

Science

Stage 7

Paper 2

2026

Cambridge Lower Secondary Progression Test

Name

Class

Date

45 minutes

No additional materials are needed.

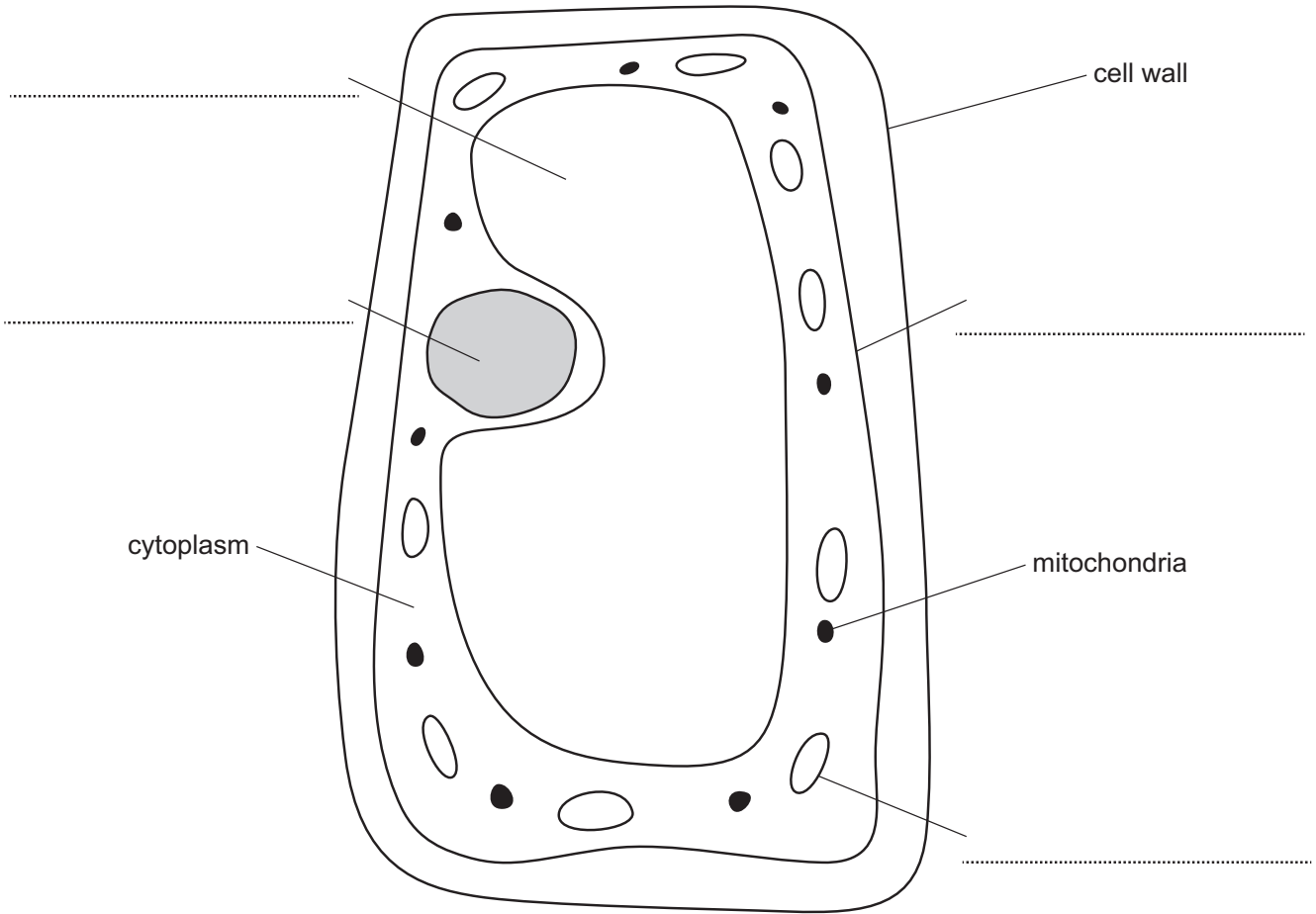
INSTRUCTIONS

- Answer **all** questions.
- Write your answers to each question in the space provided.
- You should show all your working on the question paper.

