



# Science

Stage 6

Paper 1

**35 minutes**

No additional materials are needed.

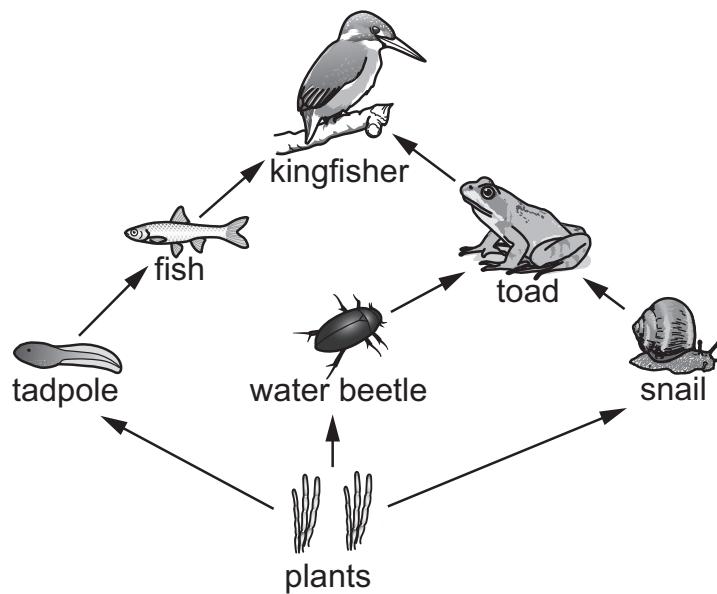
## INSTRUCTIONS

- Answer **all** questions.
- Write your answer 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 40.
- The number of marks for each question or part question is shown in brackets [ ].

1 The diagram shows part of a food web.



(a) Which animal is the last carnivore in the food web?

..... [1]

(b) Which animals are eaten by the toad?

..... [1]

(c) This food web has different food chains.

Complete the food chain that includes the tadpole.

..... → ..... → ..... → .....

[1]

(d) The energy source for this food web is the Sun.

Describe how this energy is transferred to the tadpole.

.....

.....

.....

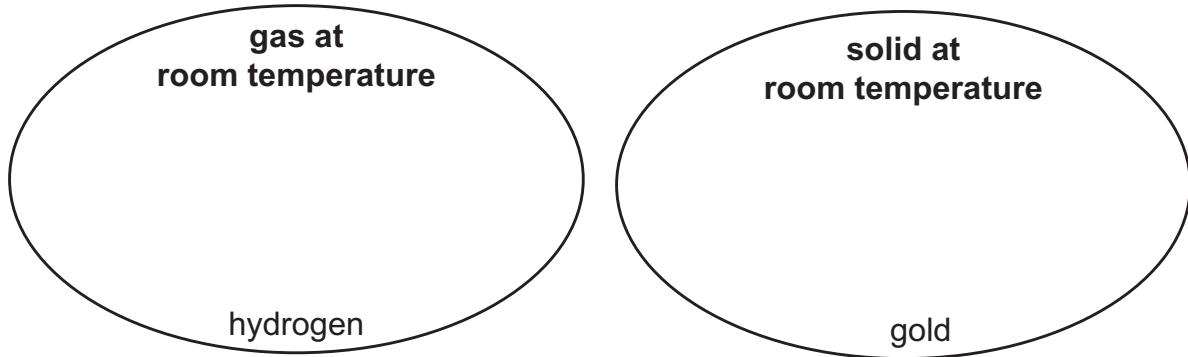
[2]

2 Look at the table of properties of some substances.

substance	temperature substance changes from solid to liquid in °C	temperature substance changes from liquid to gas in °C
hydrogen	-260	-253
gold	1062	2000
carbon	3652	4827
copper	1085	2580
neon	-249	-246
lead	327	1755

(a) Room temperature is 25 °C.

Complete the diagram using carbon, copper, neon and lead.



[2]

(b) Which substance has the **lowest** boiling point?

