St Hilda's Primary School
Primary 4
Science
Term 2 Weighted Assessment, 2025

Section A	24
Section B	11
Total Score	35

Name: _____ ( )

Class: P4 / _____
Duration: 45 minutes
Total no. of pages: 18

Date: _____

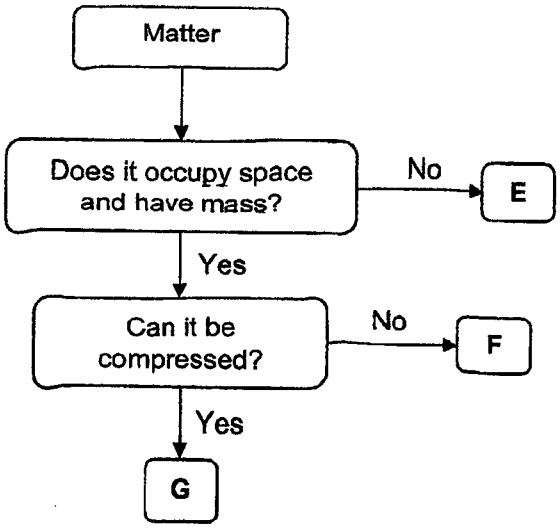
Section A: 24 Marks

Parent's Signature: _____

For questions 1 to 12, write your answer (1, 2, 3 or 4) in the bracket provided.
[2 marks each]

---

1 Study the flowchart below.



Which row correctly identifies E, F and G?

	E	F	G
(1)	oxygen	music	pencil
(2)	music	oxygen	pencil
(3)	oxygen	pencil	music
(4)	music	pencil	oxygen

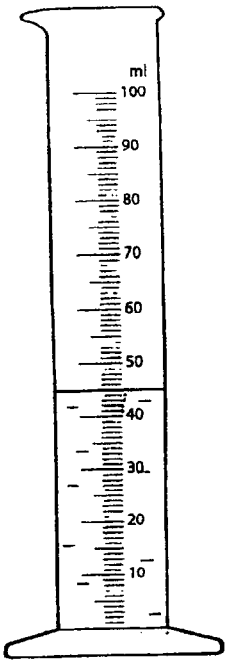
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SCORE	2

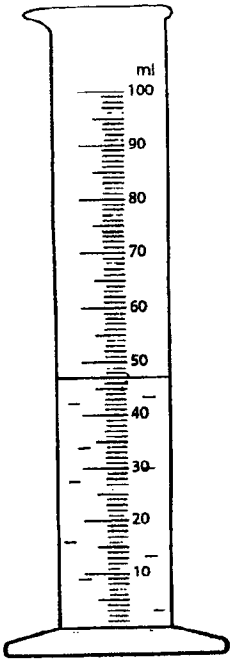
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2 Mary poured 42ml of water into a measuring cylinder.
Which of the following shows the correct volume of water?

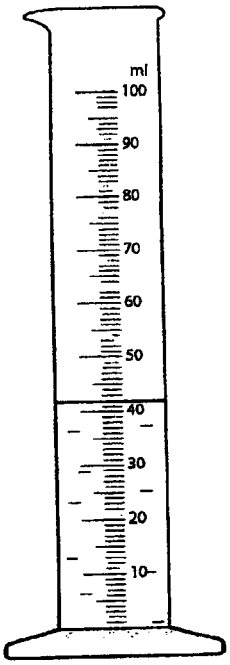
(1)



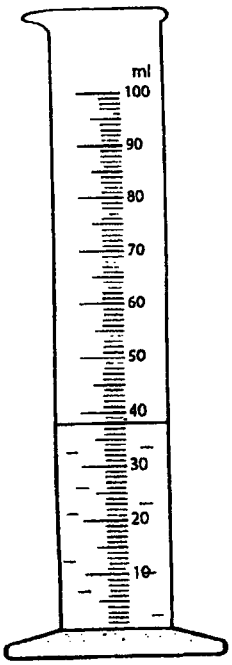
(2)



(3)



(4)



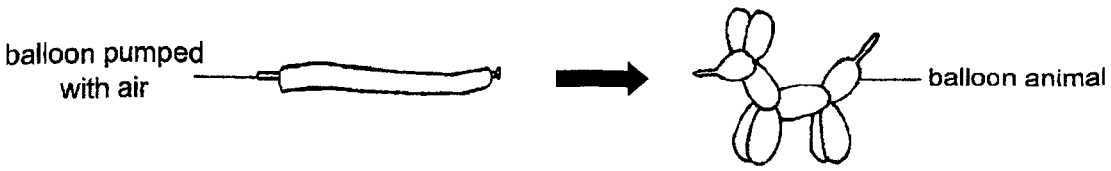
( )

2

SCORE	2

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3 Julie pumped some air into a balloon. She then twisted the balloon to make a balloon animal.



