**Test:** Primary 6 Science (Term 1) - ACS (Y0)

**Points:** 32 points

**Name:** _____ **Score:** _____

**Date:** _____

**Signature:** _____

Select multiple choice answers with a cross or tick:

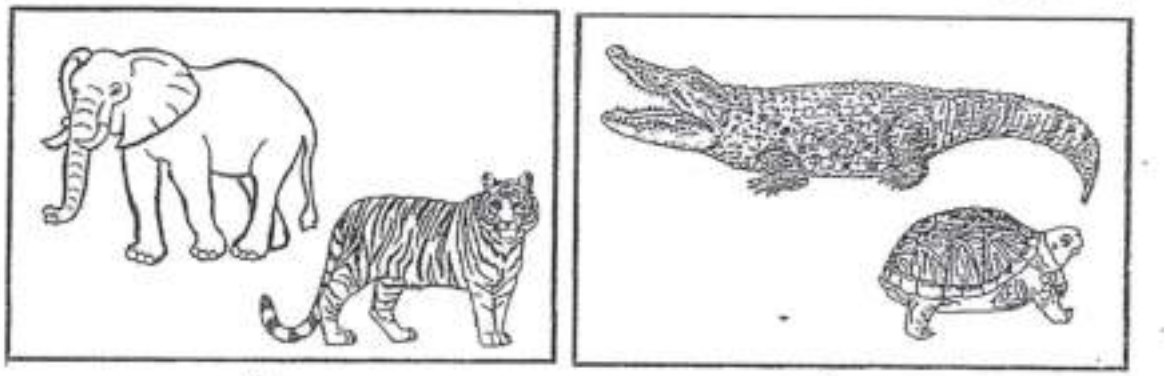
○ Only select one answer

☐ Can select multiple answers

## Question 1 of 35

Primary 6 Science (Term 1) 2 pts

Study the two groups of animals, A and B.




Which of the following describes the groups of animals correctly?

---

○ **A)**

| Characteristics | A | B |
|---|---|---|
| The animals lay eggs to reproduce. | No | Yes |

○ **B)**

| Characteristics | A | B |
|---|---|---|
| The animals have hair as their outer covering. | No | No |

○ **C)**

| Characteristics | A | B |
|---|---|---|
| The animals have scales as their outer covering. | Yes | Yes |

○ **D)**

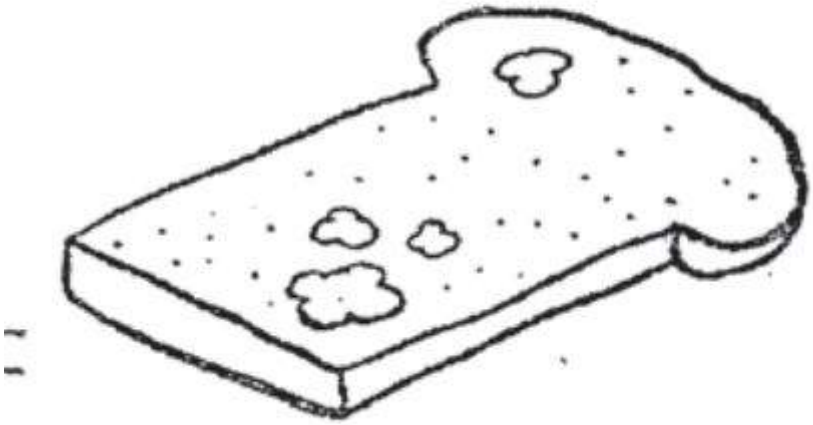
| Characteristics | A | B |
|---|---|---|
| The adults give birth to their young. | Yes | Yes |

**Question 2 of 35** Primary 6 Science (Term 1) 2 pts

Which one of the following organisms does not reproduce by spores?

A)

Mould on bread

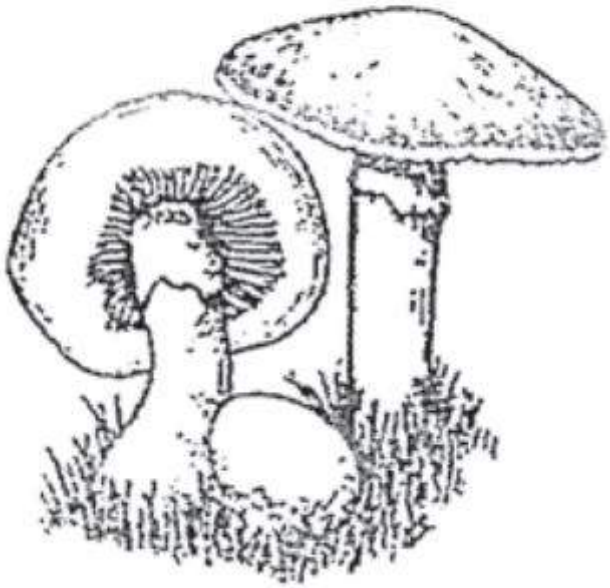


B)

Fern

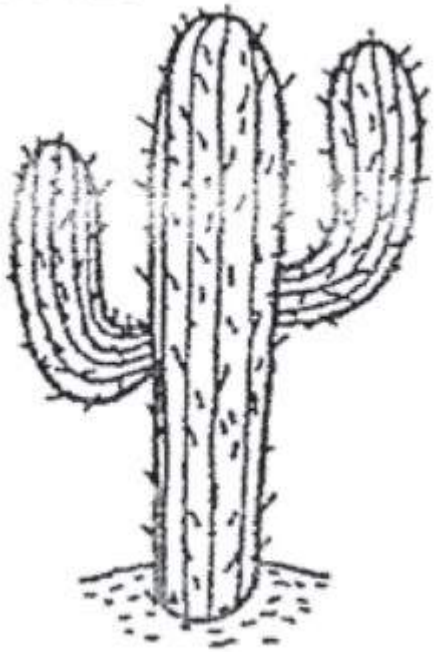
C)

Mushroom



D)

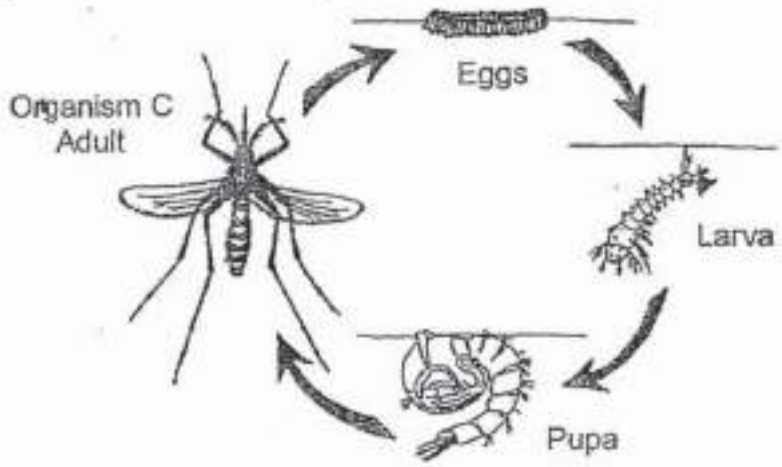
Cactus



## Question 3 of 35

Primary 6 Science (Term 1) 2 pts

David studies the life cycle of organism C.



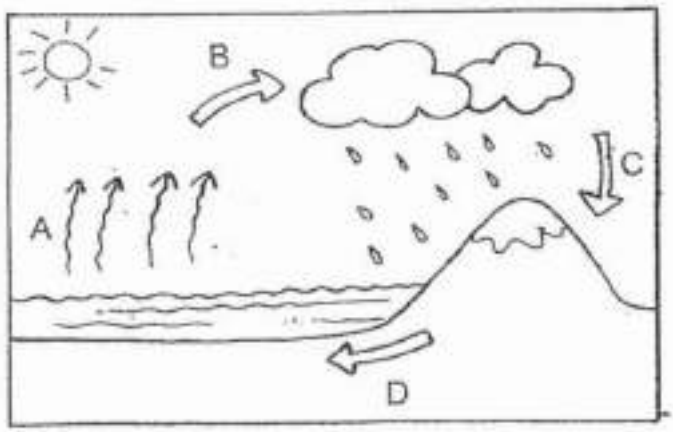

Which of the following characteristics helped David classify organism C as an insect?

- **A)** The adult lays eggs.
- **B)** The adult has three body parts.
- **C)** The young moults several times.
- **D)** The young does not resemble the adult.

## Question 4 of 35

Primary 6 Science (Term 1) 2 pts

The diagram shows the water cycle.



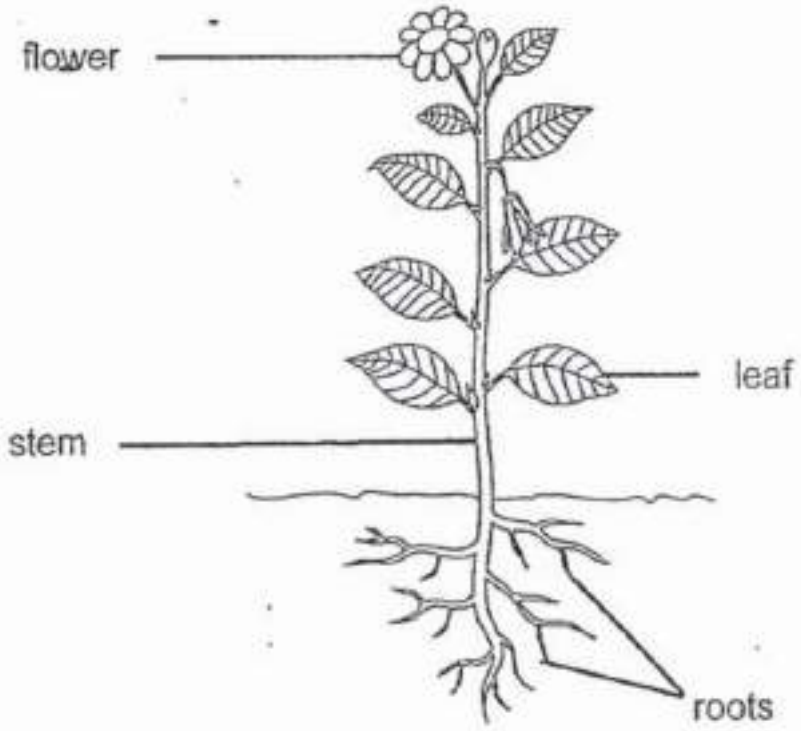

At which two parts, A, B, C and D of the water cycle, are water present in the liquid state?