INFORMATION

- The total mark for this paper is 50.
- The number of marks for each question or part question is shown in brackets [].

1 Look at the diagram of a cell from a green plant.



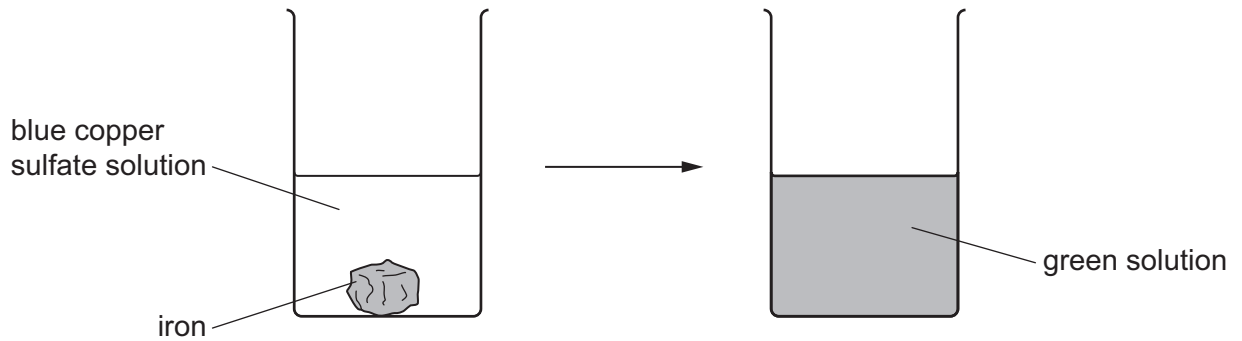
Complete the missing labels on the diagram by writing the correct **four** parts of the plant cell.

[4]

2 Ahmed observes chemical reactions.



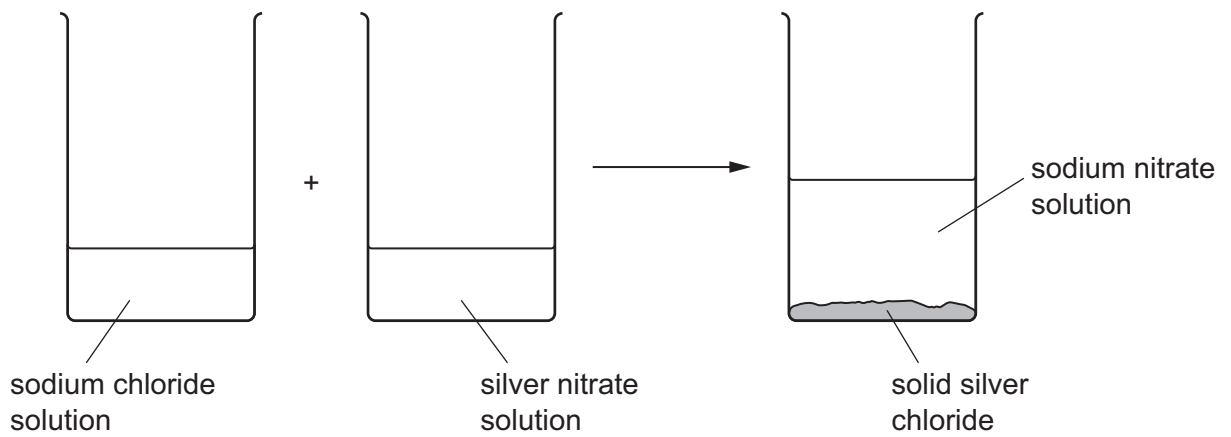
(a) Ahmed adds iron to a solution of blue copper sulfate.