..... [1]

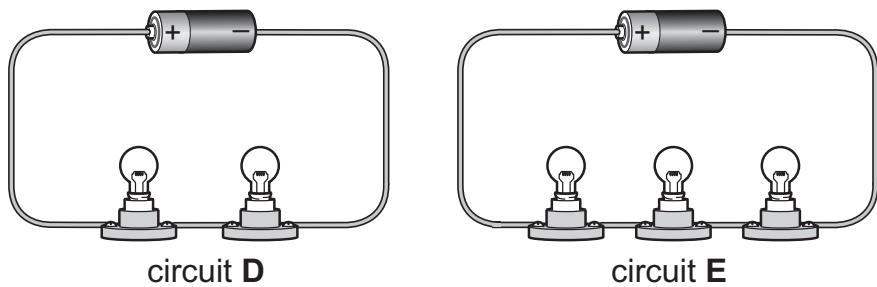
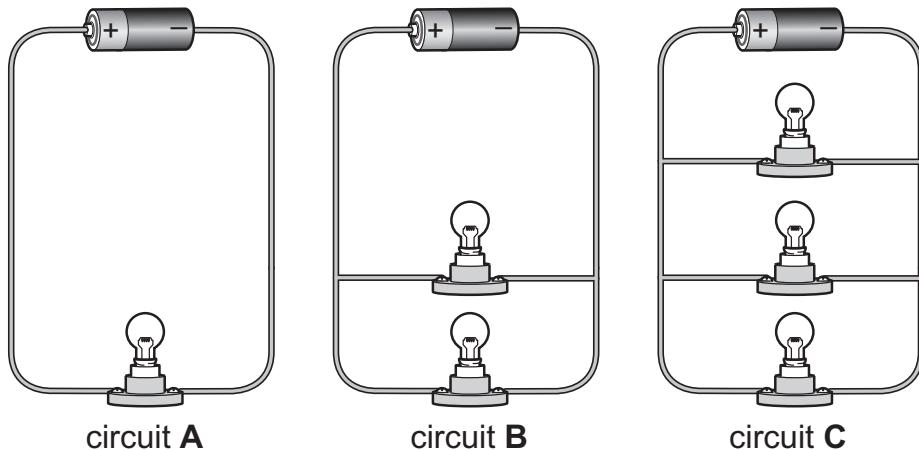
(c) Complete the sentences to describe the difference between boiling and evaporation.

Boiling is .....

Evaporation is .....

[2]

3 Lily compares lamp brightness in five different circuits.



She uses identical lamps and identical cells for each circuit.

Lily uses a scale for lamp brightness for each lamp.

10 is the brightest and 1 is the least bright.

Look at her results.

	<p>circuit E is 2 and 2 and 2</p> <p>circuit A is 8      circuit C is 8 and 8 and 8</p> <p>circuit D the lamps are 5 and 1</p> <p style="text-align: center;">circuit B the lamps are 8 and 8</p>
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**(a)** Lily starts to write the results into her results table.

Complete her results table.

circuit	
	.....
<b>A</b>	.....
<b>B</b>	.....
<b>C</b>	8 and 8 and 8
<b>D</b>	.....
<b>E</b>	.....

[2]

**(b)** There is **one** anomalous result.

Circle the circuit with the anomalous result.

A

B

C

D

E

[1]

**(c)** Describe **two** conclusions shown by the results.

Use your knowledge about series and parallel circuits in your answers.

