

**Henry Park Primary School
Primary Five Science
Weighted Assessment 1 2021**

Name: _____ ()

Marks: _____ / 15

Class: Primary 5 _____

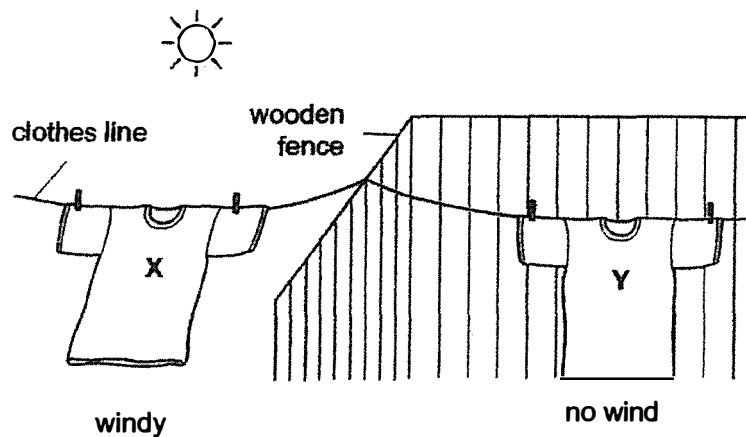
Parent's Signature: _____

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.

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.

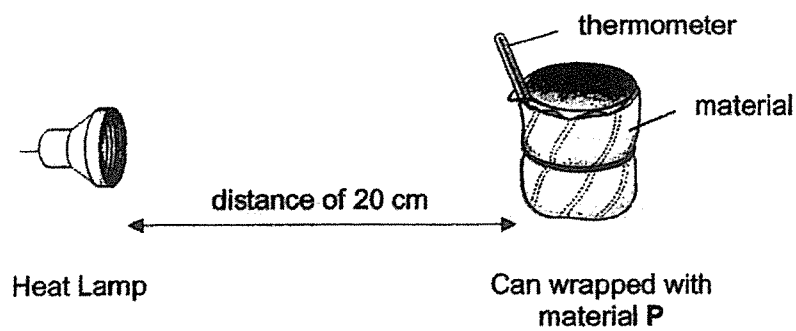
Explain why doing the experiment outdoors may not produce an accurate result. [1]

Question 2

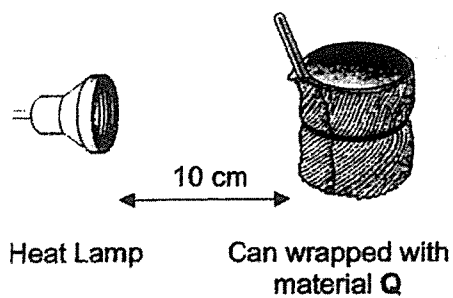
Pei Ling wanted to find out which material causes water to gain the least amount of heat.

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.

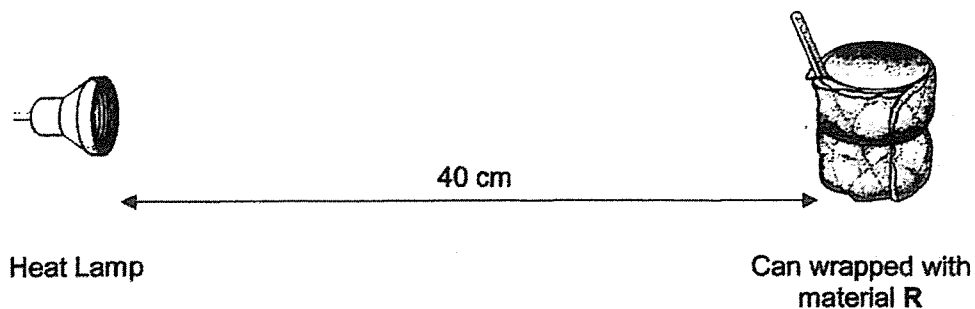
Set-up A



Set-up B



Set-up C



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.

[1]

Explain what a fair test is.

Question 3

Bacteria N cause throat infection.