---

- **A)** A and B
- **B)** B and C
- **C)** A and C
- **D)** C and D

**Question 5 of 35** Primary 6 Science (Term 1) 2 pts

Study the plant shown.




Which of the following two statements are true about the plant?

A It has a weak stem.
B Its roots make food.
C Its flower helps in reproduction.
D Its stem transports food to the roots.

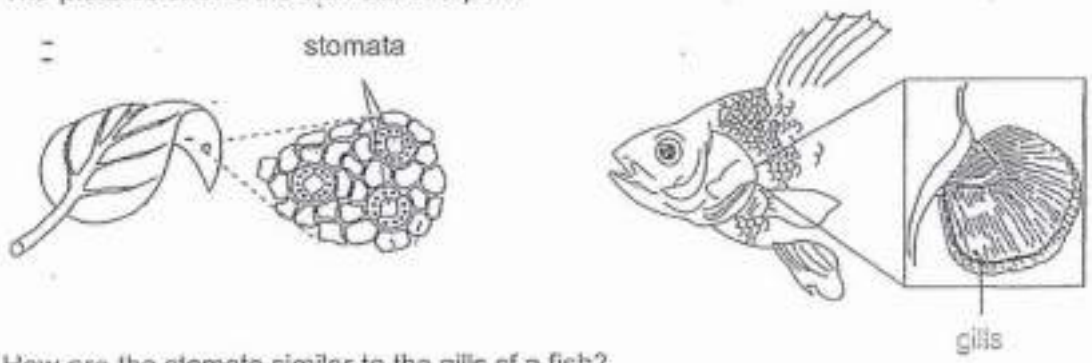
---

- **A)** A and C
- **B)** A and D
- **C)** B and C
- **D)** C and D

## Question 6 of 35

Primary 6 Science (Term 1) 2 pts

The pictures shows the stomata of a plant.

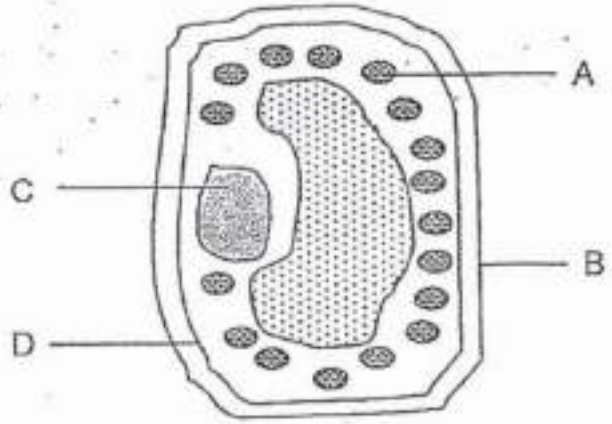



How are the stomata similar to the gills of a fish?

- **A)** They take in water.
- **B)** They take in oxygen only.
- **C)** They allow gaseous exchange.
- **D)** They have covers to protect them.

**Question 7 of 35** Primary 6 Science (Term 1) 2 pts

The diagram shows a plant cell.




The table states the functions of parts A, B, C and D.

| Part | Function |
|---|---|
| A | Makes food |
| B | Supports and gives the cell its shape |
| C | Controls all the activities of the cell |
| D | Controls the movement of substances in and out of the cell |

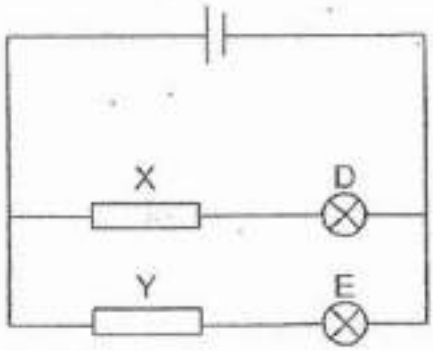
Which of the parts and functions are correct?

- **A)** A and B only
- **B)** B and C only
- **C)** A, C and D only
- **D)** A, B, C and D

## Question 8 of 35

Primary 6 Science (Term 1) 2 pts

Elly set up an electrical circuit as shown. She used some wires, two identical bulbs, D and E, and materials X and Y to form the circuit.




Elly noticed that only bulb D lit up.

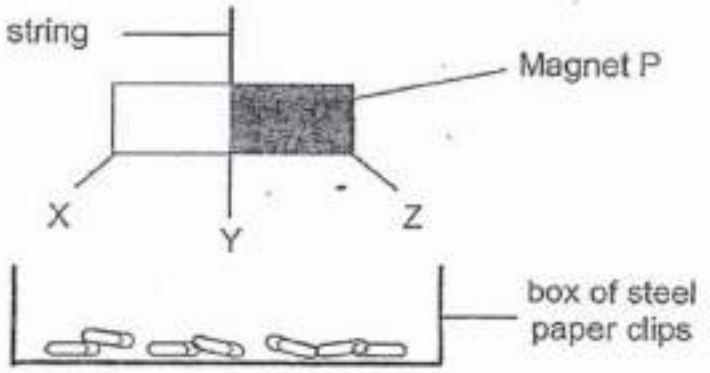
What could be the reason for this observation?

---

- **A)** Bulb D is not working.
- **B)** X is an electrical insulator.
- **C)** Y is an electrical insulator.
- **D)** The battery has run out of chemical potential energy.

**Question 9 of 35** Primary 6 Science (Term 1) 2 pts

Fred labelled each part of Magnet P as X, Y and Z as shown. He conducted an experiment by lowering Magnet P into a box of steel paper clips.




Fred repeated the experiment using two other magnets, Q and R, of the same size. He recorded the number of paper clips attracted to each part of each magnet in the table.

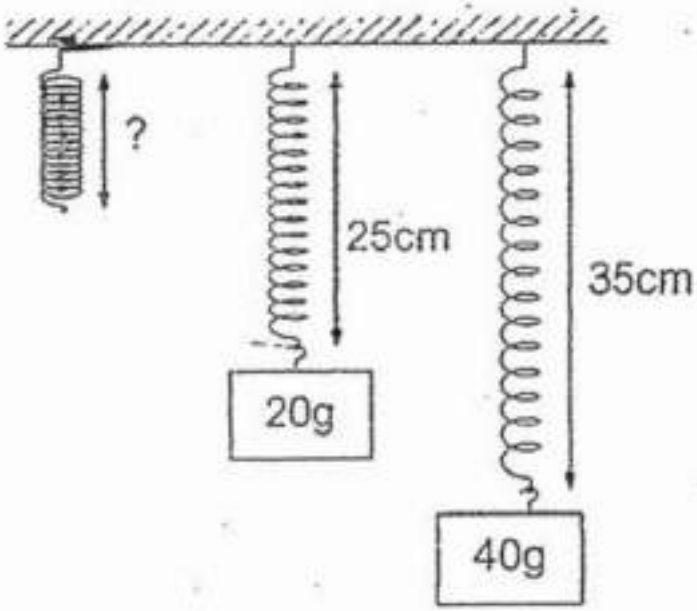
| | Number of paper clips attracted at | | |
|---|---|---|---|
| | X | Y | Z |
| **Magnet P** | 17 | 6 | 15 |
| **Magnet Q** | 7 | 1 | 9 |
| **Magnet R** | 9 | 3 | 10 |

Which of the following conclusions is correct?

- **A)** P is the strongest magnet because the most number of paper clips were attracted by the magnet.
- **B)** Q is the strongest magnet because the least number of paper clips were attracted by the magnet.
- **C)** P and R are equally strong as the number of paper clips attracted by the two magnets at Z is almost the same.
- **D)** P and R are weaker than Q because the number of paper clips attracted by the two magnets are higher than Q.

**Question 10 of 35** Primary 6 Science (Term 1) 2 pts

Fendi added some weights to a spring, as shown.




What is the original length of the spring?

- **A)** 10 cm
- **B)** 12 cm
- **C)** 15 cm
- **D)** 20 cm

## Question 11 of 35

Primary 6 Science (Term 1) 2 pts

Julian pushed his toy car on four different surfaces, A, B, C and D, with the same amount of force. The distances travelled by the toy car for each of the surfaces are shown in the table.

| Surface | Distance Travelled By Toy Car (cm) |
|---|---|
| A | 180 |
| B | 360 |
| C | 150 |
| D | 280 |

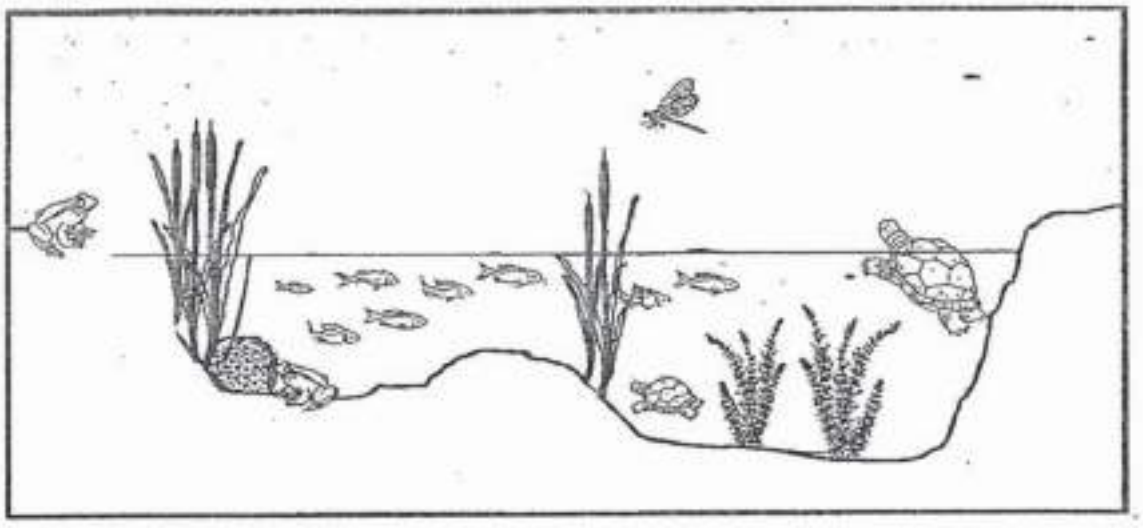
Arrange the surfaces, A, B, C and D starting with the surface that causes the least frictional force with the wheels of the toy car.