1

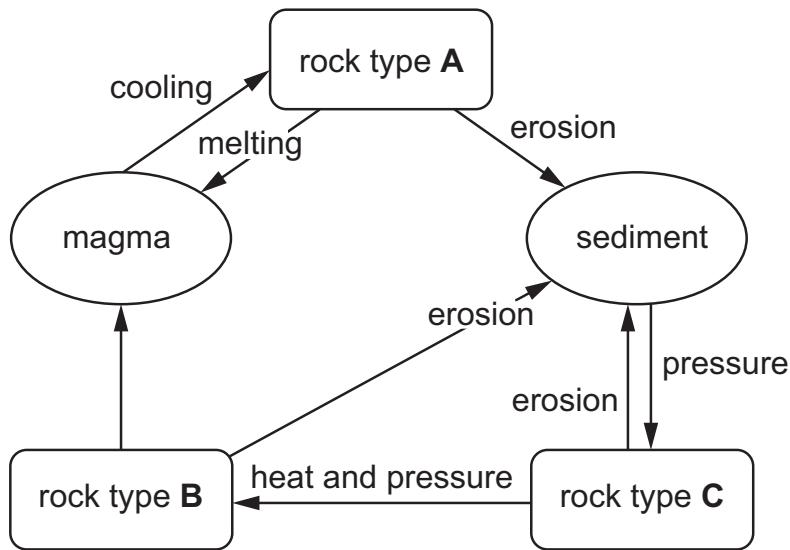
.....

2

.....

[2]

4 The diagram shows part of the rock cycle.



(a) Name rock type A.

..... [1]

(b) Name rock type B.

..... [1]

(c) Name rock type C.

..... [1]

(d) Name the process that happens between rock type B and magma.

Circle the correct process.

burial

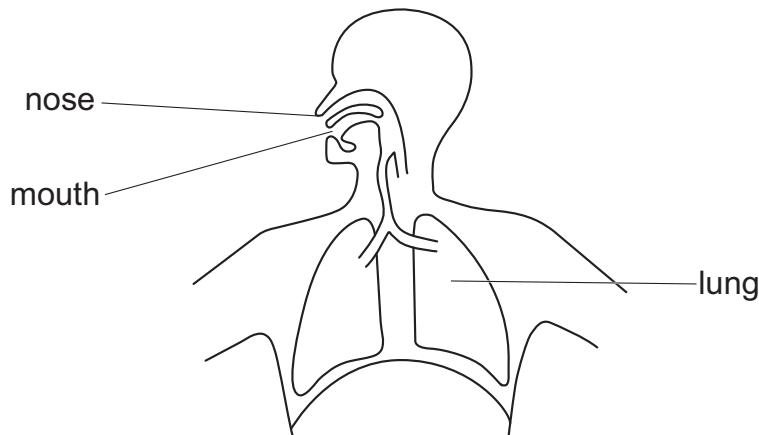
erosion

melting

**solidification**

[1]

5 The diagram shows the respiratory system inside a human body.



There is oxygen in the air outside the body.

(a) Describe how oxygen travels from the air to the blood in the body.

Use the labels on the diagram in your description.

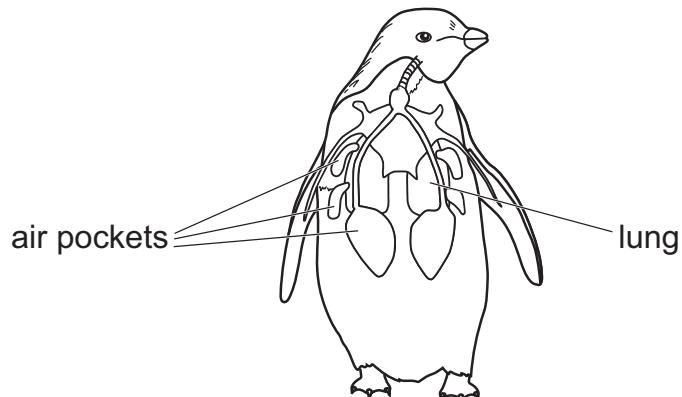
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[2]

(b) The diagram shows the respiratory system inside a penguin.



The penguin has two lungs and six air pockets.

Suggest why a penguin needs lungs **and** air pockets.