Based on the above observations, which of the following statements about the property of air is/are correct?

A Air has mass.
B Air takes up space.
C Air does not have a definite shape.

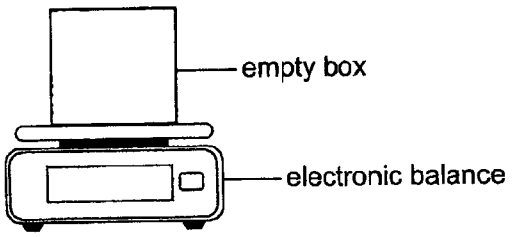
(1) A only
(2) C only
(3) A and B only
(4) B and C only

( )

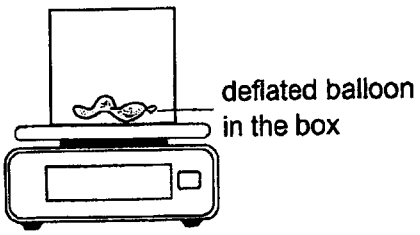
SCORE / 2

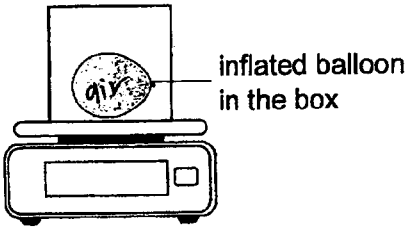
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4 Ali measured the mass of an empty box on an electronic balance as shown. The empty box weighed 10g.



Ali then placed a deflated balloon into the box and measured the mass of the box containing the deflated balloon. Next, he inflated the balloon and placed it back into the box. He measured the mass of the box containing the inflated balloon as shown.





Which of the following shows the correct mass of the box containing the deflated balloon and the box containing the inflated balloon?

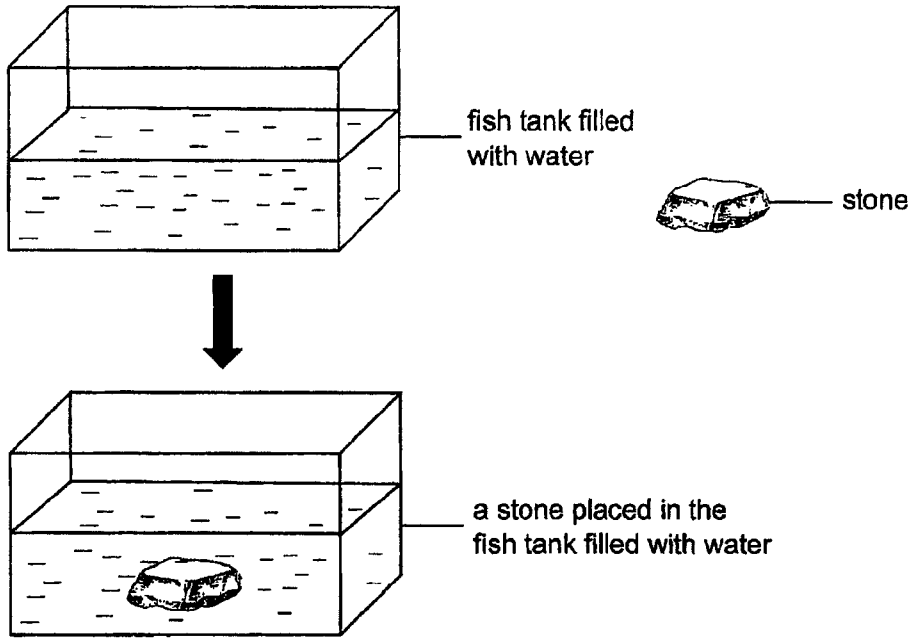
	Mass of box containing deflated balloon (g)	Mass of box containing inflated balloon (g)
(1)	12	13
(2)	13	12
(3)	10	10
(4)	9	10

( )

SCORE	/ 2

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5 A stone was placed into a fish tank filled with water as shown.



