutions.

- she makes a salt solution using 10 cm<sup>3</sup> of water with a known mass of salt
- she puts the salt solution into a freezer and leaves it to freeze
- she takes the frozen salt solution out of the freezer
- she measures the temperature when the frozen salt solution melts
- she repeats each experiment.

Here are her results.

mass of salt used in g	melting point in °C	
	first set of results for the experiment	second set of results for the experiment
1	-2	-2
2	-4	-4
3	-6	-6
4	-7	-5
5	-9	-9

(a) What happens to the frozen salt solution when it melts?

..... [1]

(b) What is the melting point of pure water?

..... °C [1]

(c) Complete the sentence about the pattern shown by the results.

The ..... the mass of salt in the solution the

..... the melting point. [1]



(d) One temperature in the second set of results does not fit the pattern.

Which temperature?

..... °C [1]

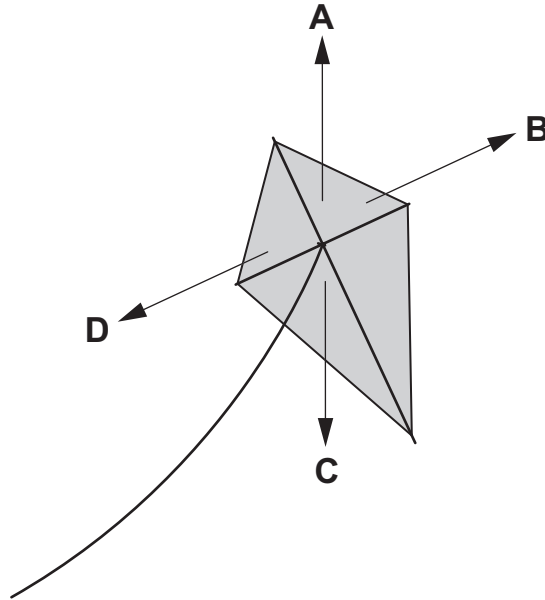
(e) Why did Elena collect two sets of results?

..... [1]

8 Samir is flying a kite.

There is a strong wind blowing.

The picture shows the forces on the kite.



(a) Which letter shows the gravitational force on the kite?

.....

Which letter shows the pulling force Samir exerts?

.....

Which letter shows the pulling force of the wind?

.....

[2]

(b) Which **two** forces balance?

Circle the correct answer.

**A and C**

**B and C**

**C and D**

**D and A**

[1]

(c) The strength of the wind increases.

The kite stays in the same place.

What happens to the pulling force that Samir exerts?

.....

[1]

9 All animals eat to give them energy.

(a) Here is some information about a food chain in the sea.

**Penguins eat fish.**  
**Fish eat green plants called plankton.**

Use the information to draw a food chain in the boxes.



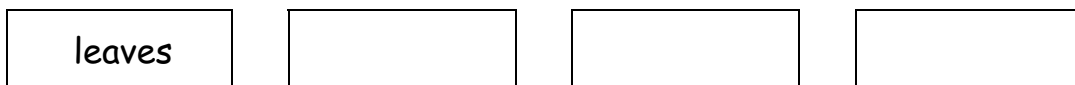
[1]

(b) Here is some information about a food chain in a woodland.

**Owls** eat small birds.  
**Small birds** eat insects.  
**Insects** eat tree leaves.

Use the information to complete this food chain.

Draw arrows to show the direction that energy is flowing.



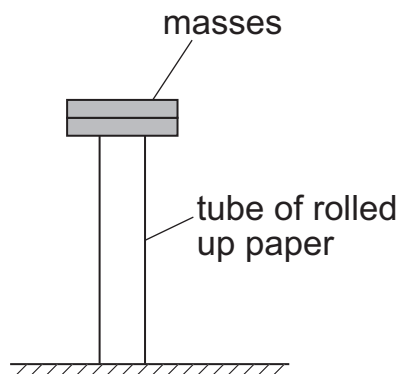
[2]

10 Gaynor knows that birds have hollow bones like a tube.

This helps birds to fly.

She is investigating how the diameter of hollow tubes changes the strength of the tube.

Here is her apparatus.



Here are her results.

diameter of tube in mm	mass at breaking in g
4	100
8	150
12	200
16	250
20	200
24	200

(a) Which diameter tube is the strongest?

..... mm [1]

(b) Gaynor says her results are not very useful.

The investigation can be improved by using different materials for the tubes.

Write down two **other** ways Gaynor can improve her investigation.

