METHODIST GIRLS' SCHOOL

Founded in 1887

CONTINUAL ASSESSMENT 2014
PRIMARY 5
SCIENCE
BOOKLET A1

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.

Name: _____ ( )

Class: Primary 5._____

Date: 6 March 2014

This booklet consists of 13 printed pages including this page

For each question from 1 to 30, four **options** are given, one of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet.

[60 marks]

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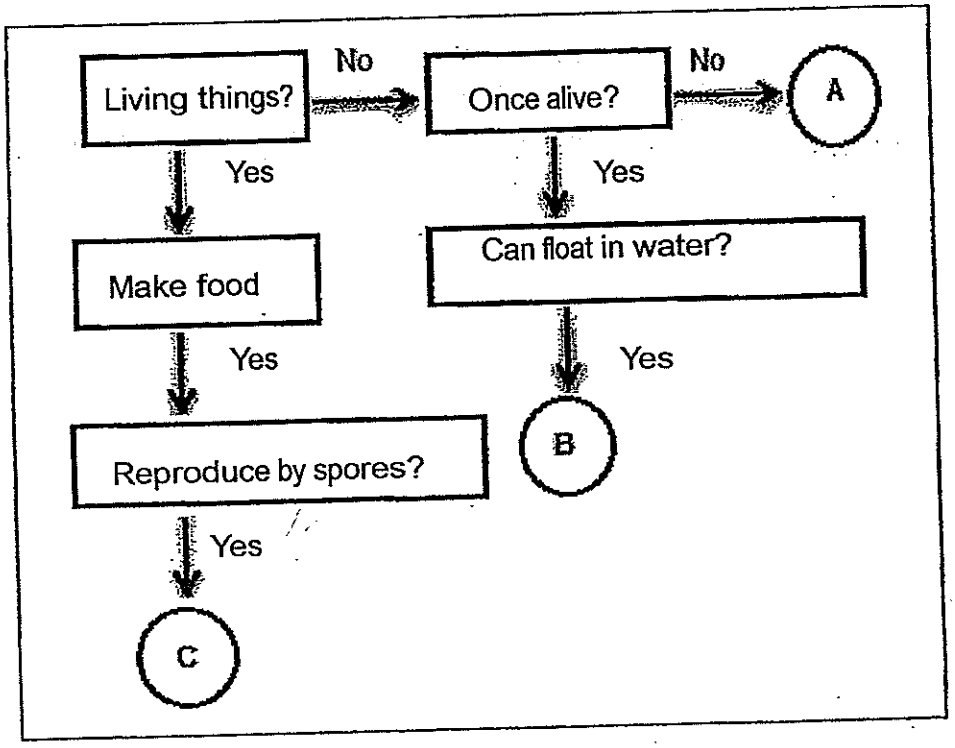
1. Study the flow chart below.



Which of the following best represent objects, A, B and C?

	A	B	C
(1)	Plastic tray	Iron nail	Moss
(2)	Pebble	Tyre	Fern
(3)	Grass	Cardboard	Fungi
(4)	Book	Rubber duck	Algae

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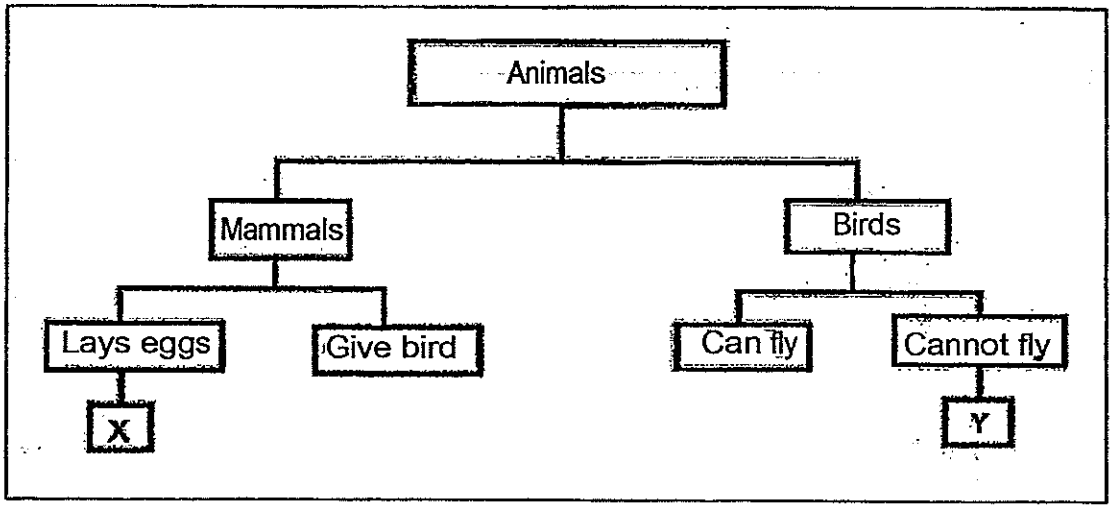
2. The chart below shows how animals can be classified.



Which animals can X and Y be?

	X	Y
(1)	Anteater	Kingfisher
(2)	Platypus	Ostrich
(3)	Whale	Penguin
(4)	Monkey	Peacock

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3. Deborah wanted to find out whether water lettuce, would grow well in water containing detergent.

She used two identical beakers, Beaker A and Beaker B.

The table below shows the items that she had added into one of the beaker.

Beaker	Soap powder	Tap water	Water lettuce
A	10 ml	500 ml	50
B			

If she were to set up Beaker B as a control, which of the following should she choose to add into Beaker B?

	Soap powder	Tap water	Water lettuce
(1)	0 ml	500 ml	50
(2)	10 ml	500 ml	25
(3)	10 ml	300 ml	50
(4)	10 ml	500 ml	50

(Go on to the next page)

4. The table below shows the characteristics of 2 dogs and their young.

Characterisics	Male dog	Famale dog	Young
Long fur	No	Yes	Yes
Short tail	Yes	No	Yes
Black spots	Yes	No	No

Four students made the following statements about the young:

Ali: The young inherited its father's long fur.
Bala: The young inherited 1 trait from its mother.
Cai Xing: The young did not inherit its father's black spots.
David: The young inherited at least 1 trait from both of its parents.

Based on the information given on the table above, who made the correct statement/s?

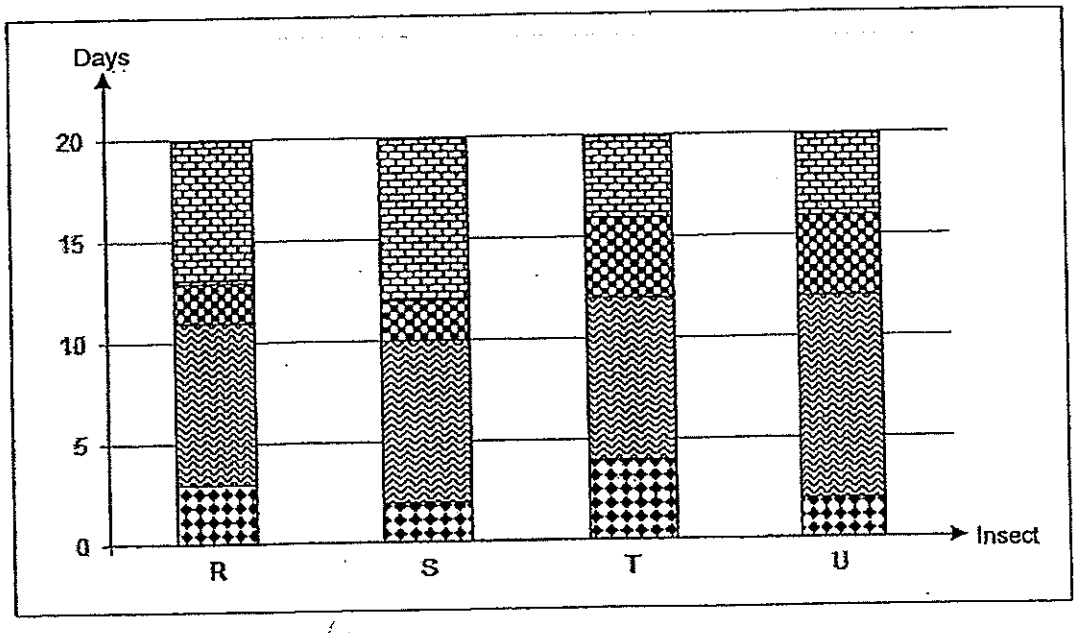
(1) Ali and Bala only

(2) Cai Xing and David only

(3) Bala, Cai Xing and David only

(4) Ali, Bala, Cai Xing and David only

5. The graph below shows the length (number of days) at each of the stage in the 4-stage life cycle of four insects.



Based on the graph above, Mrs Lee, a Science teacher, asked her students on which day/s are all the insects at the same stage in their life cycles, assuming that the eggs of all the insects were laid on the same day?