Which of the following shows the correct statement about the water in the fish tank after the stone was placed in it?

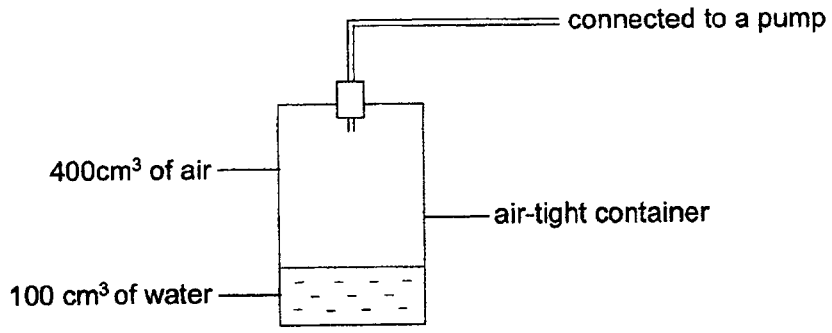
(1) The mass of the water in the fish tank changed.
(2) The water in the fish tank can be compressed.
(3) The water level in the fish tank changed.
(4) The water level in the fish tank remains unchanged.

( )

SCORE	/2

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6 The diagram below shows an air-tight container which has a volume of 500 cm^3. The airtight container has 100cm^3 of water and 400cm^3 of air in it as shown below.



Using the pump, another 100 cm^3 of water and 100 cm^3 of air are added into the container. What is the final volume of air in the container?

(1) 200cm^3
(2) 300cm^3
(3) 400cm^3
(4) 500cm^3

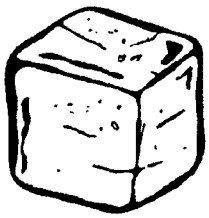
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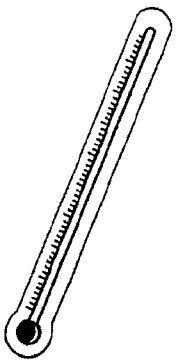
7 Which of the following is a source of heat?

(1)



ice cube

(2)



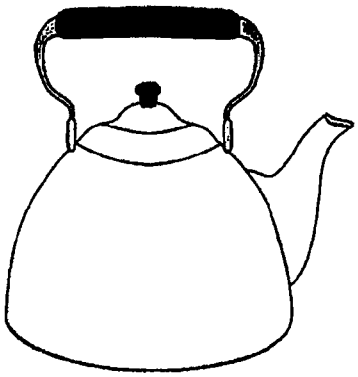
thermometer

(3)



fire

(4)



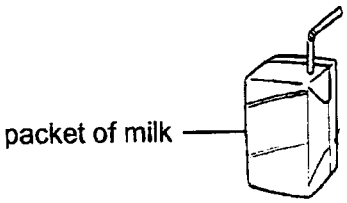
empty kettle

( )

SCORE	2

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8 Carey took out a packet of cold milk from the fridge and placed it on the kitchen table. After 30 minutes, she touched the packet of milk and realised that it was not cold anymore.



Which of the following statements best explains why the packet of milk was not cold after 30 minutes?

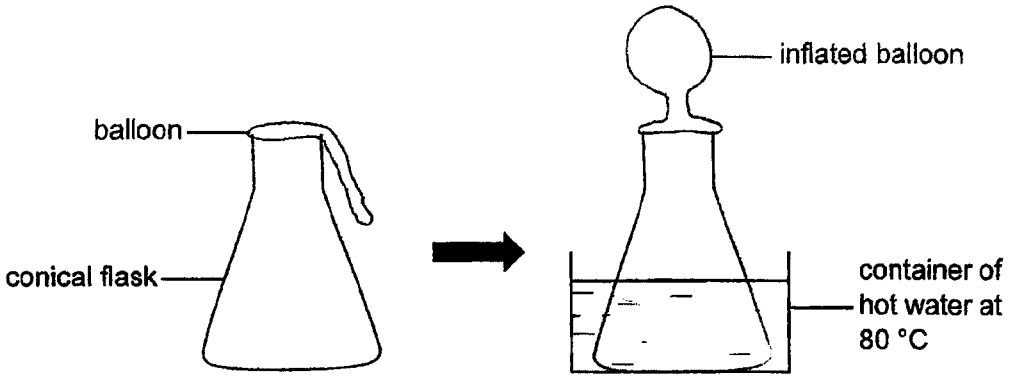
(1) The packet of milk lost heat to the surrounding air.
(2) The packet of milk lost coldness to the surrounding air.
(3) The packet of milk gained heat from the surrounding air.
(4) The packet of milk gained coldness from the surrounding air.