- **A)** B, A, D, C
- **B)** B, D, A, C
- **C)** C, A, D, B
- **D)** C, B, A, D

## Question 12 of 35

Primary 6 Science (Term 1) 2 pts

The diagram shows a pond habitat.



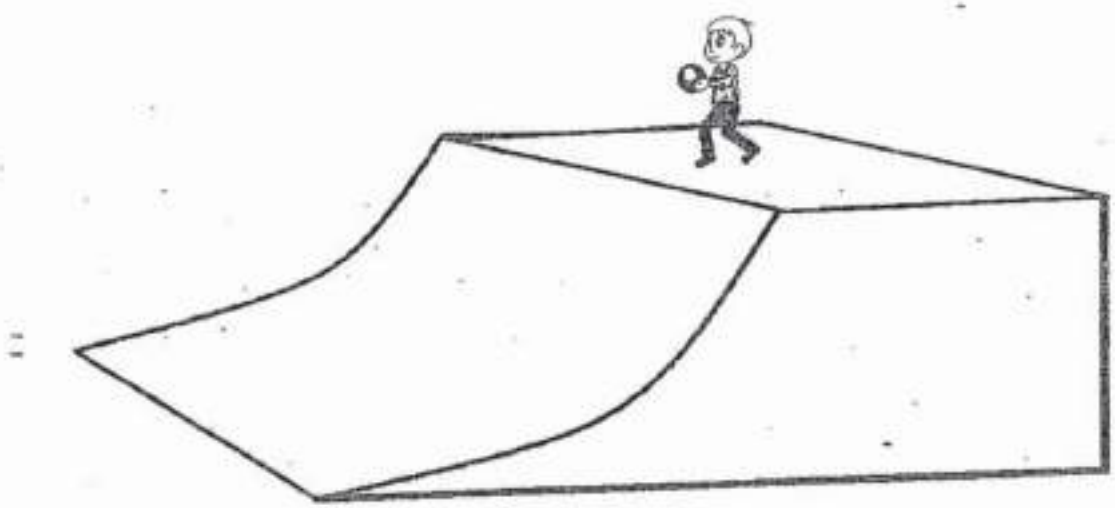
How many populations are there in this habitat?

- **A)** 5
- **B)** 6
- **C)** 7
- **D)** 8

## Question 13 of 35

Primary 6 Science (Term 1) 2 pts

Harry released a ball down a ramp.



Which of the following correctly shows the energy conversion that occurred in the ball?

- **A)** Kinetic energy ----> Sound energy + Heat energy
- **B)** Kinetic energy -----> Potential energy + Heat energy
- **C)** Potential energy ------> Kinetic energy + Sound energy
- **D)** Potential energy -------> Kinetic energy + Sound energy + Heat energy

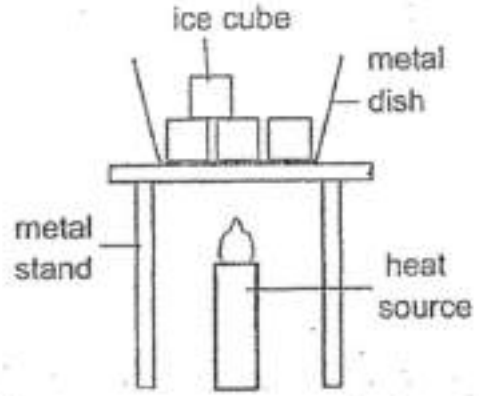
## Question 14 of 35

Primary 6 Science (Term 1) 2 pts

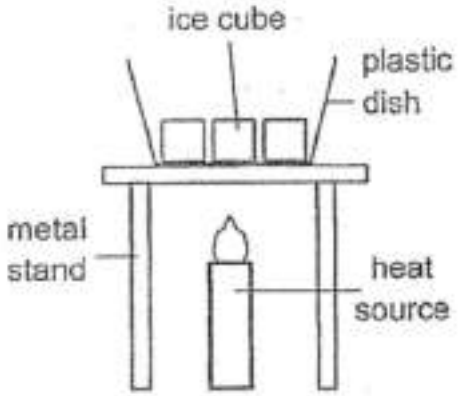
Gilbert wants to find out which material is able to conduct heat the fastest.

Which two set-ups must Gilbert use to test his aim?

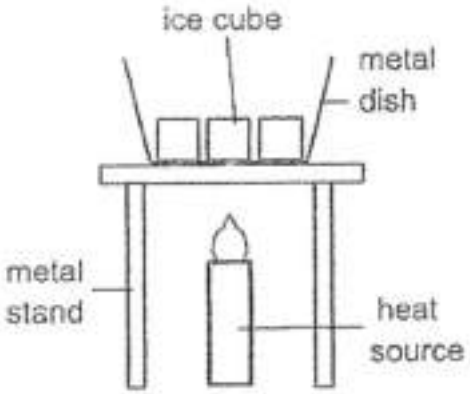
(A)



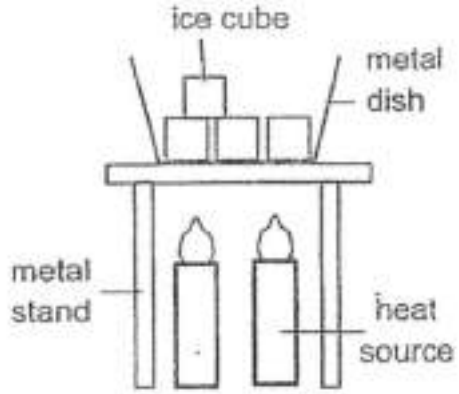

(B)




(C)




(D)

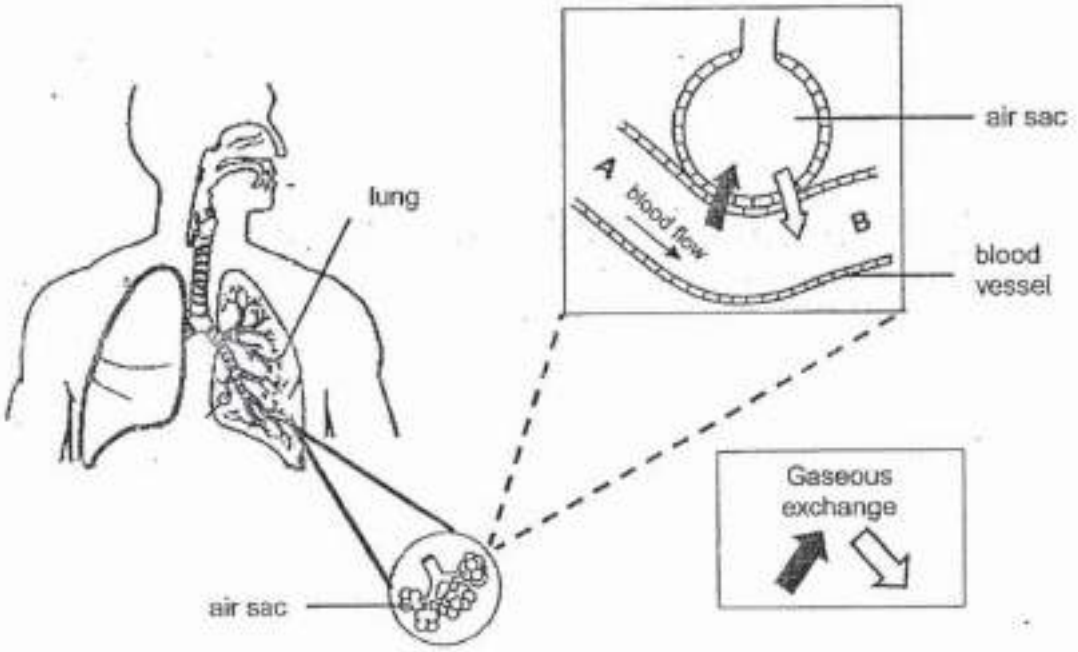



- **A)** A and B
- **B)** A and D
- **C)** B and C
- **D)** B and D

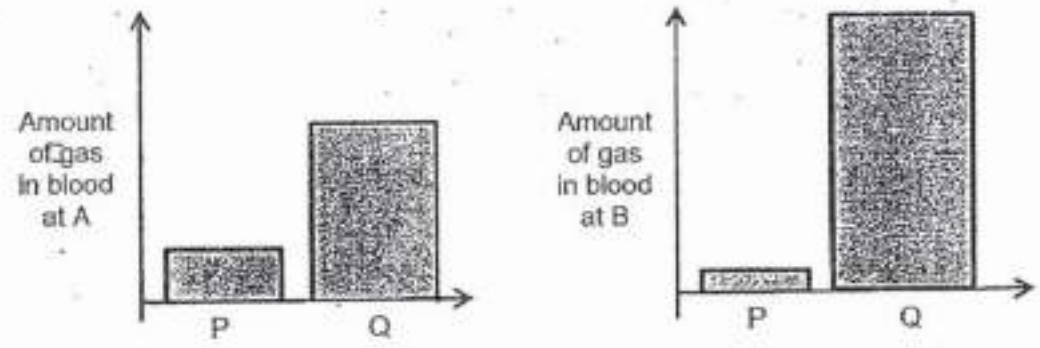
## Question 15 of 35

Primary 6 Science (Term 1) 0.5 pts

The diagram shows the lungs of a human and how gaseous exchange takes place at the air sacs.