The following were her students' responses.

Kenny: It is on Day 5.

Lina: It is on Day 9.

Molly: It is on Day 15.

Who gave the correct answer/s?

(1) Kenny only

(2) Lina only

(3) Kenny and Lina only

(4) Lina and Molly only

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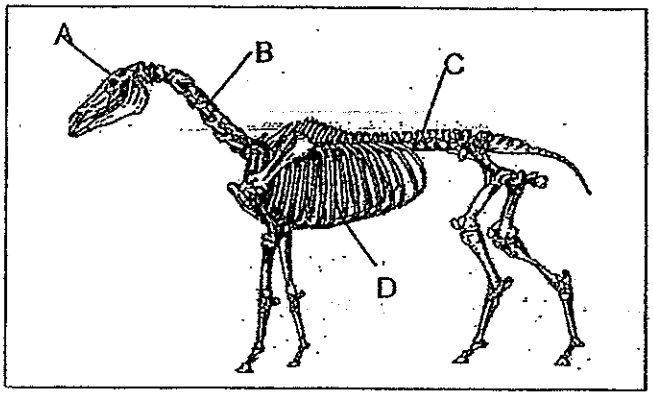
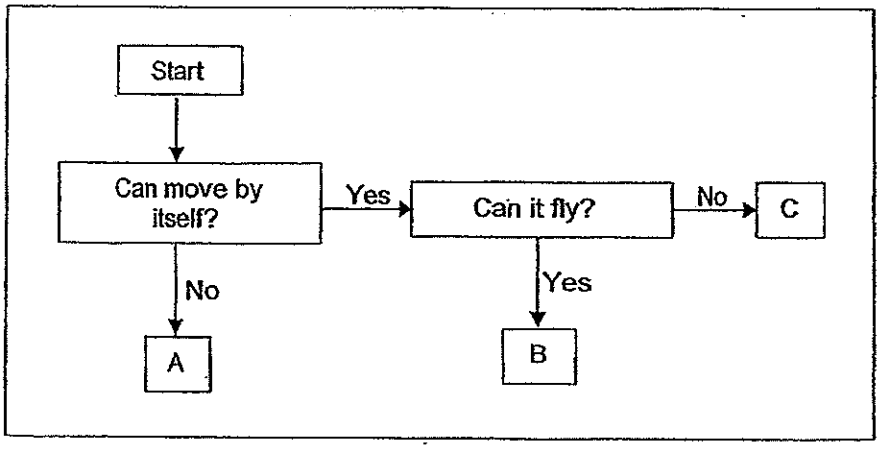
6. The diagram below shows the skeletal system of a horse.



Which part A, B, C or D is similar to the ribcage of the human skeletal system?

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

7. Study the flow chart below.



Which of the following describes organism A, B and C correctly?

	A	B	C
(1)	Moss	Bat	Lizard
(2)	Maggot	Mosquito	Beetle
(3)	Hibiscus	Sparrow	Bee
(4)	Mushroom	Angsana	Balsam

(Go on to the next page)

8. A study was performed on two animals. The characteristics of the two animals were recorded as shown in the table below.

	Animal X	Animal Y
Eggs are laid in water.	Yes	No
Young resemble adult.	No	Yes
Fertilisation takes place externally.	Yes	No

What could Animals X and Y be?

	Animal X	Animal Y
(1)	Frog	Penguin
(2)	Mosquito	Butterfly
(3)	Duck	Frog
(4)	Guppy	Mosquito

9. The table below shows some of the features that the Keith family has.

	Eyes	Ears	Hair	Nails
Mr Keith	black	detached	straight	short
Mrs Keith	brown	detached	curly	short
Annie	brown	detached	straight	long
Benny	brown	attached	straight	short
Christine	black	detached.	straight	short
David	brown	detached	curly	short

One of the four children is adopted. Who is most likely to be the adopted child?

(1) Annie

(2) Benny

(3) Christine

(4) David

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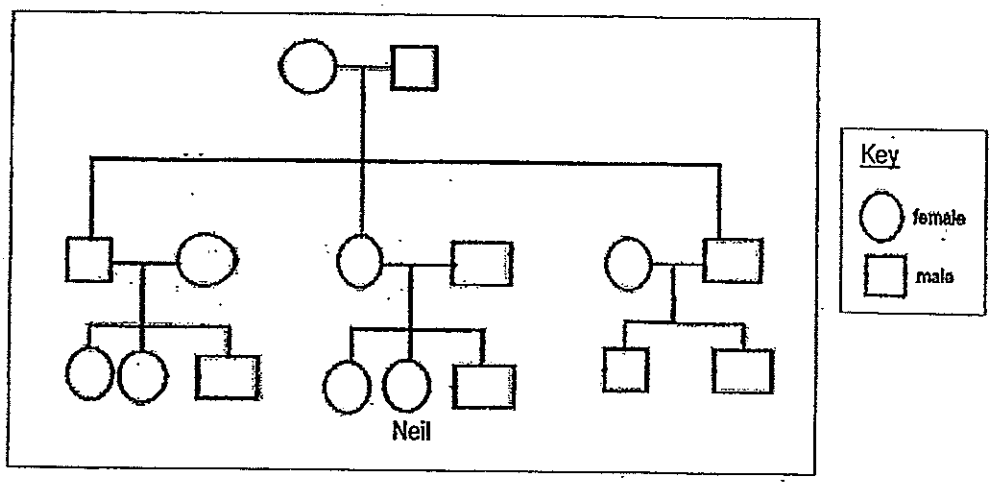
10. The diagram shows Neil's family tree.



How many cousins does Neil have?

(1) 3
(2) 4
(3) 5
(4) 6

11. Study the table of the two groups of animals shown below.

Group A	Group B
Cattle	Crocodile
Buffalo	Snake
Elephant	Alligator

Which of the following statements below is **not true** for the two groups?

(1) They help Man to do work.
(2) Their skins are useful to Man.
(3) They are grouped according to their body coverings.
(4) They are grouped according to their body temperature.

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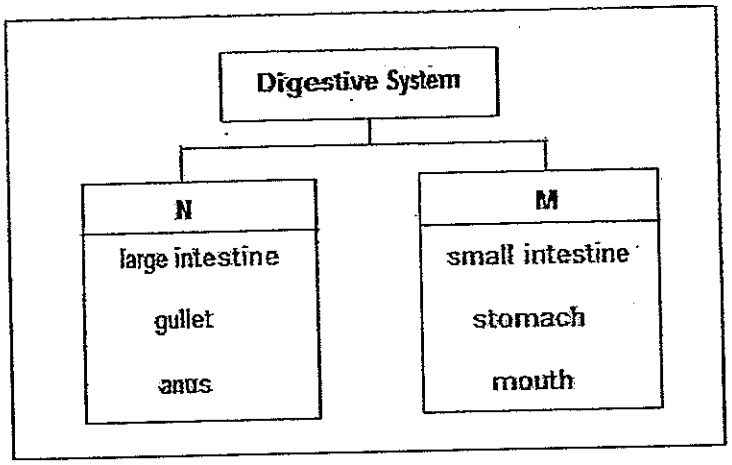
12. The chart below shows how the organs of the human digestive system are classified.



Based on the chart above, some students made the following guesses on the correct headings for M.

Guna: Where absorption of digested food takes place.

Hassan: Where absorption of water takes place.

Imelda: Where digestion is completed.

Jia Ling: Where digestion takes place.

Whose heading/s is/are correct?

(1) Guna only

(2) Jia Ling only

(3) Hassan and Imelda only

(4) Jia Ling and Hassan only

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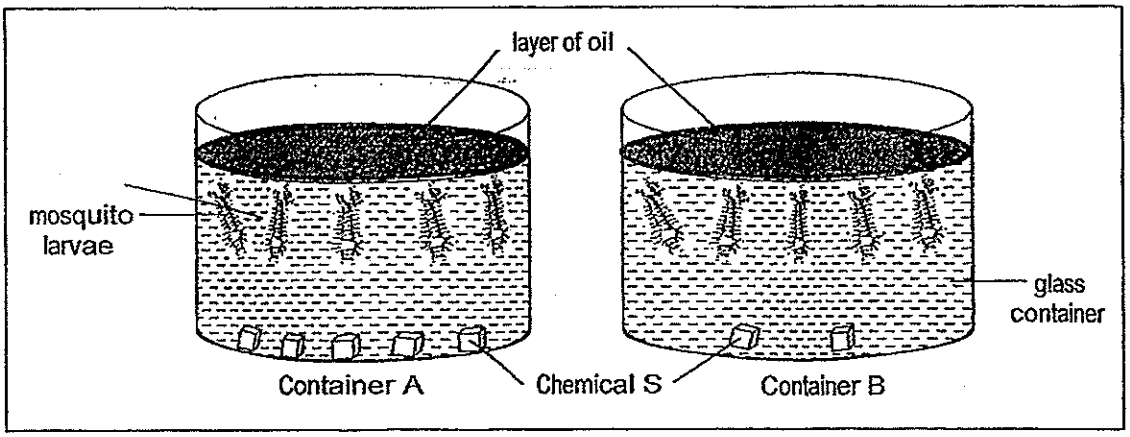
13. Kim conducted an experiment to find out if Chemical S is able to kill mosquito larvae thriving in water. She prepared the following set-ups as shown in the diagram below.