Explain how he knows a chemical reaction takes place.

..... [1]

(b) Ahmed adds a colourless solution of sodium chloride to a colourless solution of silver nitrate.



A precipitate of solid silver chloride is formed.

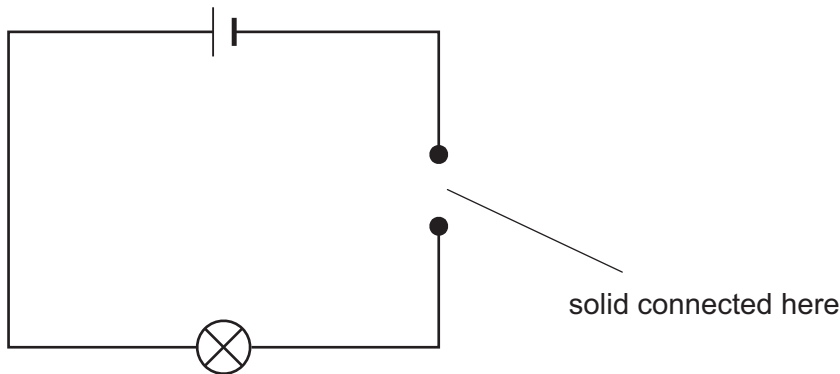
Explain why the precipitate forms.

..... [1]

3 Angelique investigates the electrical conductivity of different solids.



Look at the circuit she makes.



Angelique:

- uses solid **A** to close the gap in the circuit
- observes if the lamp lights
- repeats this with different solids, **B, C, D** and **E**.

(a) Here are her results.

solid	does the lamp light?
A	yes
B	no
C	yes
D	yes
E	no

Complete the table to show which of the solids, **A, B, C, D** and **E** are electrical conductors and which are **not** electrical conductors.

electrical conductors	<u>not</u> electrical conductors

[1]

(b) What name is given to a solid that is **not** an electrical conductor?

..... [1]

(c) Angelique wants to find out which solid is the **best** electrical conductor.

She adds a piece of equipment to the electrical circuit and records the results.

Name the piece of equipment.

Explain how the results show which solid is the **best** electrical conductor.

piece of equipment

explanation

.....

.....

[2]

4 The table shows the times and heights of high tides and low tides for one town next to the sea over 24 hours.



time	height in m
01:02	2.95
07:03	1.25
13:37	2.93
19:36	1.27

(a) Write down the time of the **highest** tide.

..... [1]

(b) High tides and low tides are caused by tidal forces on Earth.


Describe what causes these tidal forces.

.....

.....

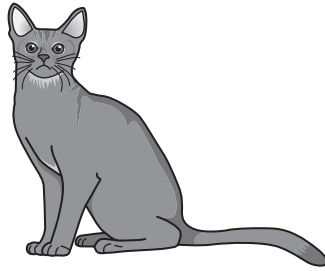
..... [2]

5 This question is about the characteristics of living organisms.

 Look at the diagram of a sunflower plant and a cat.



sunflower



cat

not to scale

A sunflower and a cat are living organisms.

(a) Tick (✓) **all** the characteristics of living organisms that are true for a sunflower and a cat.

growth

nutrition

reproduction

respiration

[2]

(b) The sunflower is placed next to a window and left for five hours.

Look at the diagram of the sunflower before and after it is moved next to the window.



before



after five hours



window

Which **two** characteristics of living organisms are shown in the diagram?

1

2

[2]

6 Solids, liquids and gases are described using a particle model.



(a) Describe the **differences** between a **solid** and a **gas**.

Use ideas about the arrangement, separation and motion of particles.

arrangement

.....

separation

.....

motion

.....

[3]

(b) State **one similarity** between the particle models of a **solid** and of a **liquid**.

.....

..... [1]

7 Air is a mixture of gases.



(a) Complete the table to show the percentage of gases in clean, dry air.