Gases P and Q are found in the blood at parts A and B of the blood vessel. The amount of gases P and Q found in A and B is represented in the bar graphs below.

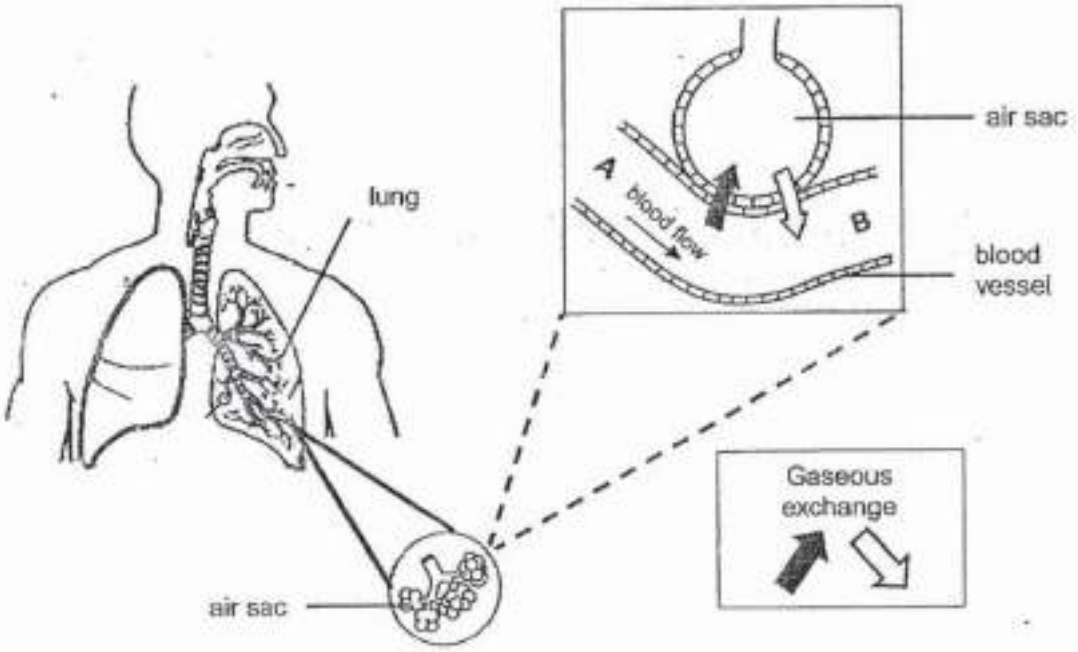



Identify gas P.

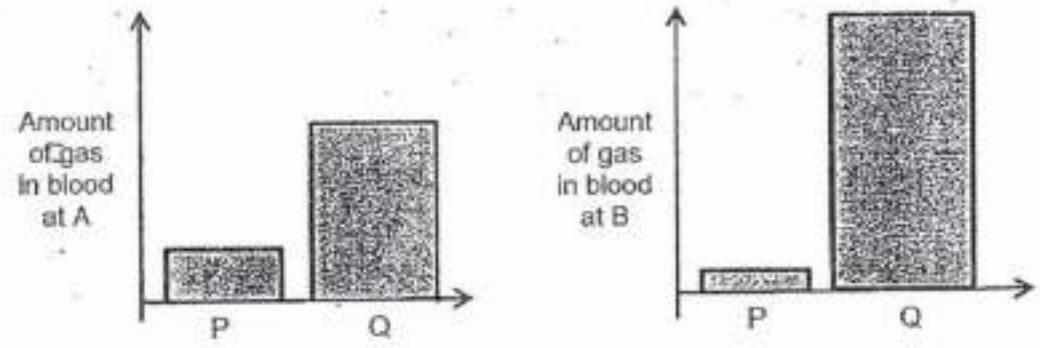
## Question 16 of 35

Primary 6 Science (Term 1) 0.5 pts

The diagram shows the lungs of a human and how gaseous exchange takes place at the air sacs.




Gases P and Q are found in the blood at parts A and B of the blood vessel. The amount of gases P and Q found in A and B is represented in the bar graphs below.

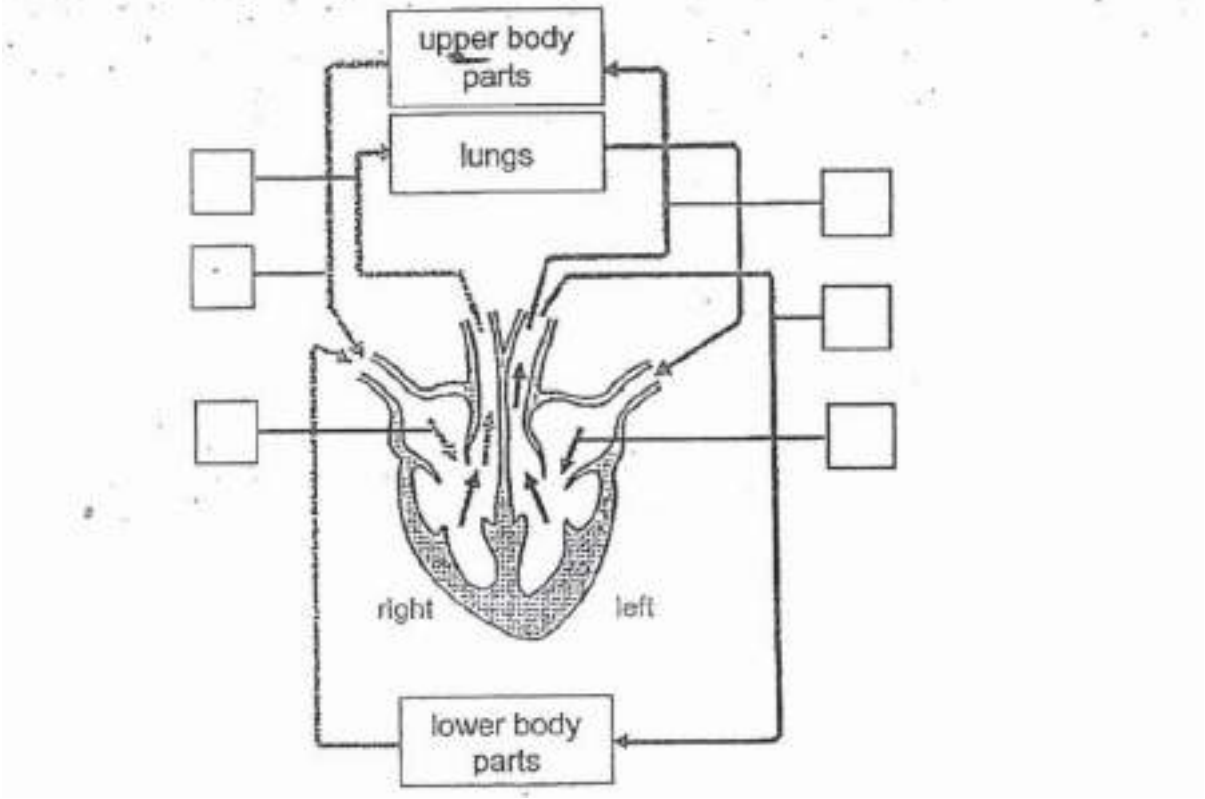



Identify gas Q.

## Question 17 of 35

Primary 6 Science (Term 1) 0 pts

The diagram shows the flow of the blood from the lungs to the rest of the body via the heart.




Identify the arrows that represent the blood that is rich in oxygen by placing ticks in the boxes. (1 mark)