Two days later, she found that all the mosquito larvae had died. She then concluded that Chemical S is effective in killing the mosquito larvae in the water.

However, some of Kim's friends commented that her experiment was not carried out properly and suggested the following ways to correct the set-ups in her experiment.

	Suggestion
Irene	Add three more Chemical S into Container B so that both set-ups are the same to ensure a fair test.
Ju Sheng	Add two more Chemical S into Container A so that the effect of Chemical S will be stronger.
Karthik	Remove all Chemical S from Container B so that Container B can be a control set-up for the experiment.
Lina	Remove the layer of oil as it prevents the mosquito larvae from taking in atmospheric oxygen, thus, causing them to die.

Whose suggestion/s is/are correct?

(1) Irene only

(2) Ju Sheng only

(3) Karthik and Lina only

(4) Lina and Irene only

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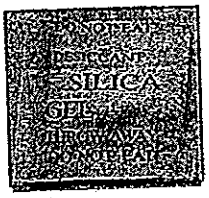
14. Three months ago, Fatimah bought a leather bag. When she opened the box, she found a packet of drying agent as shown in the diagram below.



Thinking that she would not need it, she threw the drying agent away.

When she took out the leather bag from the dust cover, she realised that there were some white patches on the bag as shown in the diagram below.

She realised that she should not have thrown the packet of drying agent away.

Fatimah thought of a few reasons to explain why the drying agent was included.

Reason	
A	The drying agent absorbed the moisture in the air.
B	The drying agent prevented mould from growing.
C	The drying agent provided food for bacteria to feed on.
D	The drying agent gave out pleasant smell to the surrounding.

Which of the reasons above is/are correct?

(1) A only

(2) C only

(3) A and B only

(4) C and D only

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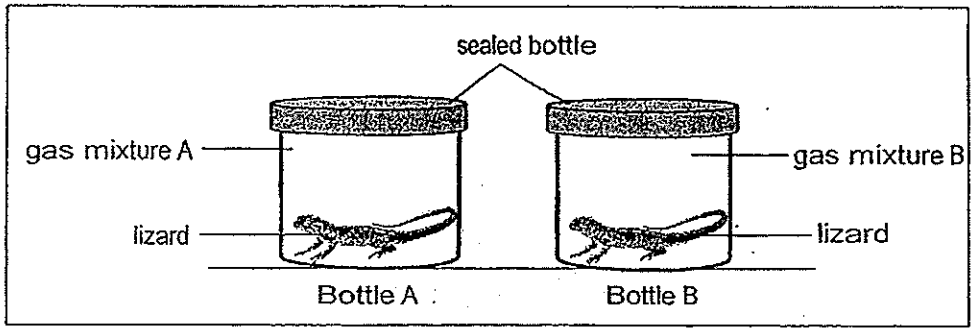
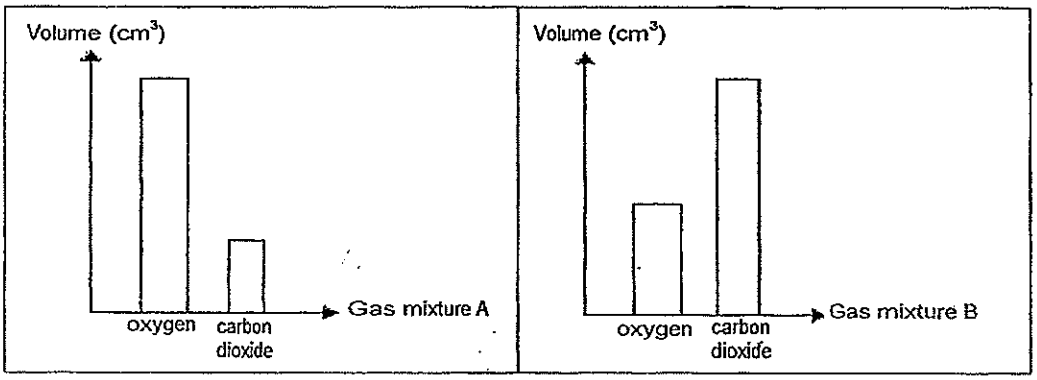
15. Joshua placed a lizard into glass bottles, Bottle A and Bottle B. Gas mixture A and gas mixture B were pumped into Bottle A and Bottle B respectively as shown in the diagram below.



The compositions of gas mixture A and gas mixture B are shown below.



Based on the information given, Joshua made the following conclusions:

Conclusion	
W	Lizard in Bottle A survived longer as the bottle contained more oxygen than carbon dioxide. Oxygen was needed by the lizard for respiration.
X	Lizard in Bottle B survived longer as the bottle contained more carbon dioxide than oxygen. Carbon dioxide was needed by the lizard for photosynthesis.
Y	Lizard in Bottle A died faster as the bottle contained more oxygen than carbon dioxide. The oxygen suffocated the lizard.

Which of the conclusion/s above is/are correct?

(1) W only

(2) X only

(3) Y only

(4) X and Y only

End of Booklet A1

METHODIST GIRLS' SCHOOL

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CONTINUAL ASSESSMENT 2014
PRIMARY 5
SCIENCE
BOOKLET A2

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

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Name: _____ ( )

Class: Primary 5._____

Date: 6 March 2014

This booklet consists of 16 printed pages including this page

For each question from 1 to 30, four **options** are given, one of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet.

[60 marks]

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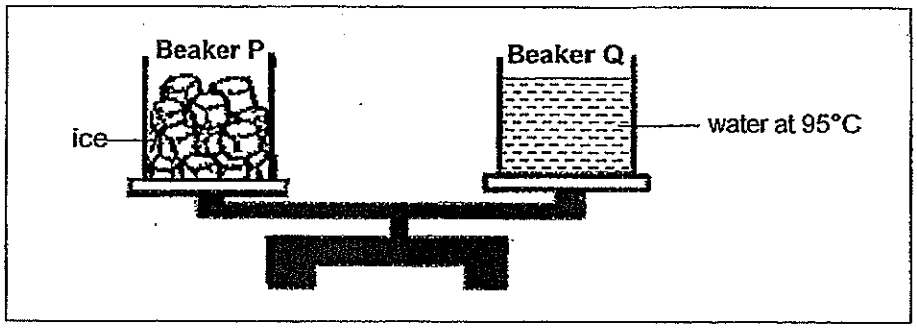
16 Shu Yuan placed Beaker Q which was filled with water at a temperature of 95°C on one side of a digital balance and Beaker P which was filled with ice cubes on the other side. At the start of the experiment, both Beaker P and Q were balanced.



She then asked her friends to predict what would happen to the set-up after one hour. The following predictions were made by her friends:

Rafi: Beaker Q would become heavier because the water has more heat than the ice cubes.

Tim: Beaker Q would become lighter because the water in the beaker evaporated at a faster rate than the water from the melting ice in Beaker P.

Usha: Beaker P would become heavier because the water vapour in the surrounding air condensed on the outer surface of the beaker.

Vivien: Beaker P would become lighter because most of the ice cubes had melted and there was very little ice left.

Who gave the correct prediction/s?