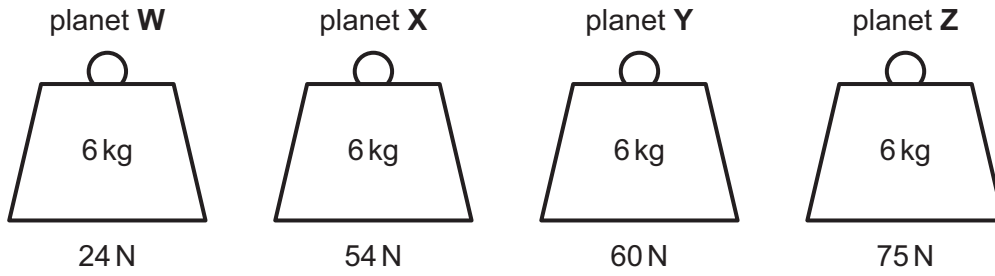
gas	percentage
oxygen
.....	78

[2]

(b) Name **one other** gas that is in clean, dry air.

..... [1]

8 The diagrams show the weight of four identical masses on different planets.



(a) Write down the name of the force that gives objects weight.

..... [1]

(b) Which **planet** has the greatest mass?

Choose from **W**, **X**, **Y** or **Z**.

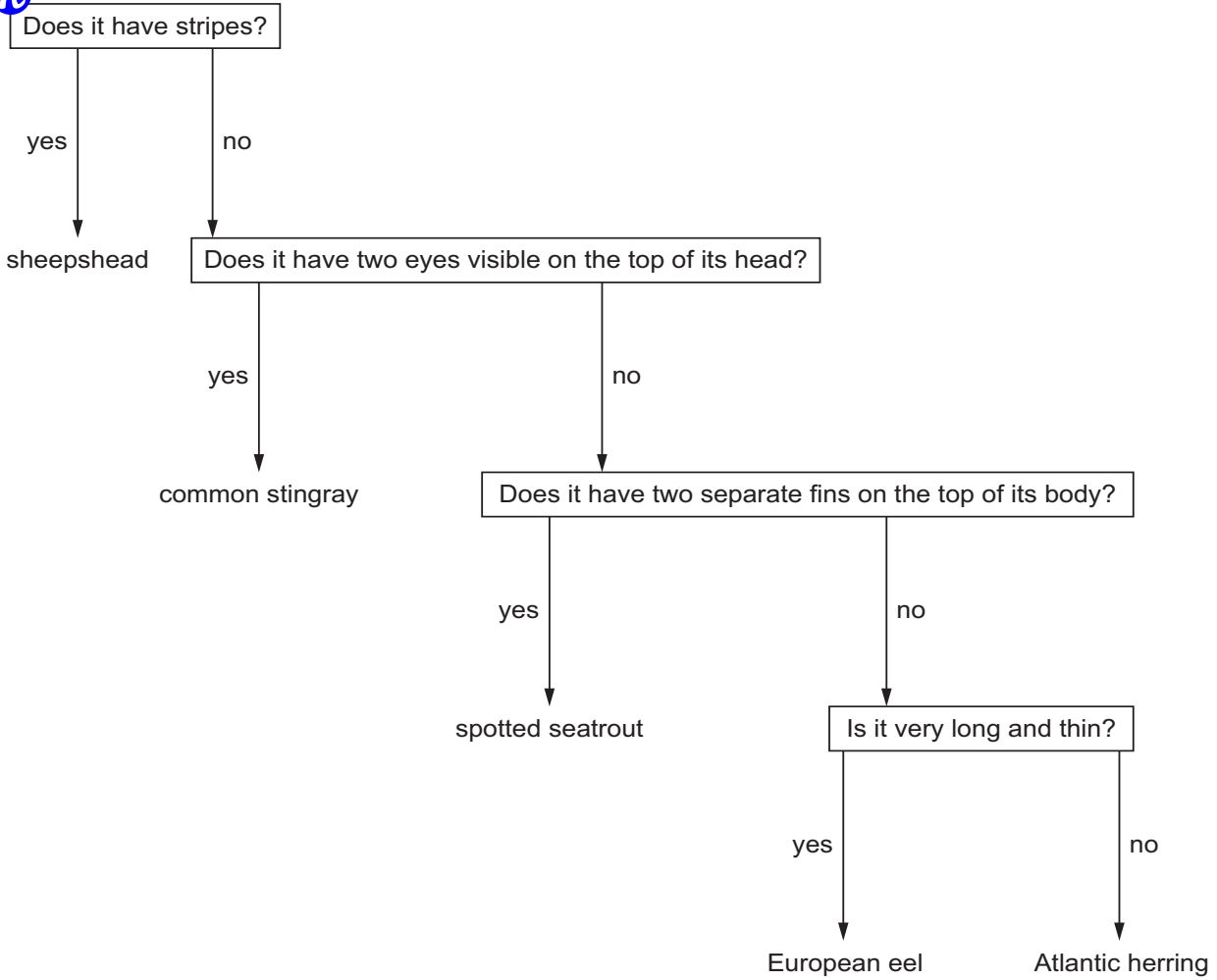
Explain your answer.