*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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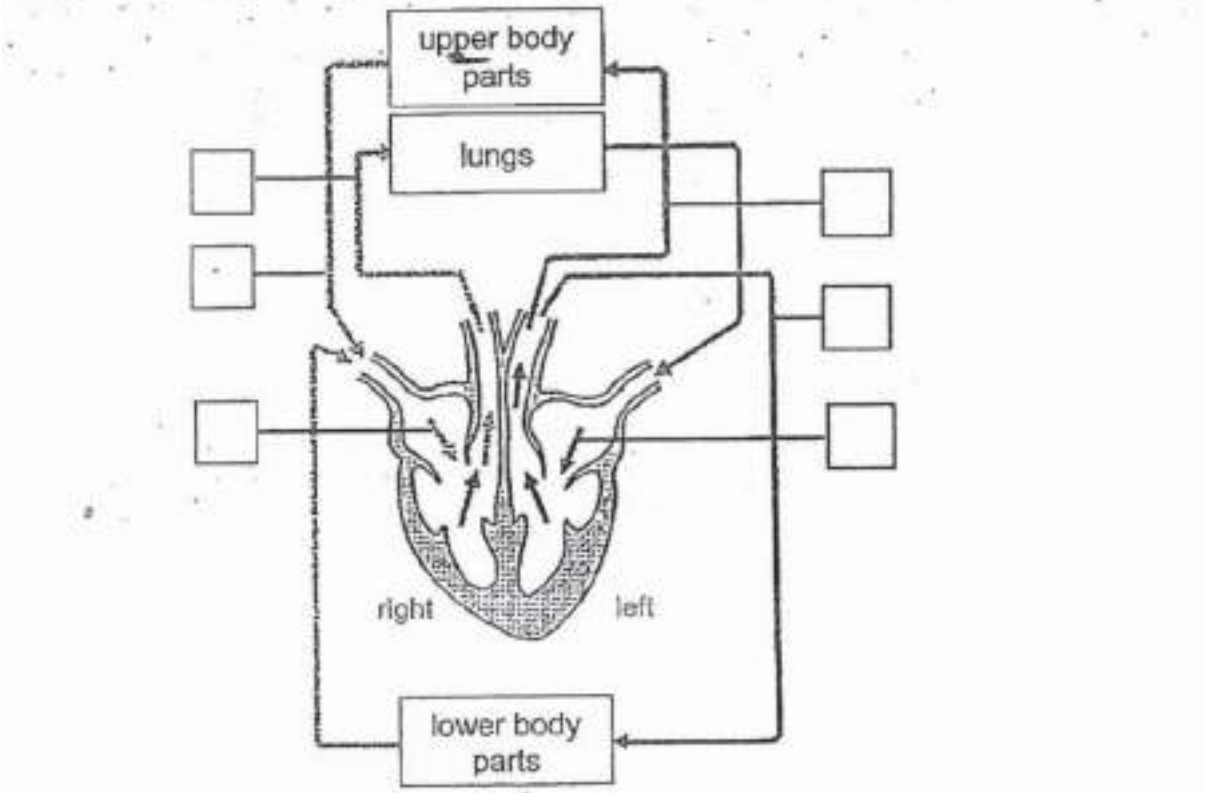
**Question 18 of 35** Primary 6 Science (Term 1) 0 pts

The diagram shows the flow of the blood from the lungs to the rest of the body via the heart.




Explain how digested food is transported to all parts of the body. (1 mark)

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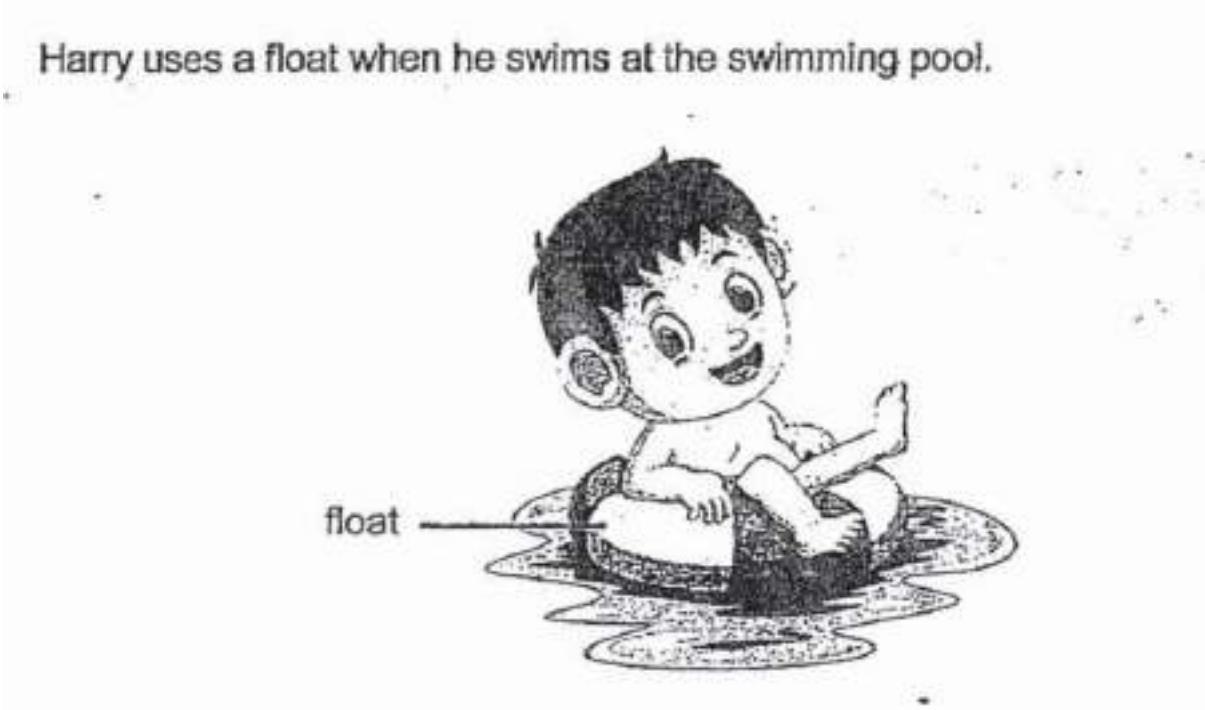
**Question 19 of 35** Primary 6 Science (Term 1) 0 pts




Harry needs to pump air into the float to inflate it before he can use it in the pool. What property of air does this show? (1 mark)

**Question 20 of 35** Primary 6 Science (Term 1) 0 pts

Harry uses a float when he swims at the swimming pool.


Does the mass of air in the float increase, decrease or remain the same after more air is pumped into it? Give a reason for your answer. (1 mark)

**Question 21 of 35** Primary 6 Science (Term 1) 0 pts

Harry uses a float when he swims at the swimming pool.


Why does the float feel harder after it has been left in the sun for some time? Explain your answer clearly. (1 mark)

*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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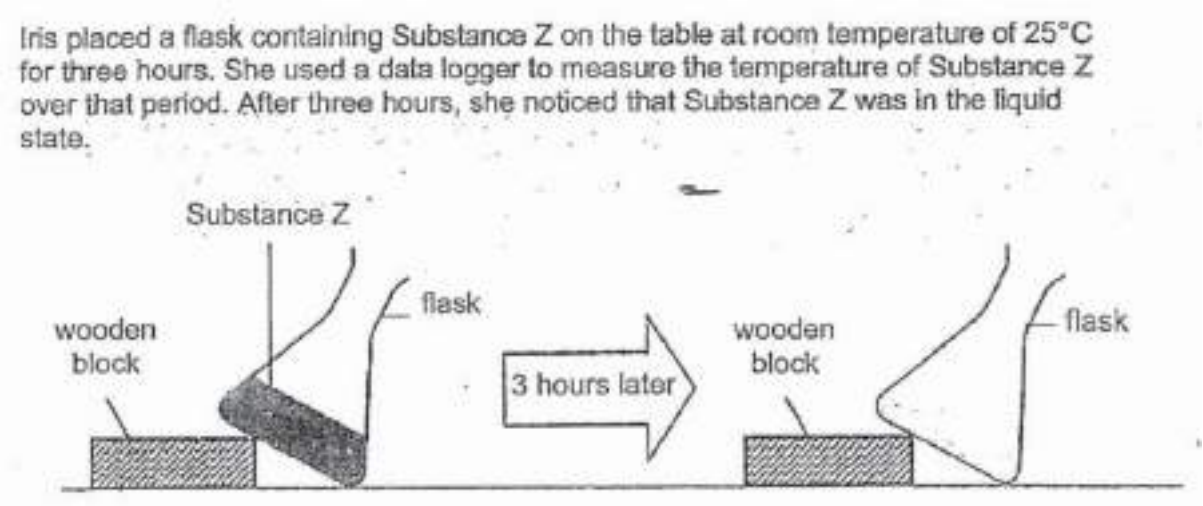
## Question 22 of 35

Primary 6 Science (Term 1) 0 pts




In the diagram above, use a ruler to draw Substance Z in liquid state. (1 mark)

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*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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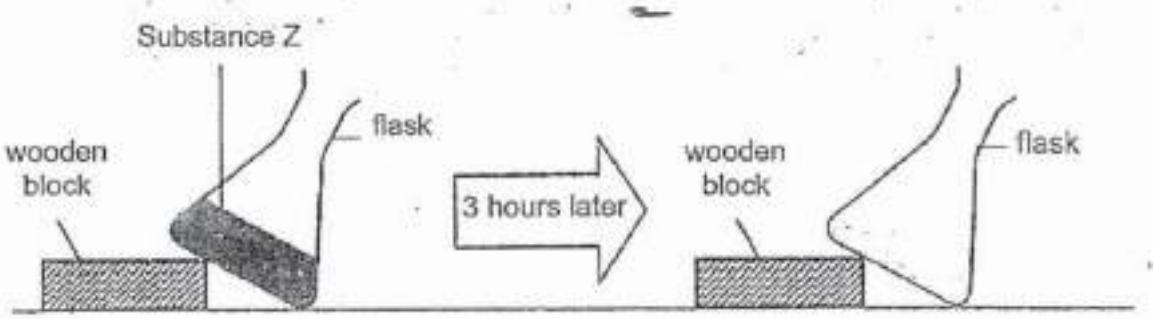
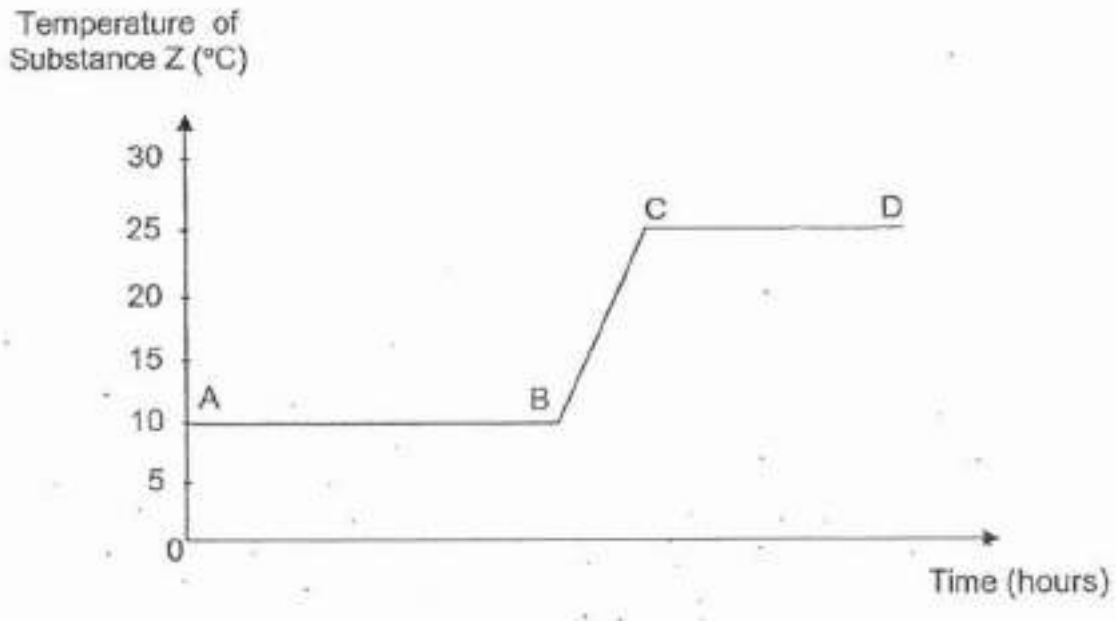
## Question 23 of 35