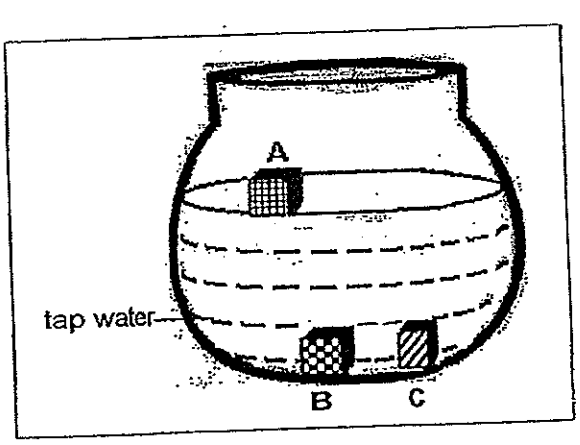
(1) Vivien only

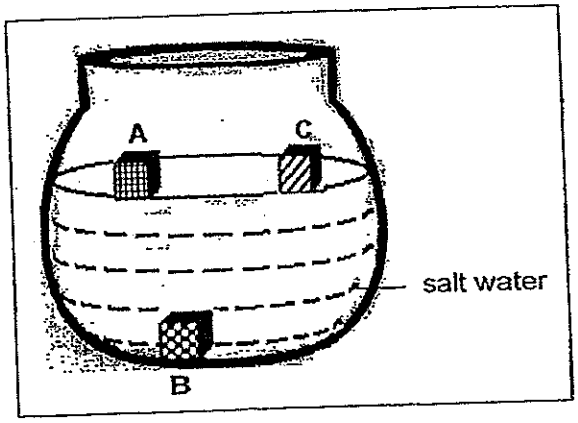
(2) Rafi only

(3) Tim and Usha only

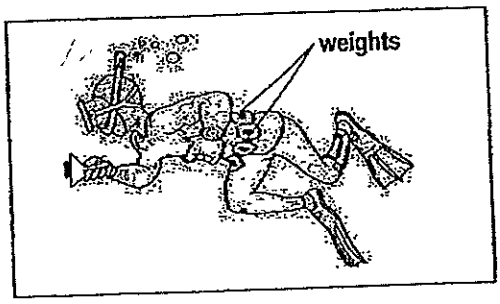
(4) Vivian and Rafi only

17. Susan was given three objects of different materials, A, B and C. She wanted to find out if these objects float or sink in tap water and salt water. She made the following observation.





She realised that a person who practices scuba diving in the swimming pool has to put weights around his waist to keep his body under water as shown below.



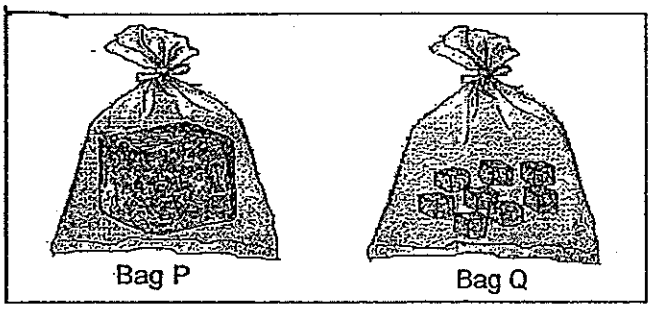
Susan was wondering which material/s, A, B or C, would be most suitable for making the weights for a scuba diver to dive in the sea.

Which of the following statements she made is correct?

	Statment
(1)	Only Material A would be most suitable because it floated on tap and salt water.
(2)	Only Materials B and C would be most suitable because both remained underwater in tap water.
(3)	Only Material C would be most suitable because it remained underwater in tap water but able to float on salt water.
(4)	Only Material B would be most suitable because it remained underwater despite being placed in tap or salt water.

(Go on to the next page)

18. Elsie has two bags each containing 200g of ice. Each bag of ice is made up of the 200g of water. The two bags are of the same material and size. Bag P contains one big block of ice while Bag Q contains many small ice cubes.



Which of the following observations will Elsie make at the end of her experiment and the correct explanation for it?

	Observation	Explanation
(1)	The ice cubes in Bag Q will melt completely in a shorter period of time than the big block of ice in Bag P	The ice cubes have bigger exposed surface area compared to the big block of ice.
(2)	The big block of ice in Bag P will melt completely in a shorter period of time than the ice cubes in Bag Q	The big block of ice has bigger exposed surface area compared to the ice cubes.
(3)	The ice cubes in Bag Q will melt completely in a shorter period of time than the big block of ice in Bag P	The temperature of the surrounding air is higher than the temperature in the plastic bag.
(4)	The big block of ice in Bag P will melt completely in a shorter period of time than the ice cubes in Bag Q	The temperature of the surrounding air is higher than the temperature in the plastic bag.

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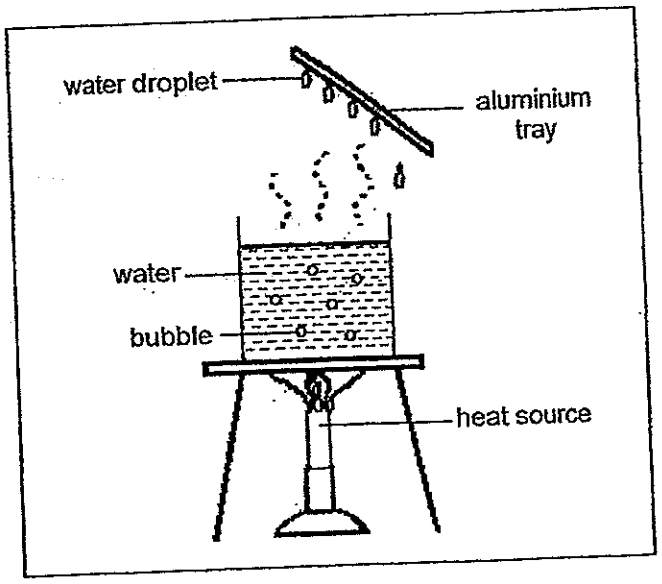
19. Zack designed the setup as shown in the diagram below to simulate the water cycle.



He wrote down the following possibilities that would happen when the source of heat is removed from the set-up above.

A: The temperature of the water in the beaker would decrease.

B: Water from the beaker would evaporate at a slower rate, thus, the formation of water droplets would be slower.

C: The temperature difference between the water and the surrounding air would be greater, thus, the formation of water droplets would be faster.

Which of the possibilities above is most likely to be correct?

(1) A only

(2) B only

(3) A and B only

(4) C and A only

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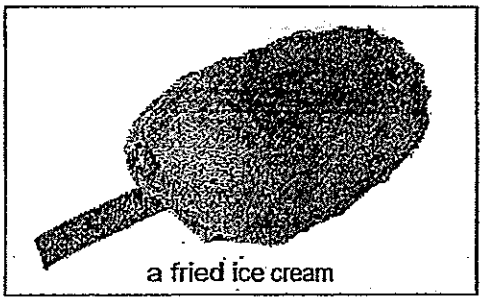
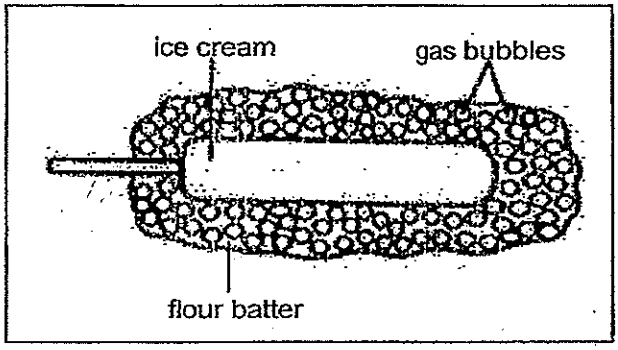
20. Cindy and her friends ordered a fried ice-cream as shown in the diagram below.



Cindy explained to her friends that the fried ice cream is made by dipping the ice cream into a flour batter which is mixed with bicarbonate soda. The bicarbonate soda will produce gas bubbles when it interacts with hot oil during deep frying as shown in the diagram below.



The following are some statements made by Cindy and her friends to explain why the ice-cream did not melt in the hot oil during deep frying.

Cindy: The gas bubbles are poor conductors of heat.

Devi: The gas bubbles slow down the transfer of heat from the hot oil to the ice cream.

Edmund: The gas bubbles slow down the ice cream from gaining heat from the hot oil.

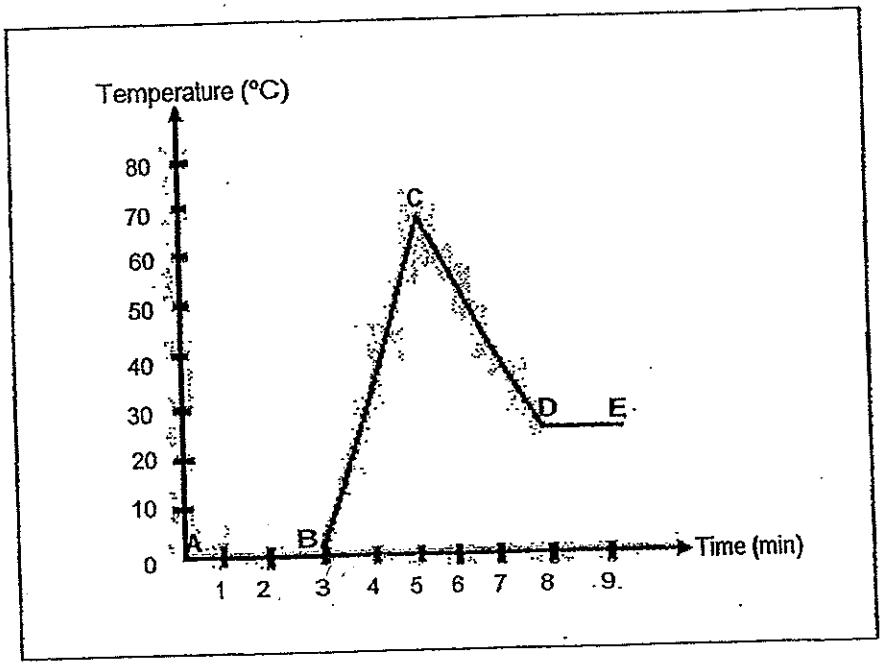
Farida: The gas bubbles do not gain heat from the hot oil.