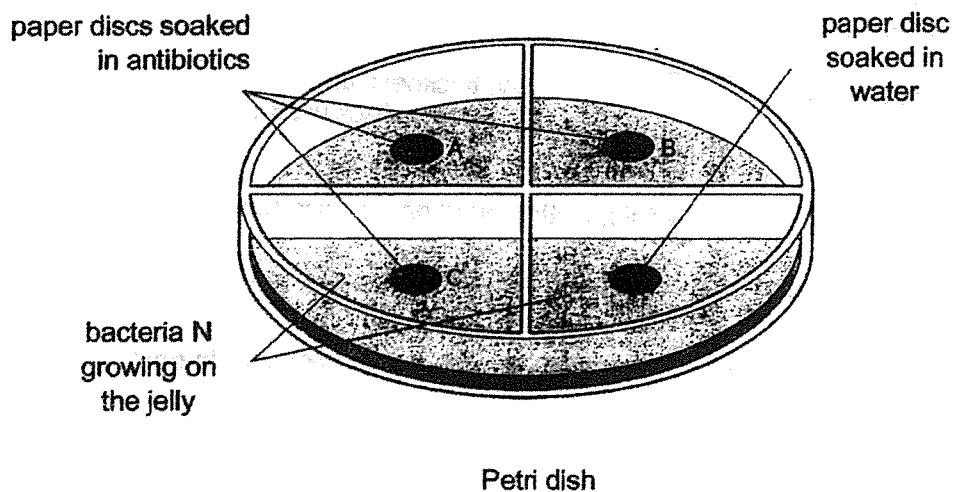
Throat infection can be treated with antibiotics. Antibiotics are medications that kill bacteria or slow down bacterial growth.

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

What Mrs Wong did:

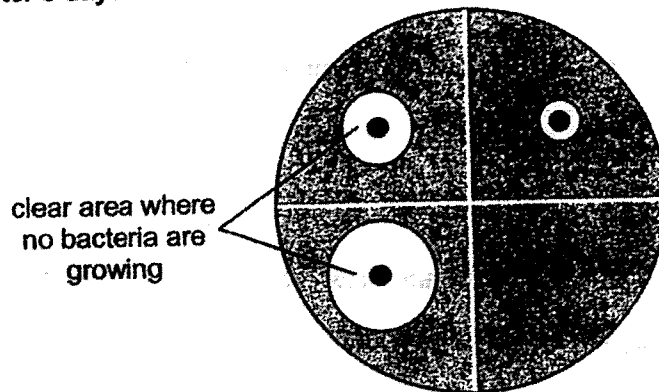
- Spread bacteria N on some jelly in a Petri dish.
- Placed three paper discs, each soaked in a different antibiotic, A, B and C, onto the jelly.
- Placed another paper disc soaked in water onto the jelly.

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



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

ANSWER KEY

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

Q1	<p>(a) (i) dependent variable: the time taken for the clothes to dry completely (ii) independent variable: location of the experiment</p> <p>(b) Repeating the experiment a few times will allow Aminah to take the average result causing the experiment's result to be the most reliable</p> <p>(c) Y</p> <p>(d) Using a fan will allow Aminah to obtain a more accurate result as in the room with the fan, the fan will be the source of wind blowing directly at T-shirt X. However, doing the experiment outdoors may not be so accurate as there might be more amount of wind.</p>
Q2	<p>(a) 10</p> <p>(b) It is not a fair test as there is more than 1 changed variable in the set-up</p> <p>(c) Move the cans wrapped with material Q and R to have the same distance as P at 20cm</p> <p>(d) Using a temperature sensor and a data logger would be more accurate than using a thermometer</p> <p>(e) In a fair test, the test should only have one change variable</p>
Q3	<p>(a) iii & iv</p> <p>(b) Paper discs A,B and C has antibiotics and the antibiotics killed the bacteria faster leaving the most clear area where no bacteria is grown.</p> <p>(c) C</p> <p>(d) The size of clear area around C was the largest thus, it killed the most bacteria.</p>

!
END

**Henry Park Primary School
Primary Five Science
Weighted Assessment 2 2021**

Name: _____ ()

Marks: _____ / 15

Class: Primary 5 _____

Parent's Signature: _____

For questions 1 to 4, write your answers in the space provided.