Primary 6 Science (Term 1) 1 pt

Iris placed a flask containing Substance Z on the table at room temperature of 25°C for three hours. She used a data logger to measure the temperature of Substance Z over that period. After three hours, she noticed that Substance Z was in the liquid state.




Using the data recorded by her data logger, Iris plotted a graph as shown.

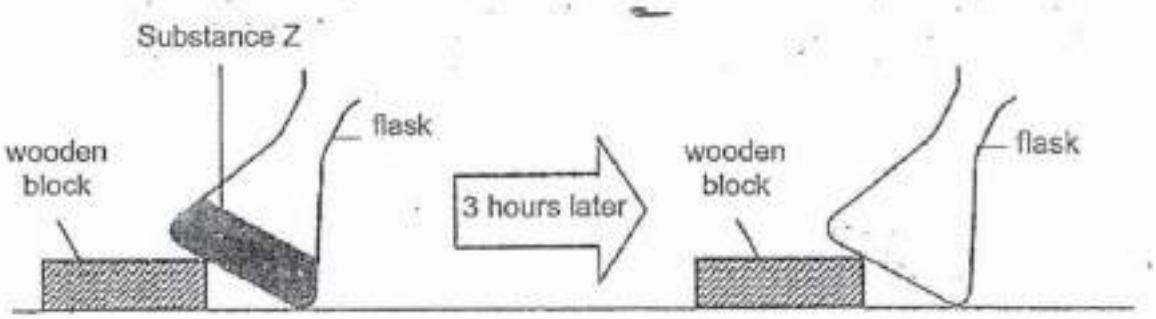



Based on the graph, what is the melting point of Substance Z? (1 mark)

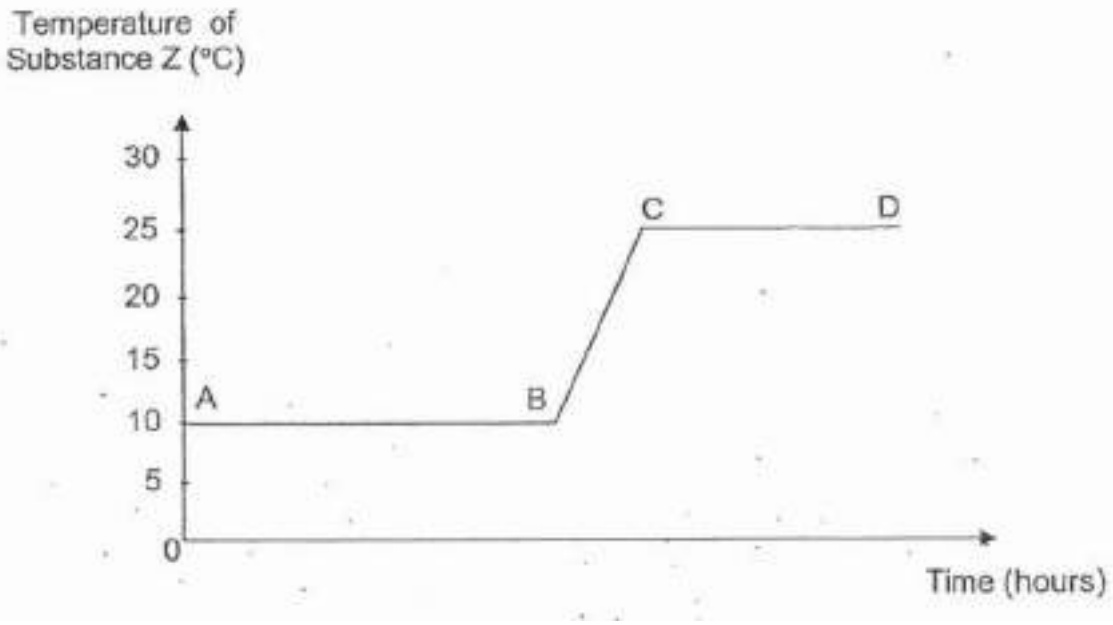
## Question 24 of 35

Primary 6 Science (Term 1) 1 pt

Iris placed a flask containing Substance Z on the table at room temperature of 25°C for three hours. She used a data logger to measure the temperature of Substance Z over that period. After three hours, she noticed that Substance Z was in the liquid state.




Using the data recorded by her data logger, Iris plotted a graph as shown.

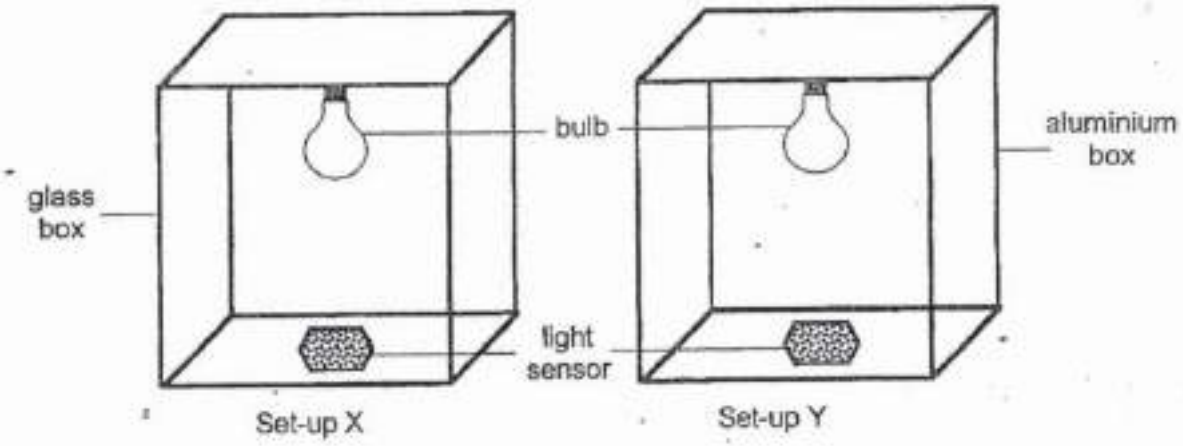



At which point in the graph did Substance Z reach room temperature? (1 mark)

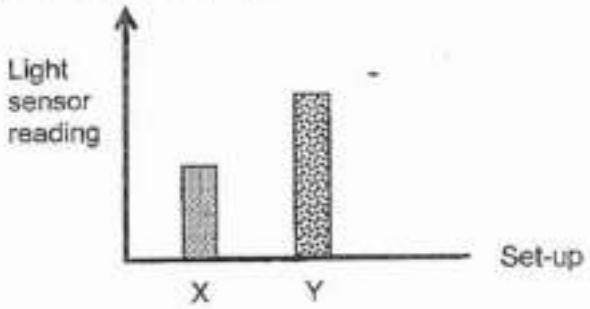
## Question 25 of 35

Primary 6 Science (Term 1) 0 pts

Jimmy used boxes of identical size but made of different materials to conduct an experiment in a dark room. In each box, he used identical bulbs and placed light sensors to record the amount of light detected.




He recorded the results in the graph.




State a property of light. (1 mark)

*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

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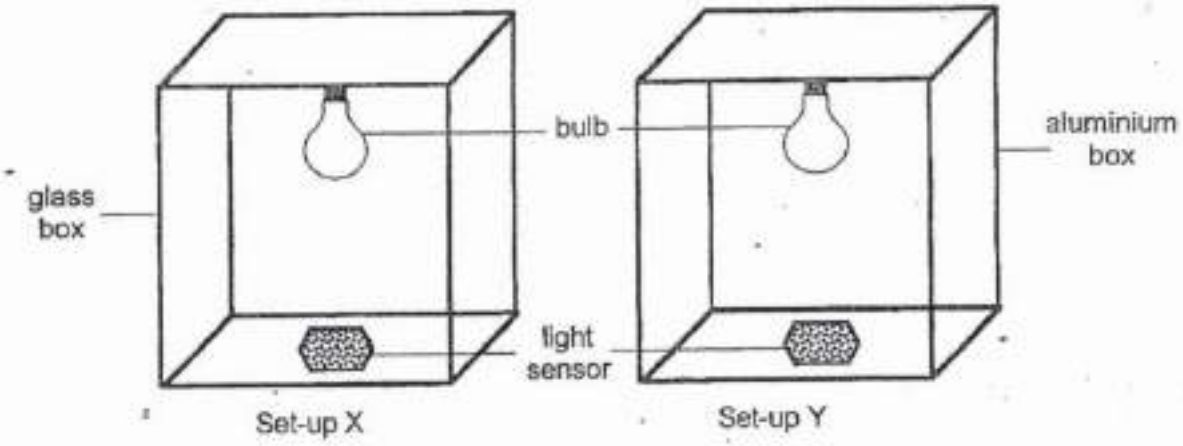
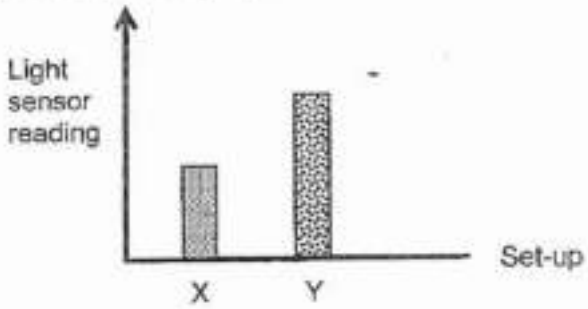
## Question 26 of 35

Primary 6 Science (Term 1) 0 pts

Jimmy used boxes of identical size but made of different materials to conduct an experiment in a dark room. In each box, he used identical bulbs and placed light sensors to record the amount of light detected.