Who made the correct explanation/s?

(1) Cindy only
(2) Devi only
(3) Cindy, Devi and Edmund only
(4) Devi, Edmund and Farida only

(Go on to the next page)

21. Amy took some ice cubes from the freezer and put them in a container. She heated the ice cubes. After a while, the container was left to cool down in a room. The room temperature was 32°C. She plotted a graph to show the changes in the temperature of the content in the container over time as shown in the diagram below.



At which part of the graph did the cooling of hot water to room temperature occur?

(1) AB

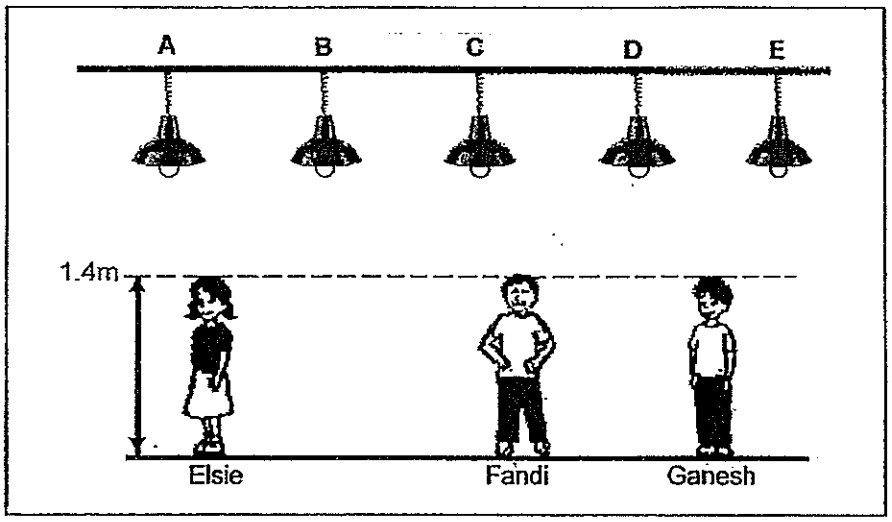
(2) BC

(3) CD

(4) DE

(Go on to the next page)

22. Three children, Elsie, Fandi and Ganesh were standing at various positions in a dark room. 5 lamps were hung at Positions A, B, C, D and E on the ceiling above them as shown in the diagram below. The lamps were turned off.



At which position/s should the lamp be switched on such that:

- Fandi has the shortest shadow
- Elsie has a longer shadow than Ganesh

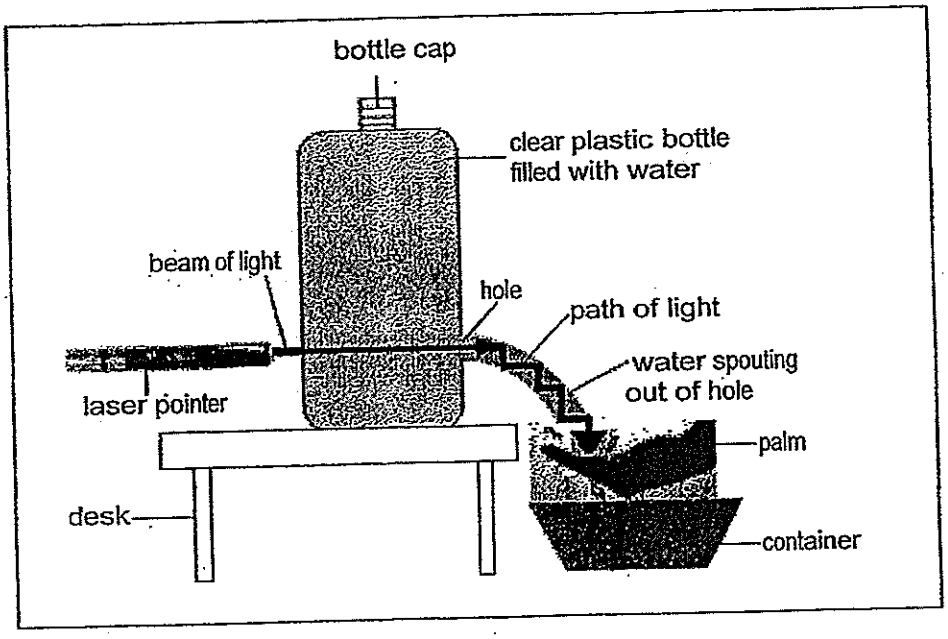
(1) Position A

(2) Position C

(3) Positions A and B

(4) Positions D and E

23. Kok Sing prepared the set up as shown in the diagram below to demonstrate the path of light in water.



As the bottle cap was loosened, a beam of light was being projected into the bottle of clear water, in line with a small hole at one side of the bottle where the water was flowing out from.

Kok Sing then placed his palm just above the container where the spout of water landed on. He realised that the beam of light was projected on his palm.

What property of light does the above experiment show?

(1) Light can be bent.

(2) Light can be reflected in water.

(3) Light can be absorbed in water.

(4) Light travels in a straight line.

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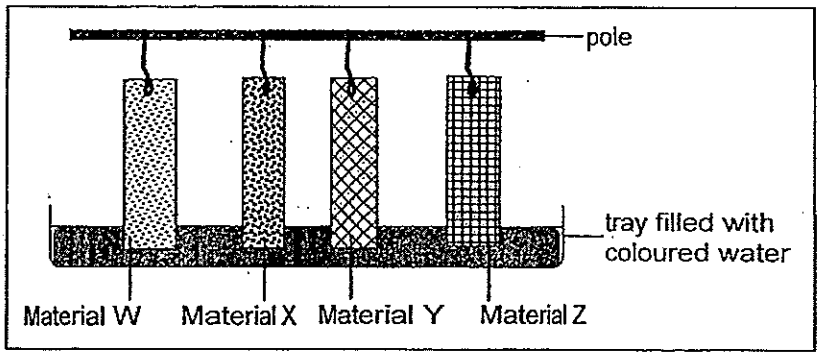
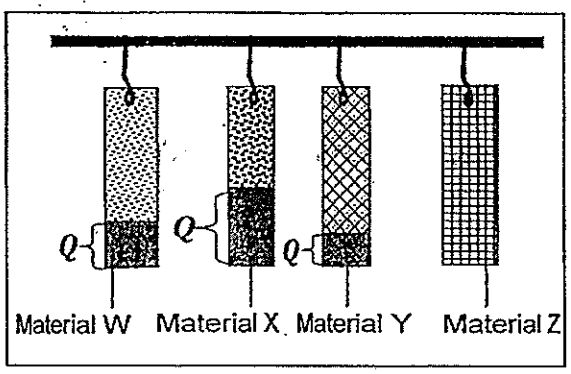
24. Sumei carried out an experiment using four different materials, W, X, Y and Z, of equal lengths. She then placed the end of each material into some coloured water as shown in the diagram below.



Five minutes later, she removed the coloured water. Then she measured the length of each strip of material that was stained by the coloured water as shown in the diagram below.



Key:

Q refers to the length of material that was stained by the coloured water (cm).

The results of her measurements are shown in the table below.

Material	*Q* (cm)
W	5
X	9
Y	3
Z	0

Based on the results above, which material would Sumei use to make a raincoat and why would she choose this material?

	Material	Reason
(1)	W	It absorbed 5cm of coloured water.
(2)	X	It absorbed the most amount of coloured water.
(3)	Y	It absorbed the least amount of coloured water.
(4)	Z	It did not absorb any amount of coloured water at all.