planet

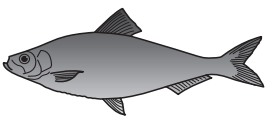
explanation

..... [2]

9 Rajiv uses this key to identify five fish, **A**, **B**, **C**, **D** and **E**.



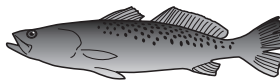
The diagram shows the five different fish Rajiv identifies.



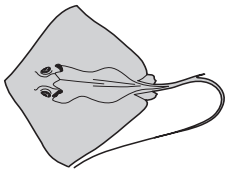
A



B



C



D



E

not to scale

Write down the name of each of the five different fish.

A

B

C

D

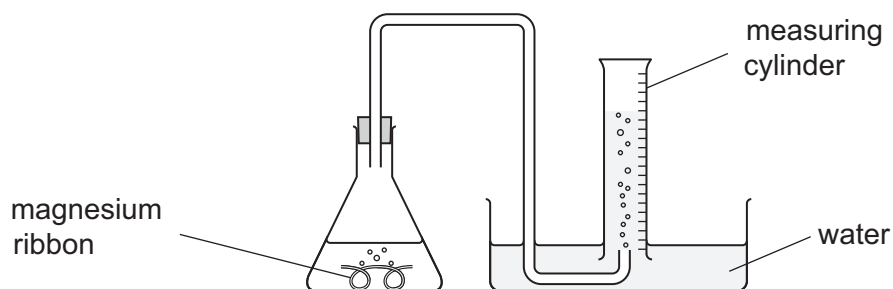
E

10 Blessy investigates the reaction between magnesium and excess dilute hydrochloric acid.



In her first experiment Blessy:

- adds 100 cm^3 of dilute hydrochloric acid to a conical flask
- adds a 1.0 cm length of magnesium ribbon
- seals the conical flask with a stopper
- collects and measures the gas made for 10 minutes.



Blessy repeats the first experiment five more times but uses different lengths of magnesium.