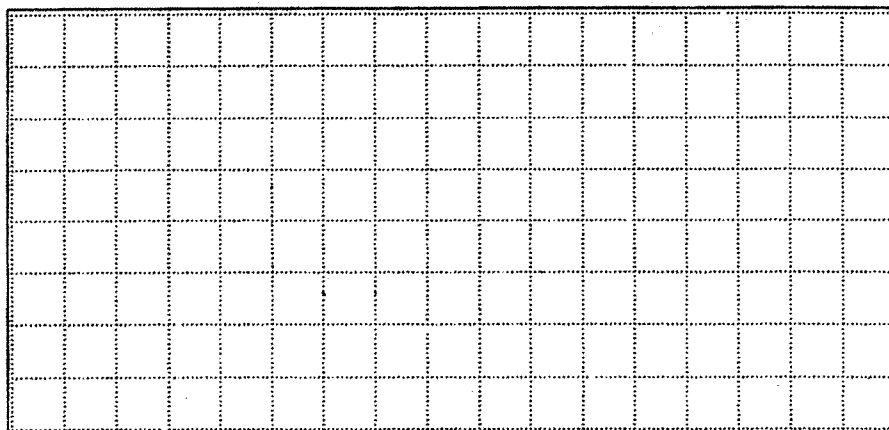
Duration: 45 minutes

Question 1

You are given specimen N in a cup. Remove specimen N from the cup.
Observe specimen N. It comes from a plant.

- (a) Open up specimen N carefully along its length. Make sure you do not break the outer covering.

In the grid below, draw half of specimen N with its seeds inside. Draw the actual size of what you see of specimen N. [2]



- (b) Observe and describe the outer covering. [1]

- (c) Based on your observation in (b), suggest a suitable function of the outer covering. [1]

Question 2

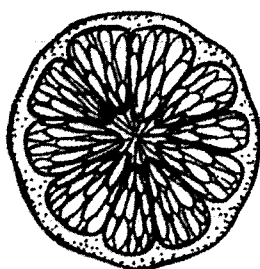
Look at fruit X and Y below. You are given part of fruit X and Y.
You are going to use The Universal Indicator to test and compare the acidity of these 2 fruits. The smaller the number (pH value), the more acidic the fruit is.

- (a) Place a strip of the Universal Indicator on each fruit and observe the change in colour on the Universal Indicator.

Match the colour with the chart provided.

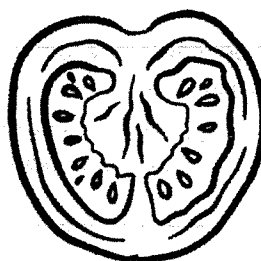
Write the number that best represents the colour that you see on the Universal Indicator (pH value of the fruits) in the boxes below.

[2]



Fruit X

pH value:



Fruit Y

pH value:

- (b) Which fruit (X or Y) is more acidic?

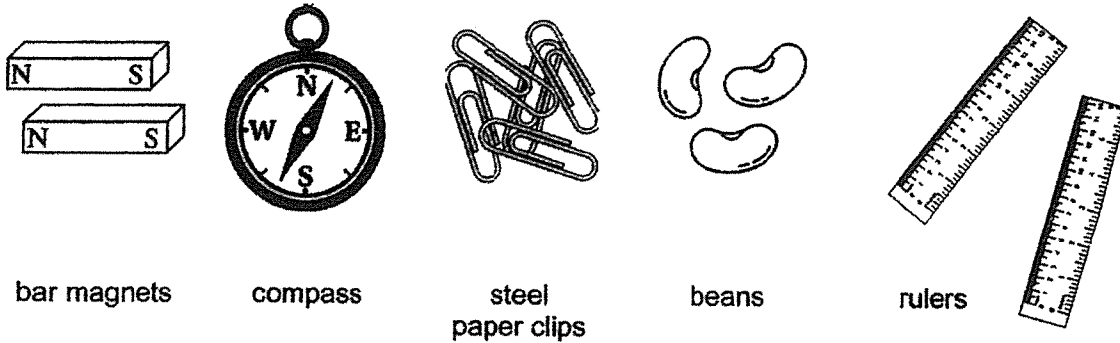
[1]

- (c) How did you arrive at your answer?

[1]

Question 3

Look at the objects shown below.



- (a) If you are asked to carry out an experiment to find out which bar magnet is stronger, which materials would you use?