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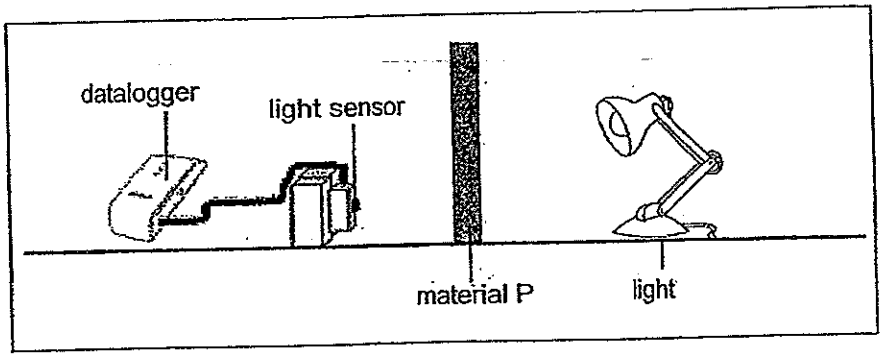
25. Rani attached a light sensor to a datalogger and measured the amount of light that passed through Material P in a dark room as shown in the diagram below.



She then repeated the activity using Material Q and Material R. She recorded the readings as shown in the table below.

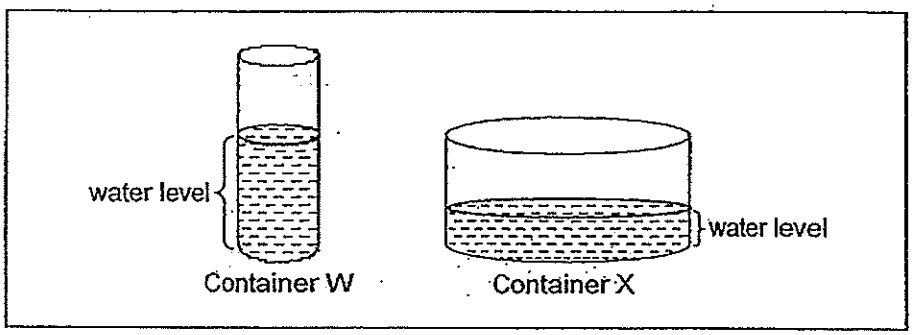
	Material P	Material Q	Material R
Amount of light passed through (lux)	0	240	770

Which one of the following **best represents** material P, Q and R **correctly**?

	Material P	Material Q	Material R
(1)	Tracing paper	Clear plastic	Mirror
(2)	Clear plastic	Tracing paper	Mirror
(3)	Mirror	Clear plastic	Tracing paper
(4)	Mirror	Tracing paper	Clear plastic

(Go on to the next page)

26. Maria poured 200 cm^3 of water at 95°C into each of the two metal containers, W and X, as shown in the diagram below.



20 minutes later, she realised that the temperature of water in Container W was higher than that in Container X.

Maria thought of the following reasons to explain why the temperature in Container W was higher than that in Container X.

A: Container W had a smaller area of exposed surface, hence, the rate of evaporation was slower. Less heat was lost after 20 minutes.

B: Container X had a bigger area of exposed surface, hence, the rate of evaporation was faster. More heat was lost after 20 minutes.

C: The water level in Container W was greater than the water level in Container X, hence, more heat was found in Container W than in Container X.

Which of the reason/s that Maria thought of above is/are correct?

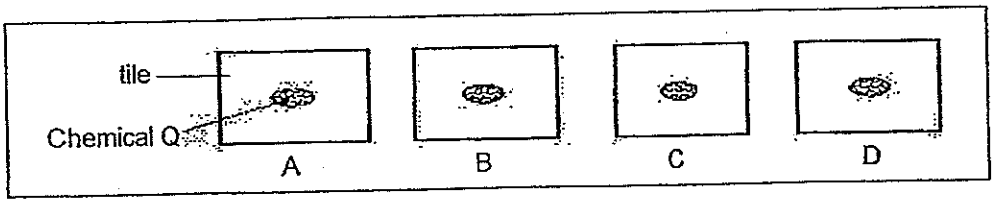
(1) A only

(2) B only

(3) A and B only

(4) A, B and C

27. Hadi carried out an experiment to investigate which tile can absorb the most heat. 4 tiles of the same size with different surfaces were used in the experiment. A drop of Chemical Q was placed on each tile before they were heated at a temperature of 80°C as shown in the diagram below.



Chemical Q is white in colour when placed at room temperature and its colour would change when there is a change in temperature. The table below shows how the colour of Chemical Q changes.

Temperature	Colour of Chemical Q
30°C to 39°C	white
40°C to 50°C	orange
51°C to 70°C	red
71°C to 80°C	brown

After the tiles were heated for 10 minutes, Hadi recorded his observations in the table below.

Tile	Colour of Chemical Q after 10 minutes
A	red
B	white
C	orange
D	brown

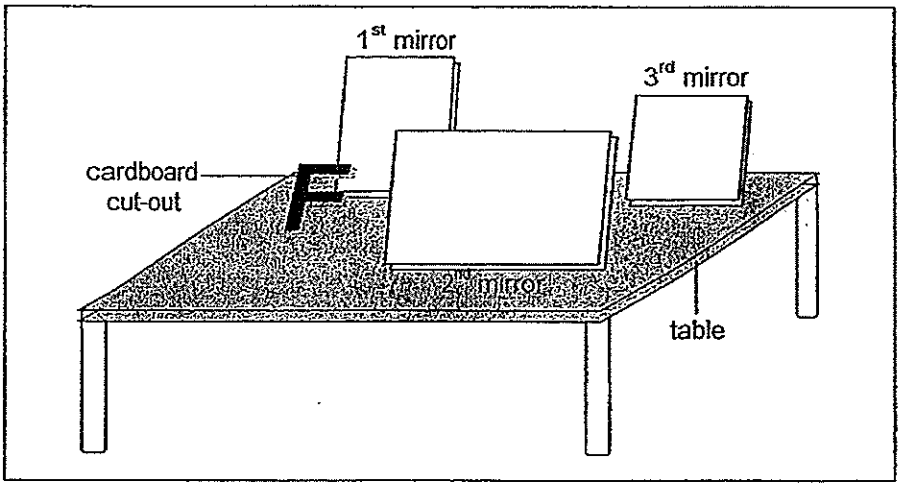
Which tile should Hadi use on the roof so that the house would not be hot during the day and why is it so?

	Tile	Reason
(1)	A	It has a fairly high temperature at the end of the experiment as it is a good conductor of heat.
(2)	B	It has the lowest temperature at the end of the experiment as it is the poorest conductor of heat.
(3)	C	It has the fairly low temperature at the end of the experiment as it is a poor conductor of heat.
(4)	D	It has the highest temperature at the end of the experiment as it is the best conductor of heat.

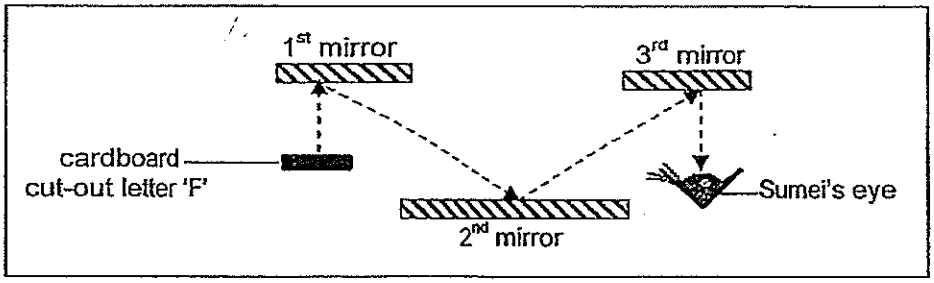
(Go on to the next page)

28. The diagram below shows the front view and the top view of how three mirrors had been placed on a table. A large cardboard cut-out of the letter 'F' was placed in front of the first mirror.