( )

SCORE / 2

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9 A balloon was placed over the opening of a conical flask as shown below. The conical flask with balloon was placed in a container of hot water at 80 °C. One minute later, the balloon was observed to be inflated as shown.



Which of the following best explains why the balloon was inflated?

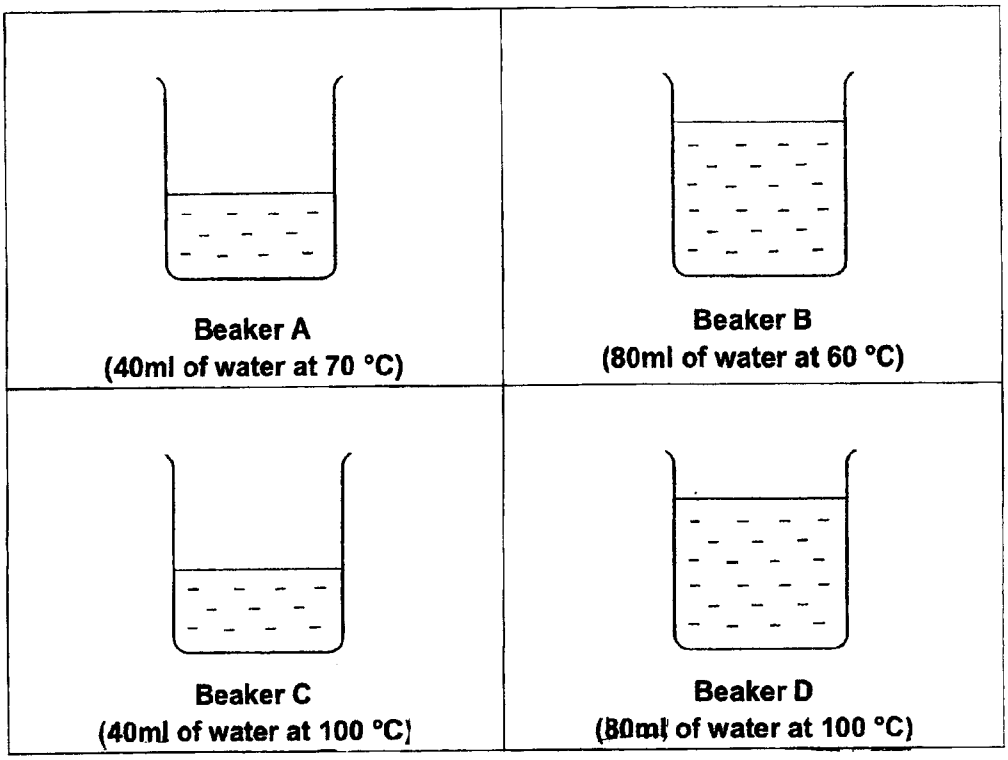
(1) The water in the container lost heat to the surroundings.
(2) The balloon gained heat from the hot water and expanded.
(3) The conical flask gained heat from the hot water and expanded.
(4) The air in the conical flask gained heat from the hot water and expanded.

( )

SCORE / 2

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10 Fiona wanted to conduct an experiment to find out if the volume of water affects the rate of heat loss in the water.



Which two beakers should Fiona use to conduct her experiment?