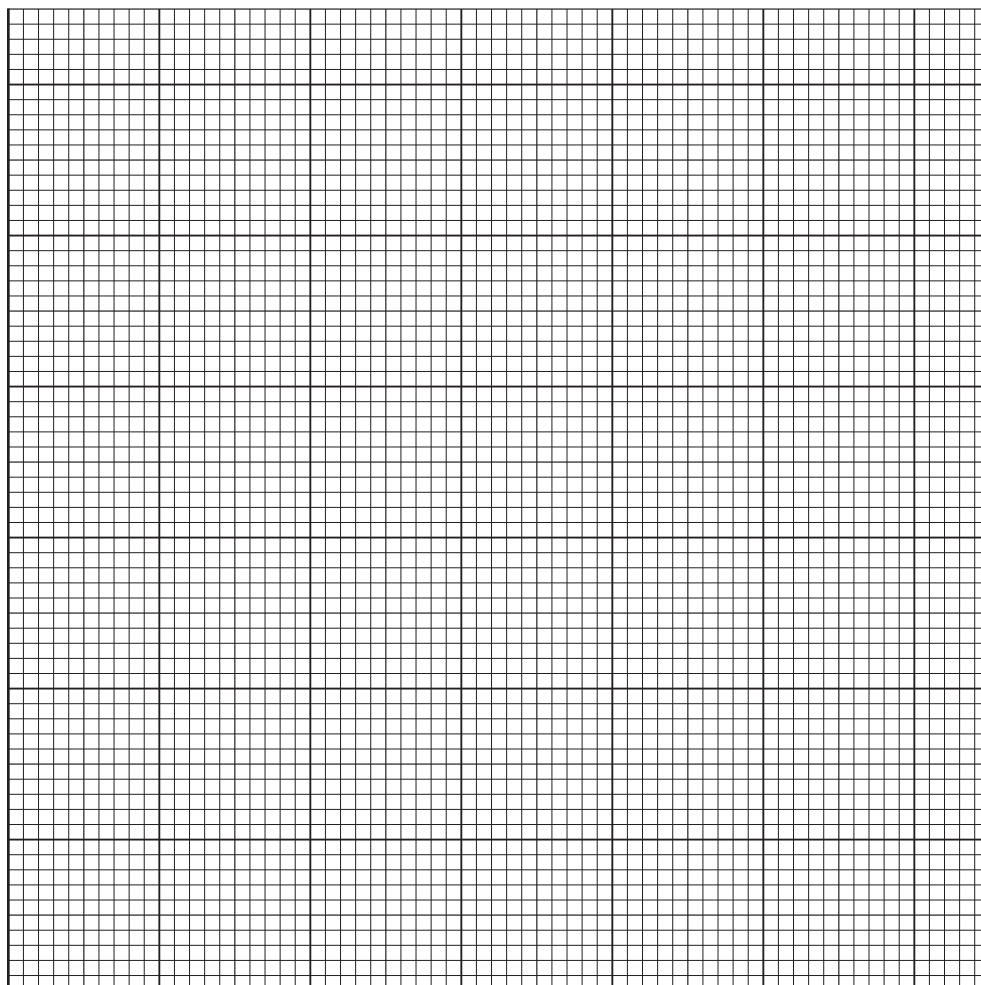
Look at her results table.

length of magnesium in cm	volume of gas in cm^3
1.0	50
2.0	100
3.0	150
4.0	75
5.0	250
6.0	300

(a) Plot the results on the grid.

Use an appropriate scale for each axis.

volume of
gas in cm^3



length of magnesium in cm

[2]

(b) One result is anomalous.

Circle the anomalous result on the graph.

[1]

(c) Draw a straight line of best fit.

[1]

(d) Blessy repeats the experiment.

She uses a 2.5 cm length of magnesium.

Use the graph to predict the volume of gas made.

volume = cm^3 [1]

(e) Blessy repeats the experiment.

She uses an 8.0 cm length of magnesium.

Blessy does this three times.

Look at her results.

length of magnesium in cm	volume of gas in cm ³		
8.0	390	410	400

Calculate the average volume of gas made by an 8.0 cm length of magnesium.

volume = cm³ [1]

11 A pond is a small area of water.



The diagram shows a food chain for a pond.



Gabriella investigates the number of each organism in the pond.

The table shows her results.

organism	number
water plant	80
small fish	54
large fish	34
large bird	2

(a) (i) There are four different types of organism in the pond.

Calculate the **total** number of organisms in the pond.

total = [1]

(ii) Calculate the percentage of organisms in the pond that are large fish.

percentage = [1]

(b) Suggest **one** reason why it is difficult to count the fish in the pond.