Front view



Top view

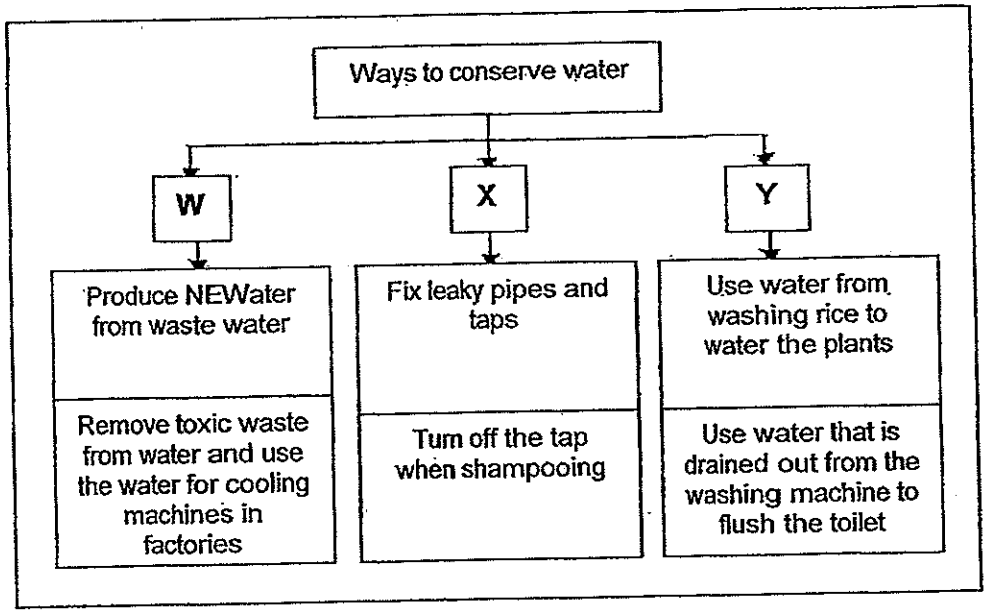


Sumei learnt in school that when she looked at an object in a mirror, the object would have its right and left image reversed.

Based on what she had learnt, which of the following shows the correct image of the letter 'F' as seen in the third mirror?

(1)	(2)	(3)	(4)
F	⅁	⊥	∃

29. The classification table below shows different activities that can be carried out in order to conserve water. The activities are grouped into different categories.

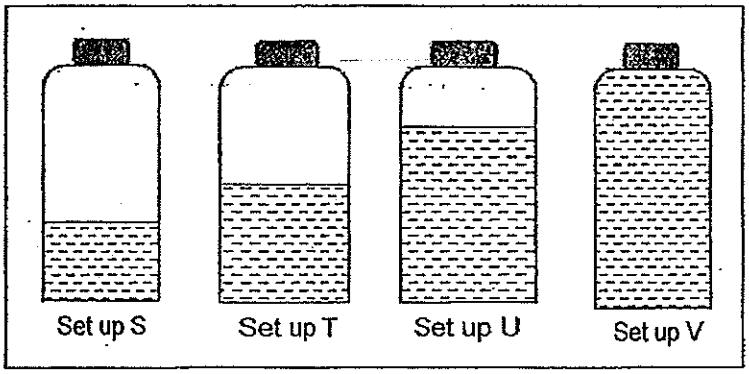


What could the headings for W, X and Y be?

	W	X	Y
(1)	Reuse	Reduce	Recycle
(2)	Reduce	Recycle	Reuse
(3)	Recycle	Reuse	Reduce
(4)	Recycle	Reduce	Reuse

(Go on to the next page)

30. Su Ling filled up four identical rubber containers with different amounts of water as shown in the set ups below. Each rubber container can hold 100 *ml* of water.



She then placed the containers filled with water into a freezer. After a day, she recorded her observation in the table below.

Set up	Volume of water (cm^3)	Volume of ice (cm^3)
S	30	35.2
T	50	62.8
U	70	83.4
V	100	109.3

Based on the information above, Su Ling concluded that the volume of water increases when water freezes.

If Su Ling were to repeat the above experiment by replacing the 100ml rubber containers with 100ml glass containers, one of the glass containers would crack.

In which set up will the glass container crack?

(1) S

(2) T

(3) U

(4) V

End of Booklet A2

METHODIST GIRLS' SCHOOL

Founded in 1887

CONTINUAL ASSESSMENT 2014
PRIMARY 5
SCIENCE
BOOKLET B1

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

Name: _____ ( )

Class: Primary 5._____

Date: 6 March 2014

Booklet B1	/ 20

This booklet consists of 8 printed pages including this page.

For questions 31 to 37, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[20 marks]

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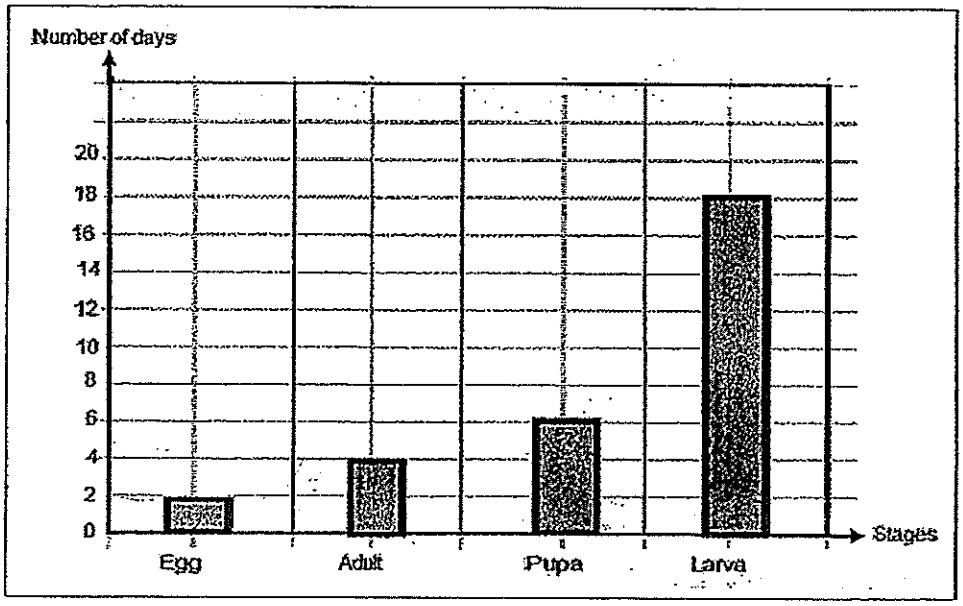
31. Alice studied the life cycle of Insect S. She recorded the number of days for each stage of its life cycle. Her results are shown in the graph below. However, she did not present the stages of the life cycle in the correct order.



(a) Based on Alice's results, how many days does it take for Insect S to become an adult after the egg has hatched? [1]

_____

(b) Insect S spends certain stages of its life cycle in the water. If Insect S is a mosquito, identify a stage of its life cycle that is spent in water. [1]

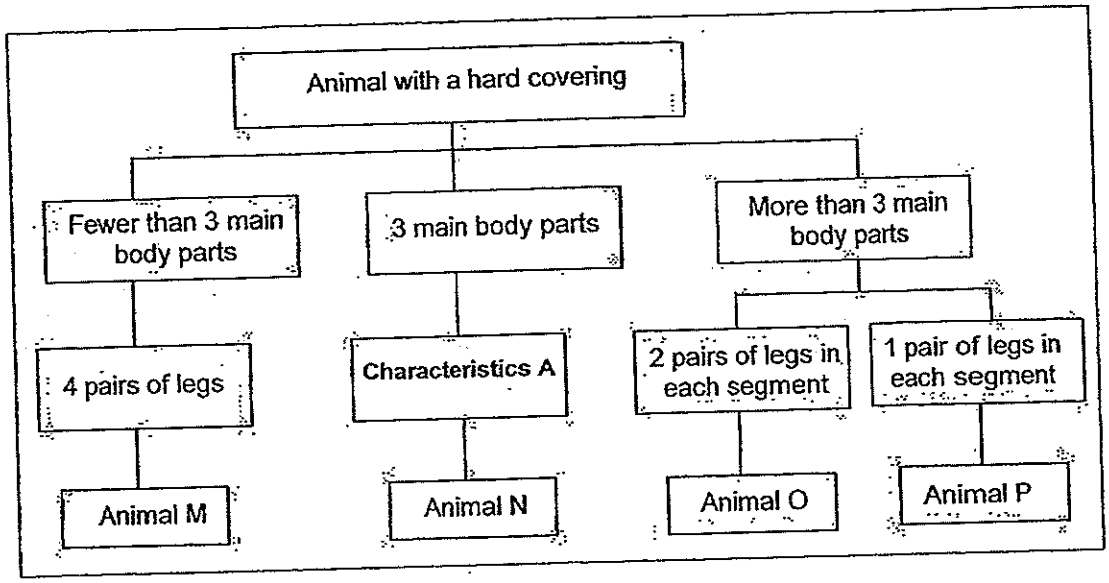
_____

(c) At which stage of its life cycle is Insect S, a mosquito, most dangerous? Give a reason for your answer. [1]

_____

_____

32. The diagram below shows a classification chart.



(a) What is a suitable heading for Characteristics A? [1]

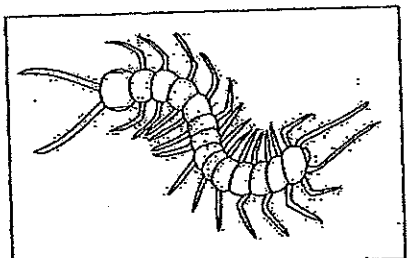
_____

(b) Describe the characteristics of Animal O. [1]

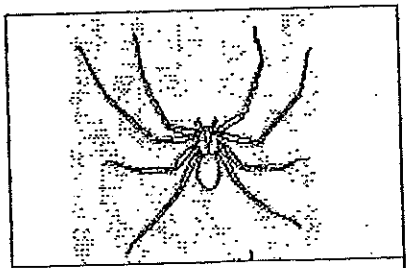
_____

The animals shown in the diagram below have hard body coverings.