(1) A and C
(2) B and C
(3) B and D
(4) C and D

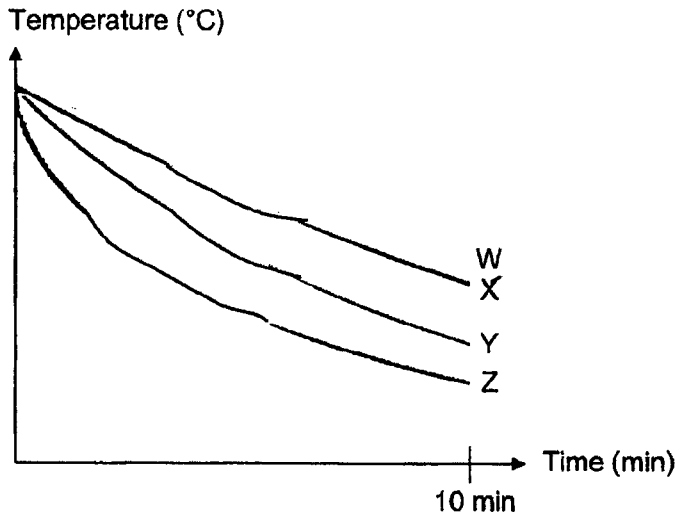
(

SCORE 2

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11 Atiqah conducted an experiment to find out which material is the best to make a container that can keep cold drinks cold for the longest period of time.

She poured equal volume of hot water at 80 °C into four similar containers W, X, Y and Z, made of different materials and left them in a room. She measured the temperature of water in each container for 10 minutes and recorded them in the graph below.



Which material is the most suitable to make a container that can keep cold drinks cold for the longest period of time?

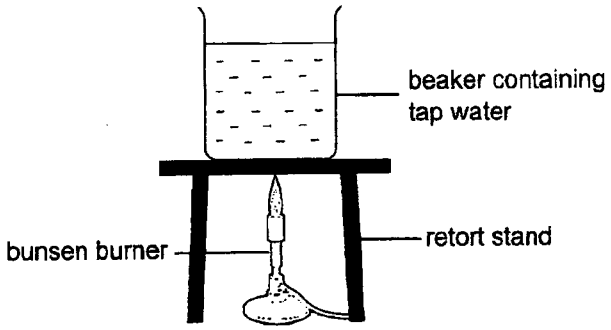
(1) W
(2) X
(3) Y
(4) Z

( )

SCORE	2

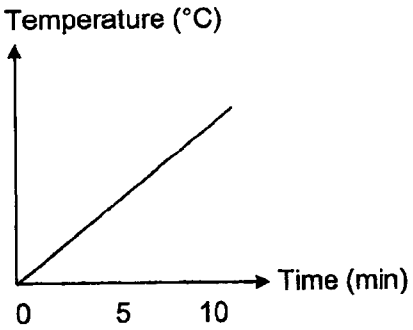
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12 Arnold heated a beaker containing some tap water using the set-up shown.

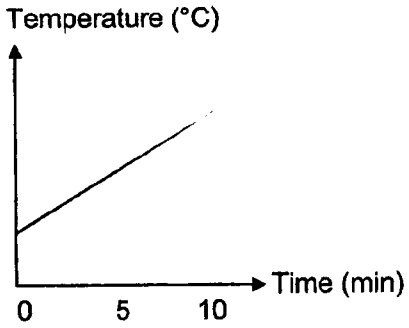


He measured the temperature of the water using a thermometer every minute for 10 minutes. Which of the following graphs best represents the change in temperature of the water over time?

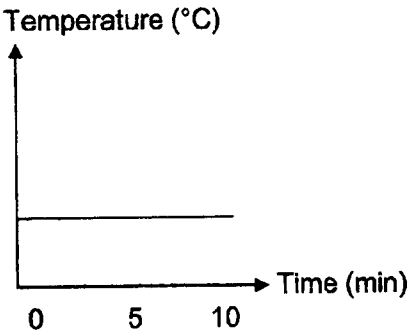
(1)



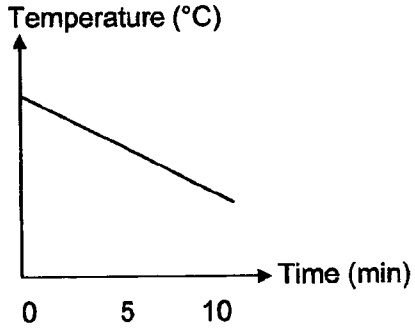
(2)



(3)



(4)



( )

SCORE 2

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Section B: 11 marks

For questions 13 to 15, write your answers in this booklet.

