Henry Park Primary School
Primary Five Science
Weighted Assessment 1 2021

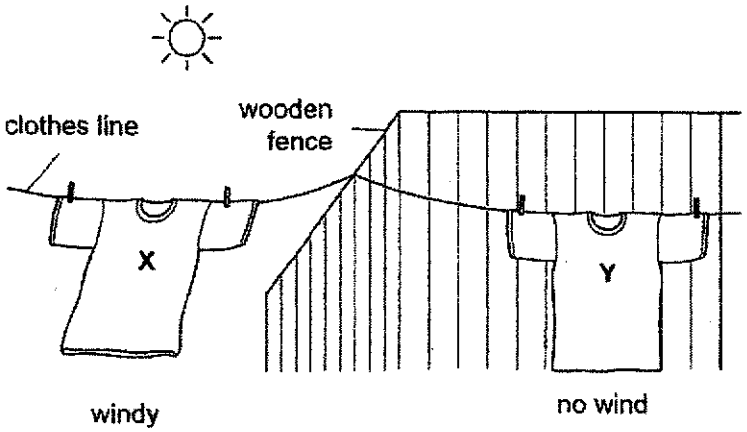
Name: _____ ( ) **Marks:** _____ / 15

Class: **Primary 5** _____ **Parent's Signature:** _____

For questions 1 to 3, write your answers in the space provided. **Duration:** 30 minutes

Question 1

Aminah hung out two identical wet T-shirts, X and Y, to dry at the same time in her garden. She wanted to find out which T-shirt would become completely dry first.



(a) State the dependent and independent variables in the above experiment. [2]

(i) dependent variable: _____

(ii) independent variable: _____

(b) Aminah's teacher told her to repeat the experiment a few times. [1]
Explain why this is important.

_____

_____

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Question 1 continued

The table shows the results of Aminah's experiment.

T-shirt	Time taken to become dry completely (min)
X	30
Y	54

(c) Which T-shirt, X or Y, took a longer time to become dry completely? [1]

_____

(d) Aminah's teacher told her that she needs to carry out the experiment in a room using a fan to obtain a more accurate result.

Explain why doing the experiment outdoors may **not** produce an accurate result. [1]

_____

_____

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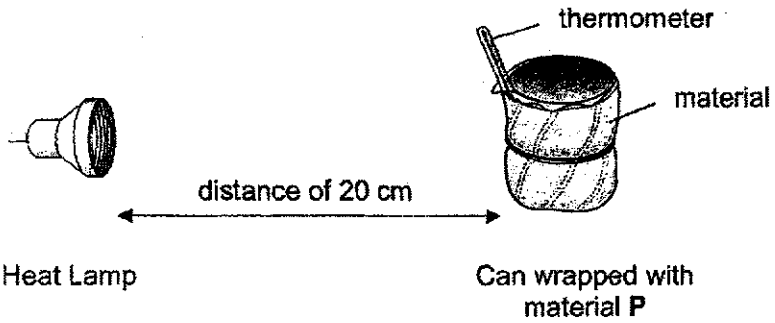
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Question 2

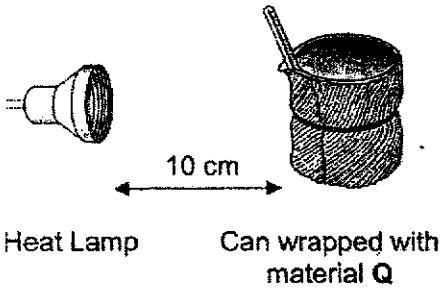
Pei Ling wanted to find out which material causes water to gain the least amount of heat.

She used 3 different materials, P, Q and R, for her experiment. She wrapped each can with a different material. She placed the cans in the same room as shown below. She used similar heat lamps and similar cans for the experiment.

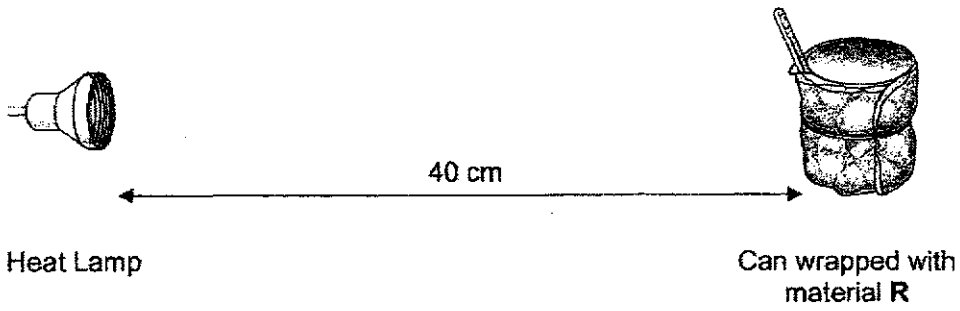
Set-up A



Set-up B



Set-up C



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Question 2 continued

She recorded the temperature of the water at the start and 15 minutes later as shown in the table below.

Time (min)	Temperature of water in can wrapped in (°C)		
	Material P	Material Q	Material R
0	10	10	10
15	29	32	26

(a) State the temperature of the water at the start of the experiment. [1]

_____ °C

Based on the results, Pei Ling concluded that material R allows the water to gain the least amount of heat.