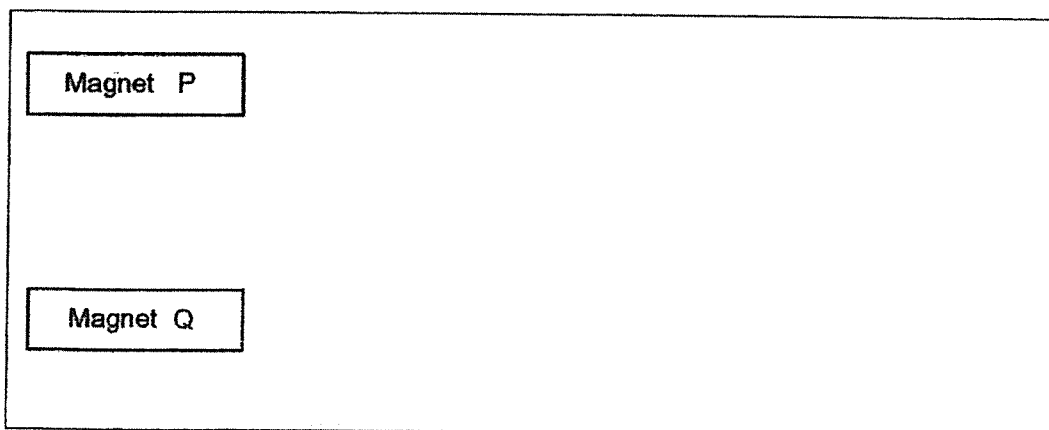
In the table below, tick (✓) against the materials you will use for the experiment.

[2]

Material	Tick (✓)
Bar magnets	
Steel paperclips	
Compass	
Ruler	
Green beans	

- (b) In the box below, complete the diagram to show how you will set up the experiment.

[2]



Question 4

Read the aim of the experiment stated below.

To find out if the type of substance dissolved in water affects the boiling point of water.

- (a) Tick (✓) the variable(s) that must be kept the same in order that the experiment is a fair test. [1]

Variable	Tick (✓)
Amount of water	
Type of substance	
Boiling point of the solution	
Mass of substance to be dissolved in the water	

The table below shows the steps for carrying out the experiment but they are not arranged in order.

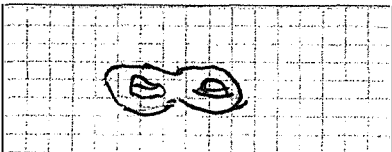
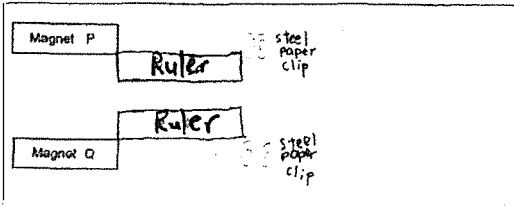
- (b) Arrange the first 4 steps correctly by writing the numbers (1, 2, 3 and 4) in the left column of the table below. Steps 5 and 6 have been done for you. [2]

Step	Method
	Heat the solution until it boils.
	Measure the boiling point of the solution.
	Stir continuously until all the salt dissolves.
	Add some salt into a beaker of water.
5	Repeat steps 1 to 4 using sugar.
6	Repeat steps 1 to 4 using honey.

End of Weighted Assessment 2

ANSWER KEY

YEAR : 2021
 LEVEL : PRIMARY 5
 SCHOOL : HENRY PARK PRIMARY SCHOOL
 SUBJECT : SCIENCE
 TERM : WEIGHTED ASSESSMENT 2

Q1	(a)		
	(b)	Its outer covering is hard and rough.	
	(c)	The outer covering protects the seeds in Specimen N.	
Q2	(a)	Fruit X	2
		Fruit Y	5
	(b)	Fruit X	
	(c)	After placing a strip of the Universal Indicator on Fruit X and Y, X had its colour closer to the one with the pH value closer to 0 compared to Fruit Y. Thus, as Fruit X has a lower pH value, it is more acidic.	
Q3	(a)	Bar magnets, Steel paperclips, Ruler	
	(b)		
Q4	(a)	Amount of water, Mass of substance to be dissolved in the water	
	(b)	3,4,2,1	

END