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

13 Study the table below.

Property	Object S	Object T
Occupies space	✓	✓
Has a definite shape	✓	X
Has a definite volume	✓	✓
Can be compressed	X	X

(a)(i) Circle the state of matter of object S. [1]

(Solid / Liquid / Gas)

(a)(ii) Circle the state of matter of object T. [1]

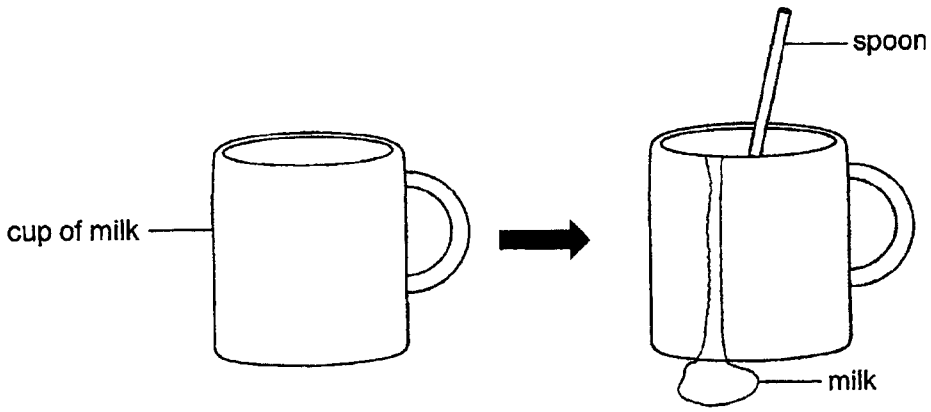
(Solid / Liquid / Gas)

(Continues on the next page)

SCORE ___/2

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Khalid filled a cup fully with milk. When he placed a spoon into the cup filled with milk, some milk spilled out of the cup.



(b) Explain why some milk spilled out of the cup after Khalid placed the spoon into the cup. [1]

_____

_____

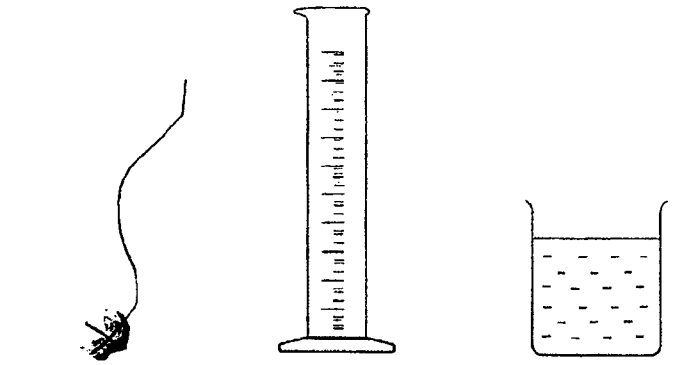
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SCORE	/ 1

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In the next experiment, Khalid wants to measure the volume of the rock tied to a string. He had some measuring apparatus as shown below.



rock attached to a string | measuring cylinder | 200ml of water

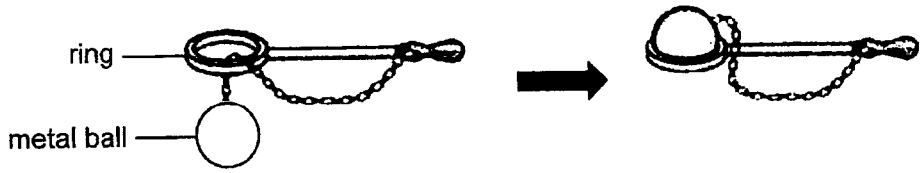
(c) Write the numbers 2, 3, and 4 in the boxes below according to the order that Khalid should take to measure the volume of the rock. Step 1 has been filled in for you. [1]

Steps	Number
Measure the volume of the water containing the rock in the measuring cylinder.	
Place the rock fully into the measuring cylinder containing 200ml of water.	
Subtract 200ml from the measured volume of water containing the rock.	
Pour 200ml of water into the measuring cylinder.	**1**

SCORE	/ 1

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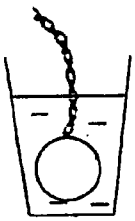
14 Brandon passed a metal ball through a ring as shown below. He then heated the metal ball over a flame and tried to pass the metal ball through the ring again. He found that the metal ball was unable to pass through the ring.