(b) Pei Ling's teacher told her that her conclusion may **not** be correct. [1]

Explain why.

_____

_____

Pei Ling's teacher told her that she needed to make an improvement to her experimental set-ups.

(c) State the change Pei Ling has to make. [1]

_____

_____

(d) Suggest one advantage of using a temperature sensor and data logger instead of a thermometer in this experiment. [1]

_____

(e) It is important for an experiment to be a fair test.

Explain what a fair test is.

_____

_____

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Question 3

Bacteria N cause throat infection.

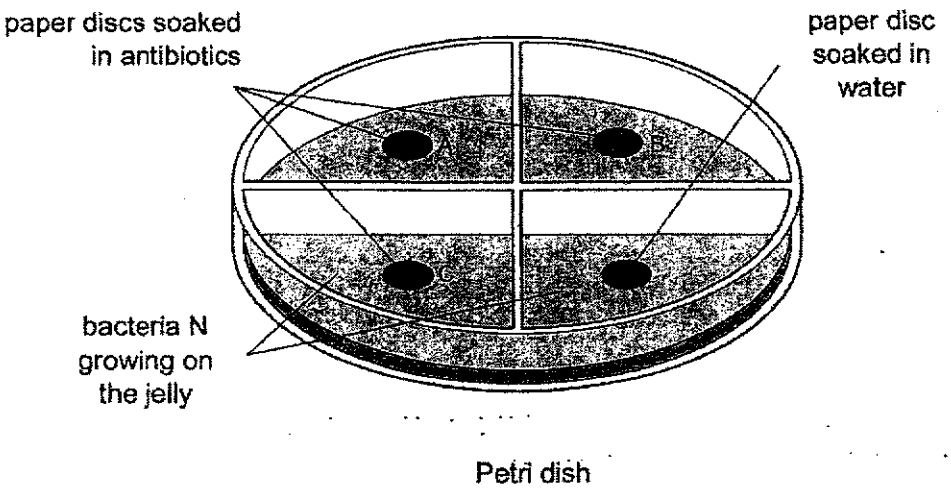
Throat infection can be treated with antibiotics. Antibiotics are medications that kill bacteria or slow down bacterial growth.

Mrs Wong investigated how effective different antibiotics (A, B and C) were at killing bacteria N.

What Mrs Wong did:

- Spread bacteria N on some jelly in a Petri dish.
- Placed three paper discs, each soaked in a different antibiotic, A, B and C, onto the jelly.
- Placed another paper disc soaked in water onto the jelly.

The diagram shows Mrs Wong's set-up at the start of the experiment.



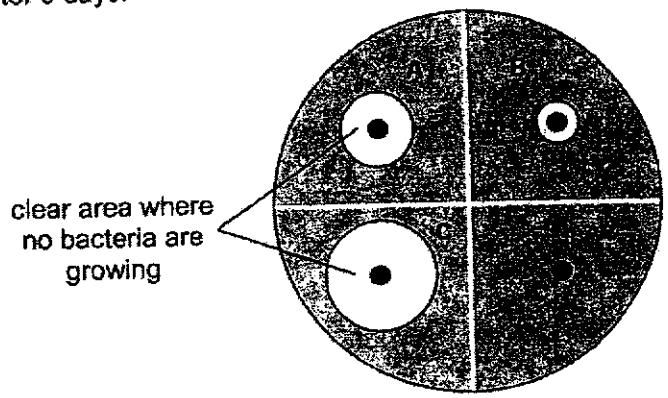
Petri dish

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Question 3 continued

Mrs Wong kept the Petri dish for 3 days and observed the results. The diagram shows the results after 3 days.



(a) Which of the following variables must be kept the same during the experiment? [2]
Tick (✓) the correct variables.

(i) size of clear area around paper disc ☐

(ii) type of antibiotic used ☐

(iii) amount of each antibiotic used ☐

(iv) thickness of paper discs used ☐

(b) Suggest why there is no bacterial growth around paper discs A, B and C. [1]

_____

(c) Based on the results, which antibiotic, A, B or C, is **most** effective in treating throat infection? [1]

Antibiotic _____

(d) Explain your answer in (c). [1]

_____

_____

_____

End of Weighted Assessment 1

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SCHOOL : HENRY PARK PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : 2021 WA1

Q1a)	(i) Time taken for T-shirt to dry completely. (ii) Presence of wind.
Q1b)	It enables her to check for consistency in the readings so that the results are reliable.
Q1c)	Shirt Y
Q1d)	The speed of wind may change.
Q2a)	10^0C
Q2b)	As there can only be one changed variable and she had placed the cans at different lengths.
Q2c)	Distance between the heat lamp and each container must be the same.
Q2d)	Temperature sensor can provide accurate reading.
Q2e)	There is only one changed variable.
Q3a)	Tick iii and iv
Q3b)	As the antibiotic killed the bacteria.
Q3c)	C
Q3d)	The size of the clear area around the antibiotic C is the largest so it has killed the largest amount of bacteria N.

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