He recorded the results in the graph.




Explain why there is a difference in the amount of light detected in each set-up. (2 marks)

Set-up X: _____

Set-up Y: _____

*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

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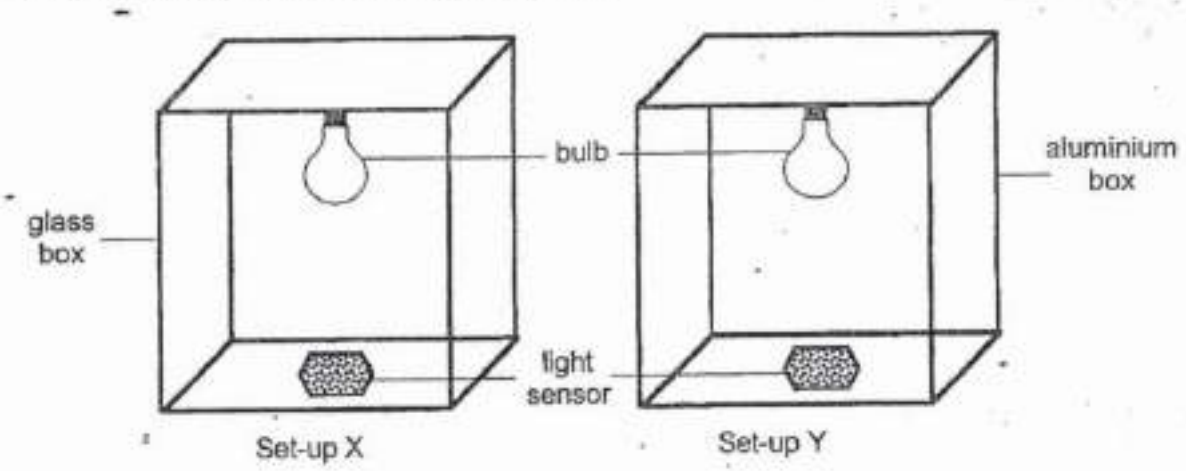
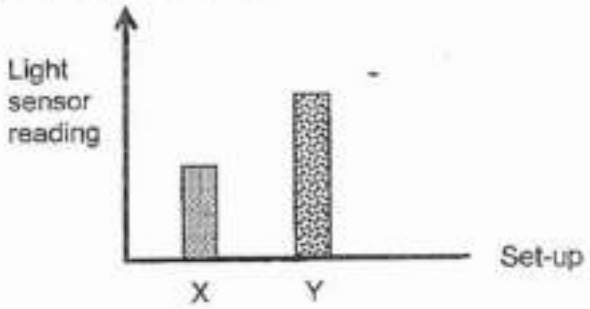
## Question 27 of 35

Primary 6 Science (Term 1) 0 pts

Jimmy used boxes of identical size but made of different materials to conduct an experiment in a dark room. In each box, he used identical bulbs and placed light sensors to record the amount of light detected.




He recorded the results in the graph.




Why did Jimmy use identical sized boxes for the experiment? (1 mark)

*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

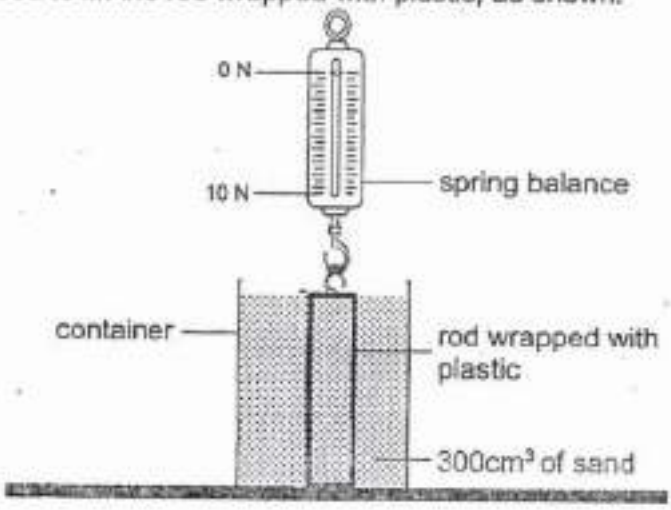
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 28 of 35

Primary 6 Science (Term 1) 0 pts

Kenny set up an experiment to measure the amount of force needed to lift two 100g rods out of an empty container, one at a time. One rod is wrapped with plastic and the other rod with sandpaper.

He then added 300cm³ of sand into the empty container. He measured the amount of force needed to lift the rod wrapped with plastic, as shown.




State the forces that caused the spring to stretch when he lifted the rod out of the container with sand. (1 mark)

*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

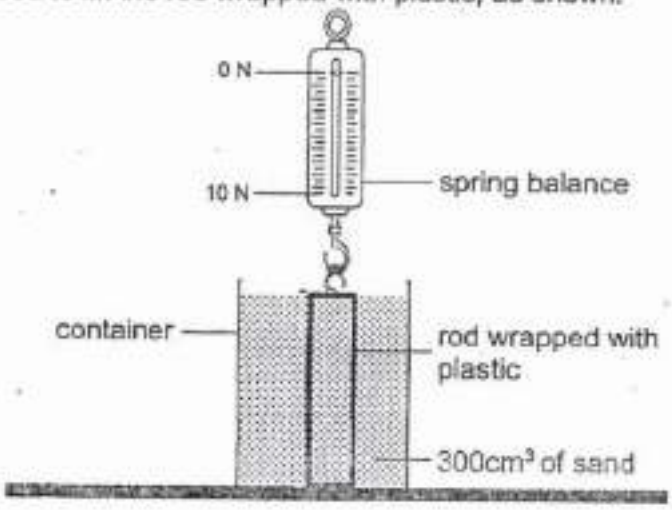
*Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.*

## Question 29 of 35

Primary 6 Science (Term 1) 1 pt

Kenny set up an experiment to measure the amount of force needed to lift two 100g rods out of an empty container, one at a time. One rod is wrapped with plastic and the other rod with sandpaper.

He then added 300cm³ of sand into the empty container. He measured the amount of force needed to lift the rod wrapped with plastic, as shown.




Kenny had recorded his results in the table. Suggest the amount of force needed to lift the rod wrapped with sandpaper out of the container of sand. Write your answer in the table. [1]

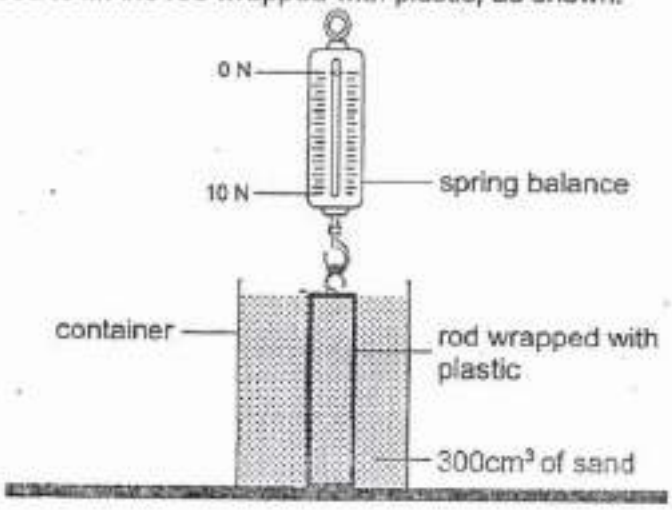
| Rod | Force needed (N) | |
|---|---|---|
| | Without sand | With sand |
| wrapped with plastic | 1 | 3 |
| wrapped with sandpaper | 1 | |

## Question 30 of 35

Primary 6 Science (Term 1) 0 pts

Kenny set up an experiment to measure the amount of force needed to lift two 100g rods out of an empty container, one at a time. One rod is wrapped with plastic and the other rod with sandpaper.

He then added 300cm³ of sand into the empty container. He measured the amount of force needed to lift the rod wrapped with plastic, as shown.




Explain your answer in the previous question. (1 mark)

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## Question 31 of 35

Primary 6 Science (Term 1) 0 pts

Plants get their energy from the Sun to make food through the process of photosynthesis.