(before heating) **(after heating)**

(a) Explain why the metal ball was unable to pass through the ring after being heated over a flame. [1]

Brandon then placed the heated metal ball in a cup of water at room temperature as shown below.



(b) Fill in the boxes below to show the flow of heat in the set-up above using the words, **cup**, **water** and **metal ball**. [1]

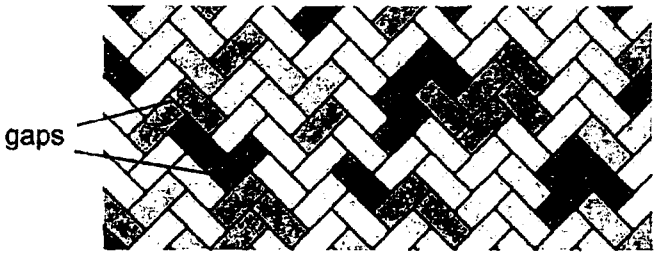
Heat flows from ☐ **to** ☐ **to** ☐

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SCORE ☐/2

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(c) Brandon observed the tiles of his garden and noticed that there were gaps between the tiles. His mother explained that the gaps help to prevent cracking of the tiles on a hot day.

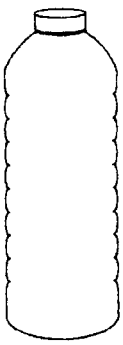


Explain how the gaps help to prevent cracking of the tiles on a hot day. [2]

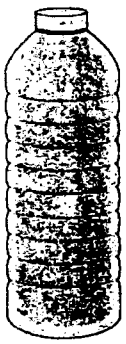
SCORE	/ 2

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15 Sarah conducted an experiment in a room at a temperature of 25 °C. Two similar bottles T and U, made of different materials, were both fully filled with water at 80 °C.



bottle T



bottle U

She measured the temperature of the water every 5 minutes in both bottles for 3ᵕ minutes and recorded the time taken for the temperature of water in both bottles to reach the same temperature.

Bottle	Time taken for water in both bottles to reach the same temperature (h)
T	3
U	2

(a) State the temperature that the water in both the bottles will reach eventually. [1]

_____

(b) Which bottle, T or U, is more suitable to keep hot drinks hot for a longer time? [2]
Explain your answer.

_____

_____

_____

END OF PAPER

SCORE	/ 3

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ST. HILDA'S PRIMARY SCHOOL
PRIMARY 4
TERM 2 WEIGHTED ASSESSMENT, 2025
SCIENCE
Simplified Answer Key

Section A

1.	4	6.	2	11.	1
2.	3	7.	3	12.	2
3.	4	8.	3		
4.	1	9.	4		
5.	3	10.	4		

Section B

This answer key only provides a reference and the key concepts have been bolded / underlined. Variations of students' answers have been accepted if they have shown conceptual understanding.

<table>
<tr><td>13 (a)(i)</td><td>solid</td></tr>
<tr><td>(a)(ii)</td><td>liquid</td></tr>
<tr><td>13(b)</td><td>The spoon <u>occupies space in the cup</u> and <u>displaced</u> the milk.</td></tr>
<tr><td>13 (c)</td><td>
<table>
<tr><th>Steps</th><th>Number</th></tr>
<tr><td>Measure the volume of the water containing the rock in the measuring cylinder.</td><td>3</td></tr>
<tr><td>Place the rock into the measuring cylinder containing 200ml of water.</td><td>2</td></tr>
<tr><td>Subtract 200ml from the measured volume of water containing the rock.</td><td>4</td></tr>
<tr><td>Pour 200ml of water into the measuring cylinder.</td><td>1</td></tr>
</table>
</td></tr>
<tr><td>14(a)</td><td>The metal ball <u>gained heat from the flame/fire</u> and <u>expanded</u>.</td></tr>
<tr><td>14(b)</td><td>metal ball → water → cup</td></tr>
</table>

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14 (c)	The gaps provide space for the tiles to gain heat from the Sun and expand.
15(a)	25 °C
15(b)	Bottle T. The time taken for the water in the bottle to reach 25°C is longer. This shows that bottle T is a poorer conductor of heat. Hot drinks in bottle T will lose heat slower to the surrounding.

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