.....
 [1]

(c) Gabriella thinks the number of small fish she recorded is anomalous.

Suggest **one** way Gabriella checks her results.

..... [1]

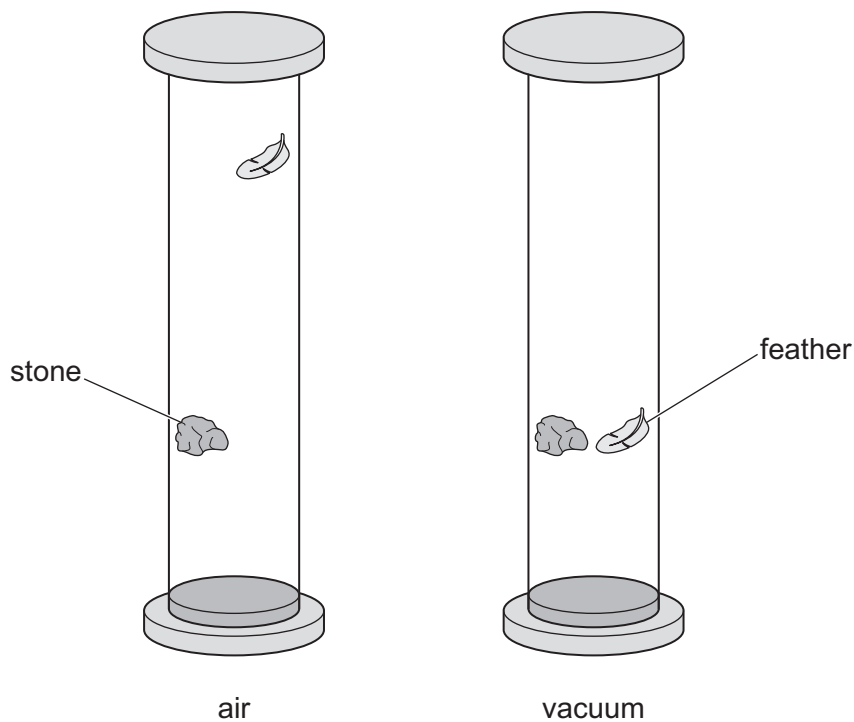
12 Hassan investigates the speed of falling objects.



Hassan:

- drops a stone and a feather at the same time in a container of air
- removes all the air from the container to make a vacuum
- drops the stone and the feather at the same time in the vacuum.

Look at his observations after he drops the stone and feather.



Explain these observations.

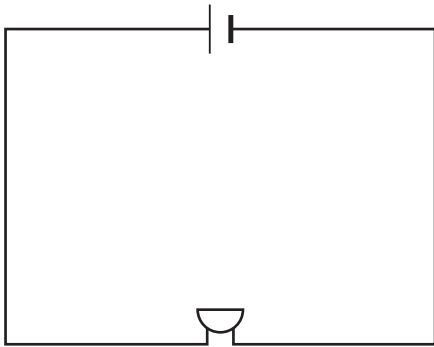
.....

.....

.....

..... [2]

13 Aiko makes an electrical circuit.



(a) Circle the names of the **two** components in her circuit.

battery of cells

buzzer

cell

lamp

switch

[2]

(b) Aiko needs an extra component to turn the circuit on and off.

Redraw the electrical circuit to show the position of this extra component.

Use the correct standard conventional electrical symbol for the component.

[2]

(c) Write down the name of the particle that flows around an electrical circuit.

..... [1]

14 Draw a straight line from each **gas** to the correct **test and result** for the gas.



gas	test and result
carbon dioxide	test: lighted splint result: squeaky pop
hydrogen	test: glowing splint result: relights glowing splint
oxygen	test: bubble through limewater result: white precipitate

[2]

15 The Earth is one planet in the Solar System.



Complete the sentence to describe how the Earth was formed.

The Earth was formed when dust and were pulled together by

.....

[2]