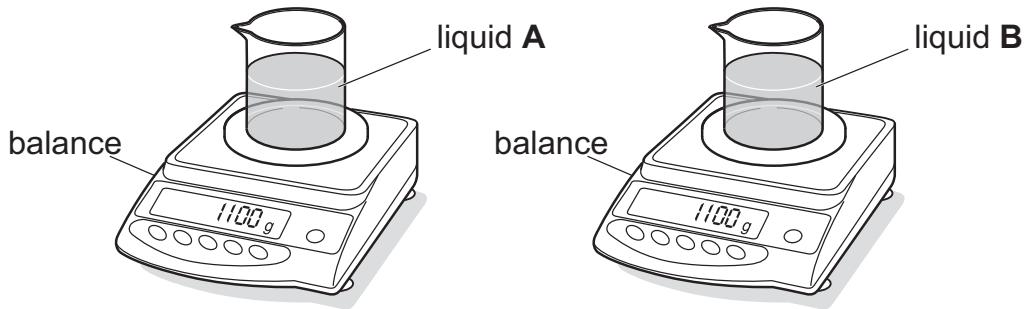
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[1]

6 Safia wants to find out if liquid **A** or liquid **B** evaporates the fastest.



(a) As the liquid evaporates, the mass displayed by the balance decreases.

The independent variable is the type of liquid.

Name **one dependent** variable.

[1]

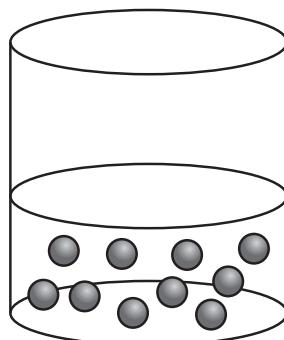
(b) Modelling is used to show evaporation.

Liquid **A** evaporates **faster** than liquid **B**.

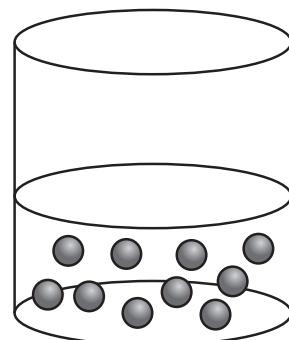
Circles are used to model particles.

A few particles are drawn in each beaker.

Draw more particles on the diagram to show liquid **A** evaporating **faster** than liquid **B**.



liquid **A**



liquid **B**

[2]

**(c)** Describe how the model helps Safia understand evaporation.

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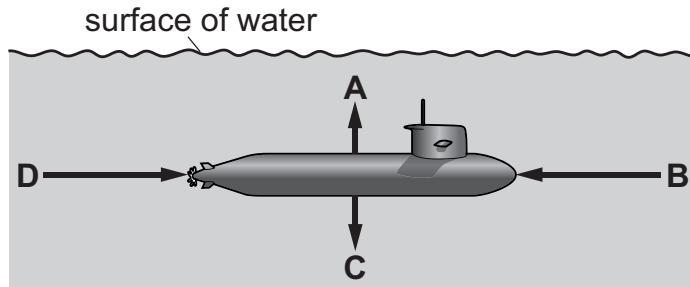
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[2]

7 A submarine travels underwater.

The submarine is moving in this direction →.



(a) Name the forces acting on the submarine.

A .....  
B .....  
C .....  
D .....

[2]

(b) The submarine is moving in this direction → .

Look at the length of the arrows for force **B** and force **D**.

Describe the speed of the submarine.

..... [1]

(c) Which force increases when the submarine rises to the surface of the water?

Circle the correct answer.

**A**

**B**

**C**

**D**

[1]

8 There are eight planets in the Solar System.

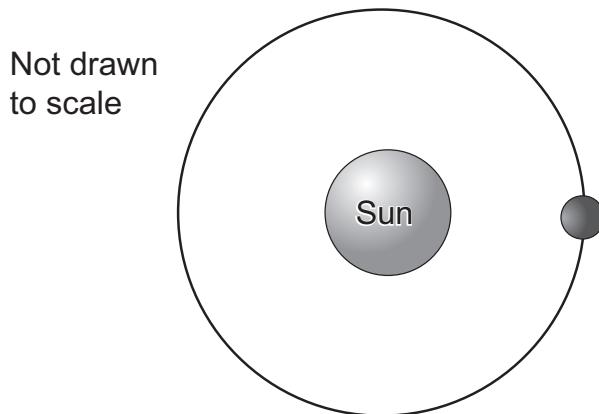
(a) Complete the table using these distances from the Sun in millions of km.