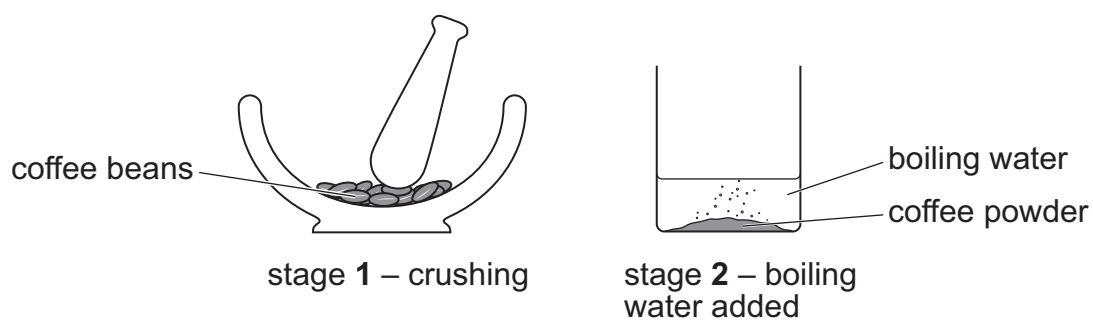
1. ....

2. .... [2]

(c) Why can hollow bones help birds fly?

..... [1]

11 Chen crushes some coffee beans into a powder and adds boiling water.

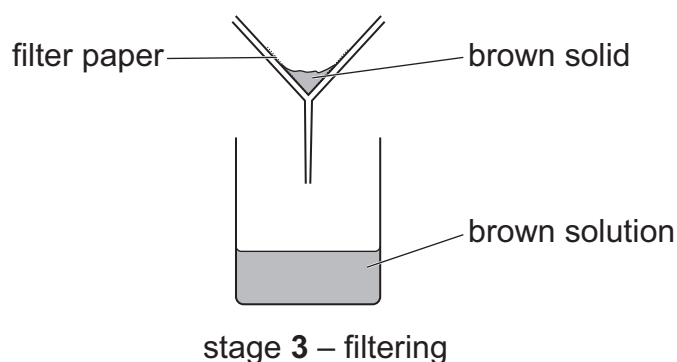


(a) Why does the water turn brown in stage 2?

.....

[1]

(b) Chen then filters the mixture of coffee and water.



Some brown solid is left on the filter paper.

Circle the statement that explains this.

**all of the coffee powder is soluble**

**some of the coffee powder is insoluble**

**all of the coffee powder is insoluble**

**some of the coffee powder is frozen**

[1]

(c) Use these words to complete the sentences about stage 3.

**filtrate**

**mixture**

**residue**

**solvent**

The brown solid on the filter paper is the .....

The brown solution in the beaker is the ..... [2]

(d) Chen heats the brown solution.

Half of the water evaporates.

What happens to the colour of the brown solution?

Tick (✓) **one** box.

goes colourless

becomes a lighter brown

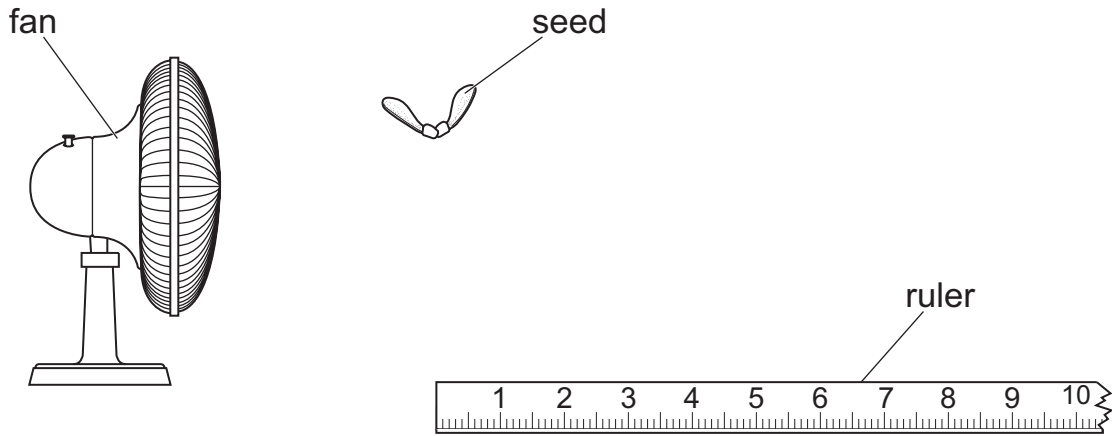
stays the same colour

becomes a darker brown

[1]

12 Sara and Juan are investigating the distance seeds can be dispersed.

Here is the equipment they use.



Sara drops a seed near the fan.

Juan measures the distance the seed moves.

They repeat the test for five more seeds.

(a) They want to make it a fair test by always using the same size seed.

What two **other** factors do they keep the same?

1. ....
2. ....