List the factors that are required for photosynthesis in green plants. (1 mark)

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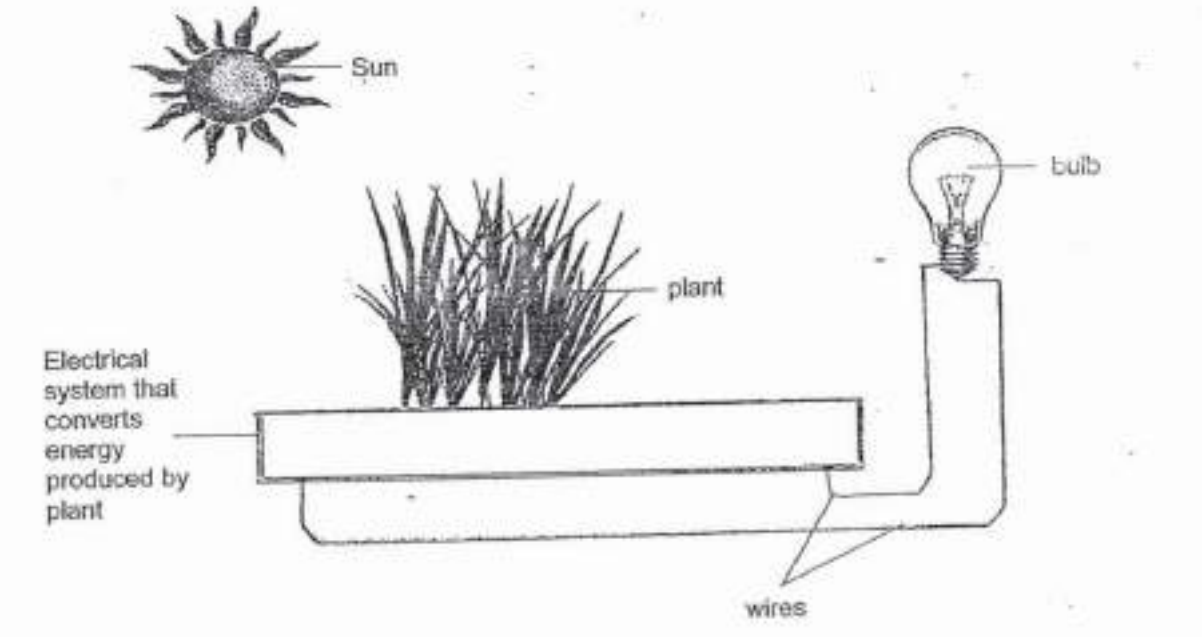
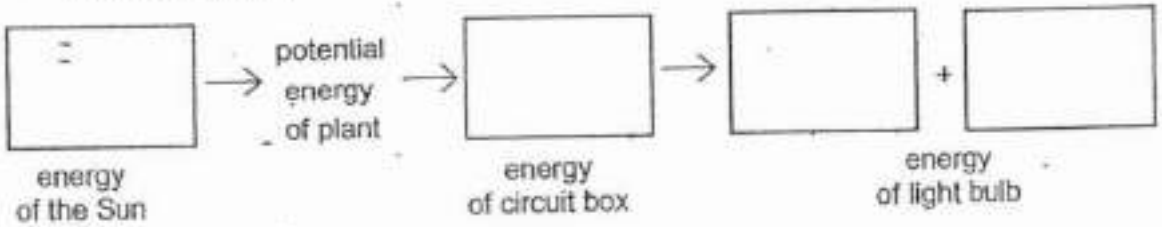
## Question 32 of 35

Primary 6 Science (Term 1) 0 pts

Scientists have found that plants produce electrical energy when they carry out photosynthesis which is used to light up a bulb as shown in the set-up.




Complete the boxes below to show the energy conversion that takes place in the above set-up. [1]

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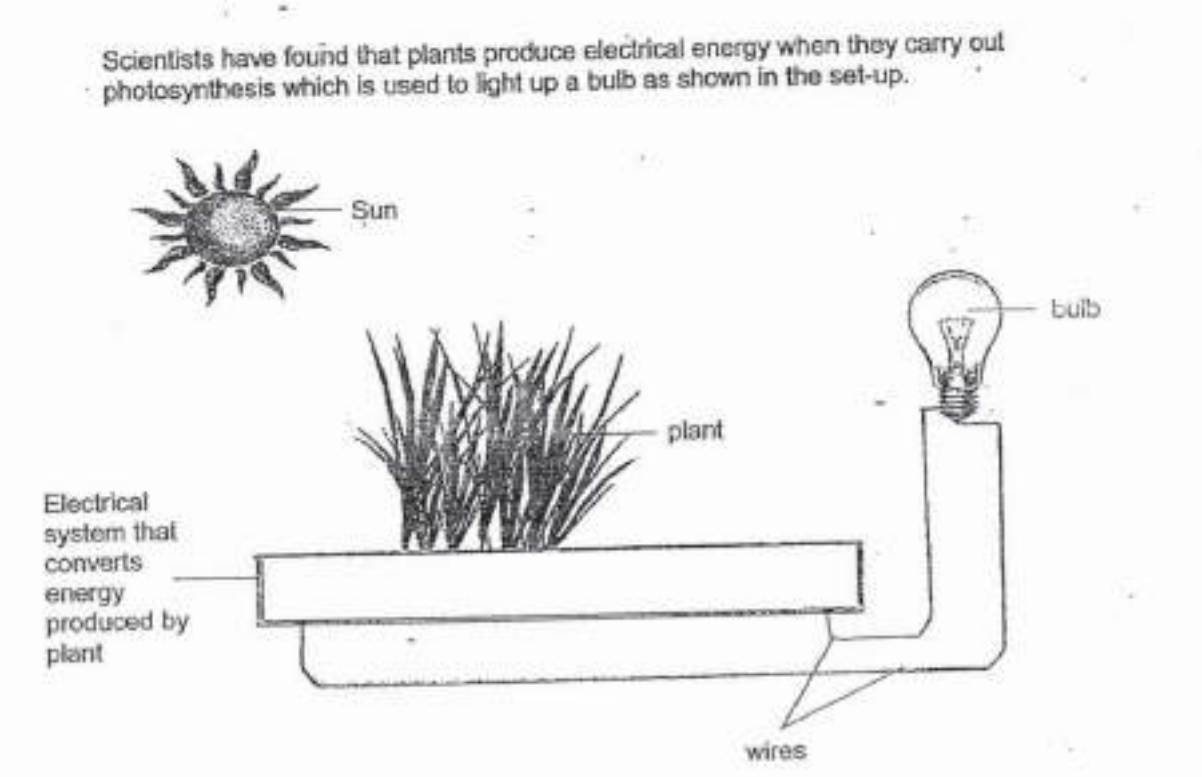
**Question 33 of 35** Primary 6 Science (Term 1) 0 pts




Explain how this form of obtaining energy is an advantage as compared to the burning of fossil fuels for energy. (1 mark)

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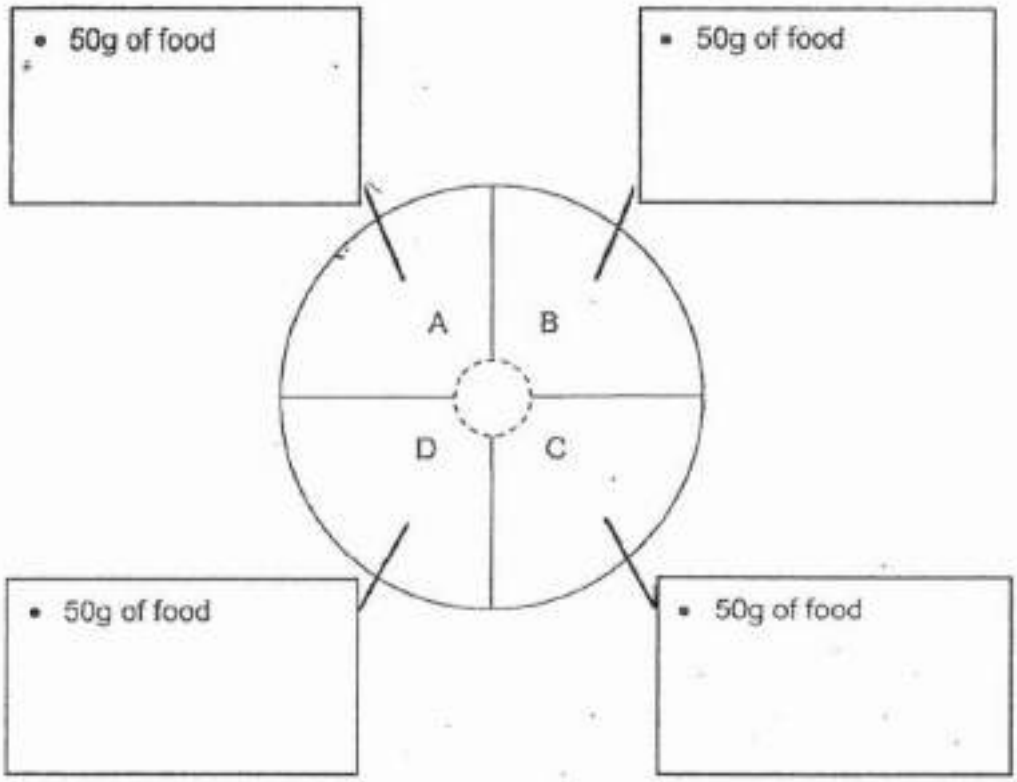
## Question 34 of 35

Primary 6 Science (Term 1) 0 pts

Everett wanted to investigate the preferred conditions of the habitat of organism H.
He has the following resources:

- a covered tray with
  - air holes
  - four equal parts, A, B, C and D
  - a hole in the middle which is the only way to each part
- 2 torchlights
- 600g of dry soil
- 600g of damp soil
- 100 organism H

Design an experiment to investigate Everett's aim by filling in the necessary boxes using all the available resources. [2]




*This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.*

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## Question 35 of 35

Primary 6 Science (Term 1) 0 pts

Everett wanted to investigate the preferred conditions of the habitat of organism H.
He has the following resources:

- a covered tray with
  - air holes
  - four equal parts, A, B, C and D
  - a hole in the middle which is the only way to each part
- 2 torchlights
- 600g of dry soil
- 600g of damp soil
- 100 organism H

Describe what he must observe after a few days before he can conclude the preferred habitat for organism H. (1 mark)

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