58    108    150    228    779    1434    2873    4495

planet	distance from the Sun in millions of km
Earth	.....
Jupiter	.....
Mars	.....
Mercury	.....
Neptune	.....
Saturn	.....
Uranus	.....
Venus	.....

[2]

(b) The Earth orbits the Sun.



Draw the Moon **and** the orbit of the Moon on the diagram.

[1]

(c) Oliver completes a Moon journal.

Moon journal						
						
day1	day2	day3	day4	day5	day6	day7
						
day8	day9	day10	day11	day12	day13	day14
						
day15	day16	day17	day18	day19	day20	day21
						
day22	day23	day24	day25	day26	day27	day28

Complete the sentence.

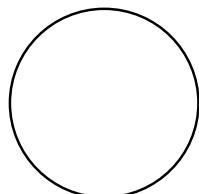
Oliver does **not** see the Moon on day 14 because .....

[1]

(d) Oliver draws a Moon journal for the next 28 days.

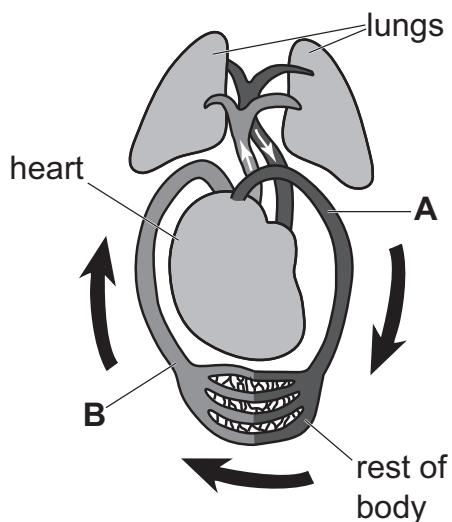
He sees the Moon on day 14.

Draw what the Moon looks like on day 14.



[1]

9 The diagram shows a model of the human circulatory system.



The arrows show the direction of blood flow.

(a) Complete the sentences.

Choose from the list.

an artery

a capillary

a circulation

a system

a vein

Blood vessel **A** is

.....

Blood vessel **B** is

.....

[1]

(b) Blood transports oxygen and waste.

Name **one other** thing transported by blood.

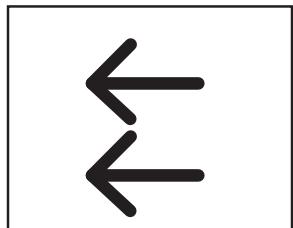
.....

[1]

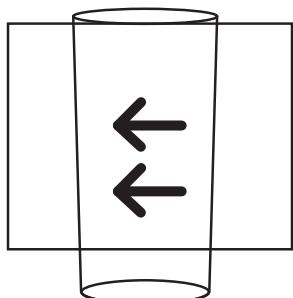
10 Mike is doing an investigation about light.

He uses an empty glass and a glass of water.

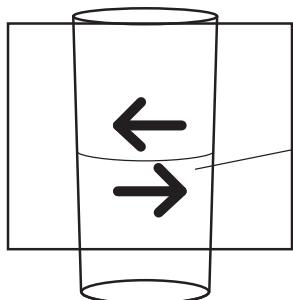
Look at the diagrams.



Mike draws two arrows on paper.



He puts an empty glass in front of the arrows.



He adds water to the glass.

Describe what is happening to the **light** passing through the glass and the water.

Explain your answer.

description .....

explanation .....

[2]

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