[2]

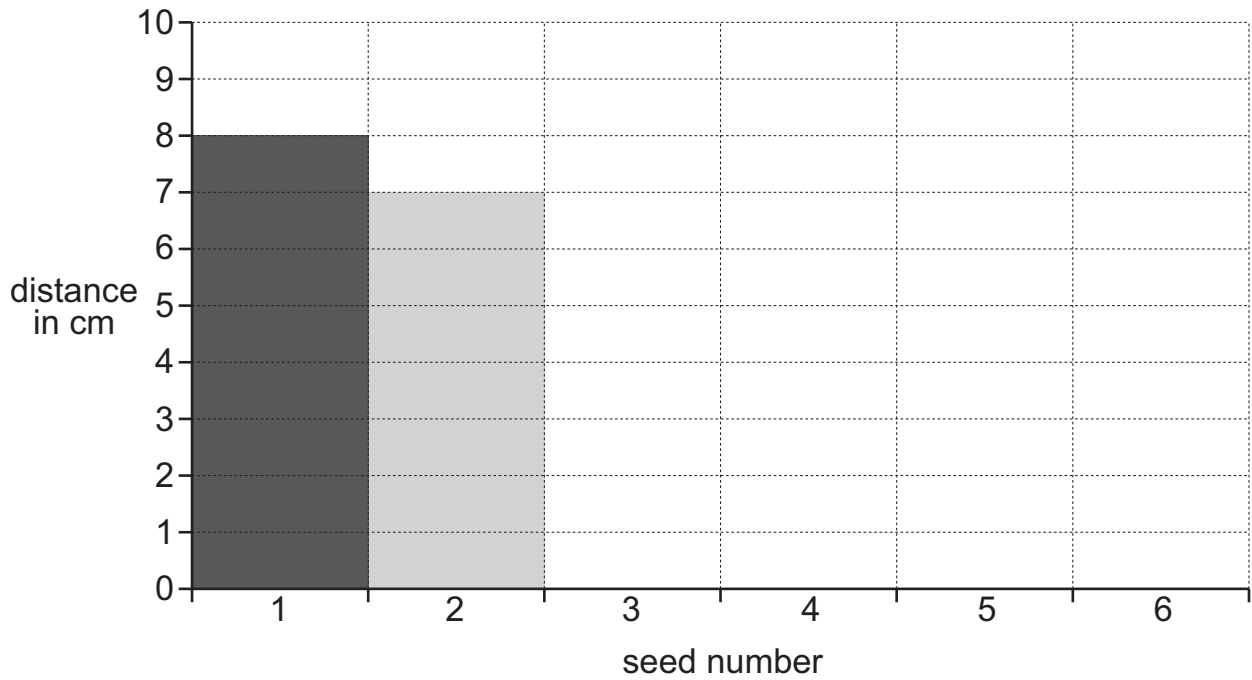
Here are their results.

seed number	distance in cm
1	8.0
2	7.0
3	8.5
4	8.0
5	4.5
6	9.0



(b) Plot their results on a bar chart.

The first two have been done for you.



[3]

(c) Sara thinks one of the results may be wrong.

Which one is it?

Seed number .....

[1]

(d) These seeds have all been dispersed by the same method.

Circle the correct method.

**animal dispersal**

**explosive dispersal**

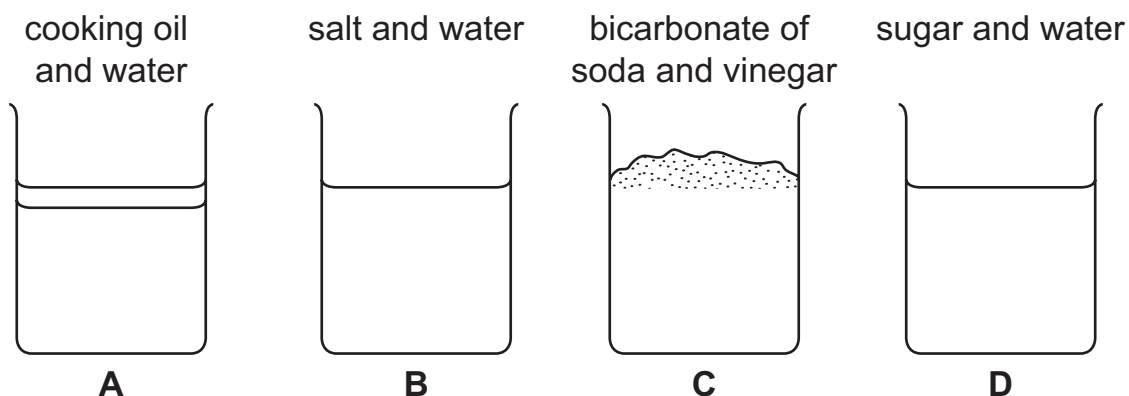
**self dispersal**

**water dispersal**

**wind dispersal**

[1]

13 Gennaro makes the following mixtures in his kitchen.



(a) Complete the table to say what happens to each of the mixtures.

Tick (✓) the **correct** box for each mixture.

mixture	chemical reaction	makes a solution	does not react or make a solution
<b>A</b>			
<b>B</b>			
<b>C</b>			
<b>D</b>			

[2]

(b) Which is irreversible?

..... [1]

(c) Why is it irreversible?

..... [1]

(d) Write down how he could get salt back from **B**.

.....  
 ..... [1]



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