(c) Based on the classification chart above, identify the animals shown in the diagram below as Animal M, N, O or P.
(Write your answers in the boxes provided below.) [2]



i) Animal _____



ii) Animal _____

4

(Go on to the next page)

33. Ah Kow carried out an experiment to find out if the amount of water given to plants would affect the number of leaves they grew.

He used 4 identical plants, Plant A, B, C and D. Each plant had the same number of leaves at the start of the experiment. He varied the amount of water given daily to each plant. He recorded the number of leaves each plant had at the end of each week as shown in the table below.

		Number of leaves on the plant at the end of each week				
Plant	Amount water given to the plant daily	Week 1	Week 2	Week 3	Week 4	Week 5
A	120 ml	24	25	27	30	32
B	170 ml	25	28	32	35	39
C	220 ml	25	29	34	38	41
D	270 ml	26	31	36	41	47

(a) Based on the information given above, what is the relationship between the amount of water given to the plants and the number of leaves they grow? [1]

_____

_____

_____

At the beginning of week 6, Ah Kow made some changes to his experiment. He gave Plant A and D each 300 ml of water daily. He then focused his attention in observing Plant A and D for two more weeks.

(b) Which plant, A or D, would be able to carry out photosynthesis at a faster rate? [1]

_____

(c) Explain how the plant that you have chosen in (b) was able to carry out photosynthesis at a faster rate. [1]

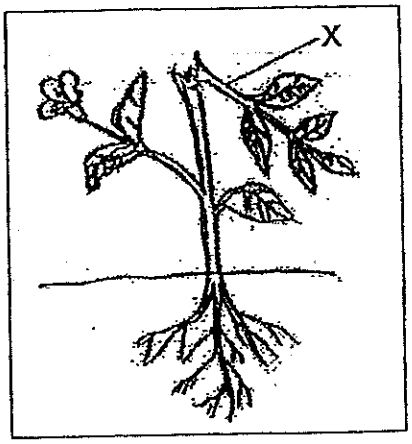
_____

_____

3

(Go on to the next page)

34. Study the diagram shown below carefully.



Johnny accidentally broke the plant Part X while gardening. Three days later, he noticed that Part X had started to wither.

(a) Give a reason why Part X withered? [1]

_____

_____

Johnny and his friends made the following statements about a certain part of a plant.

Johnny: This part carries food made by leaves to the rest of the plant.

Kate: This part carries water and mineral salts from the roots to the rest of the plant.

Leman: This part holds the plant upright and enables them to reach for sunlight which is needed to make food.

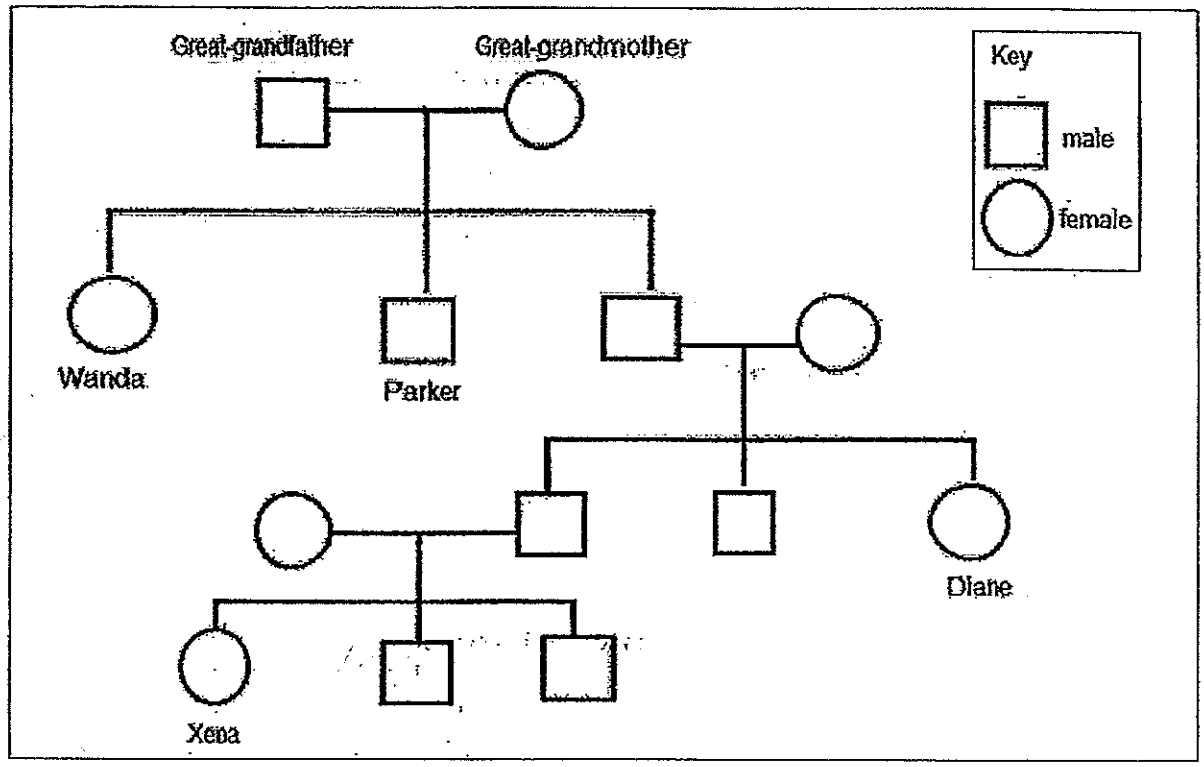
(b) Identify the plant part which best fits the descriptions that Johnny and his friends gave above. [1]

_____

2

(Go on to the next page)

35. Study the family tree of Xena.



(a) How many children do Xena's grandparents have? [1]

_____

(b) What is the relationship between [2]

(i) Xena and Diane?

_____

(ii) Wanda and Parker?

_____

3

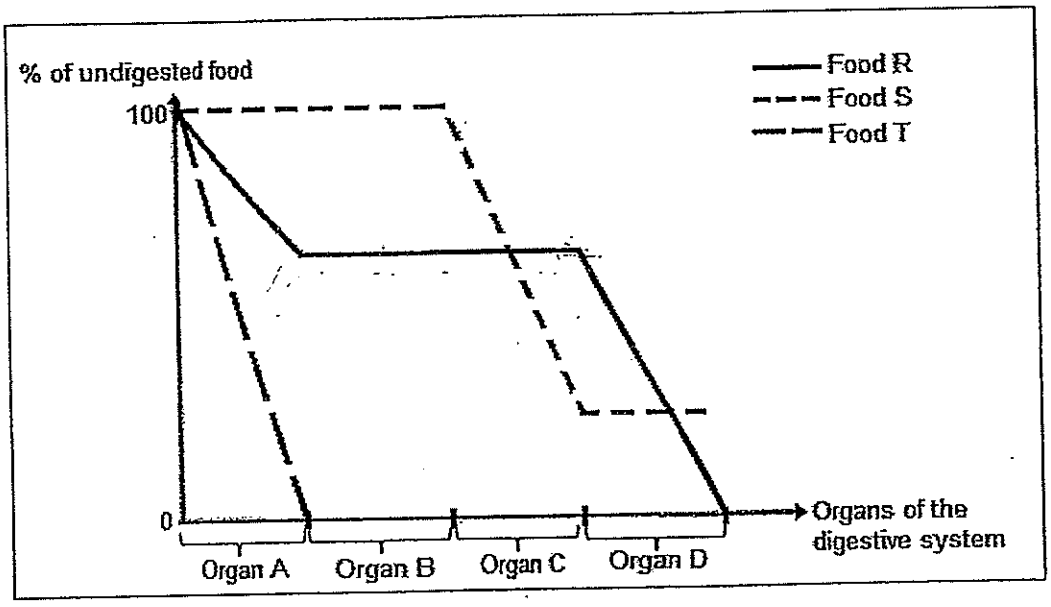
(Go on to the next page)

36. A group of students studied the digestive system of Animal Z over three days. They fed the animal with Food R, S and T on Days 1, 2 and 3 respectively as shown in the table below.

Day	Fed with	Amount of food given
1	Food R	100g
2	Food S	100g
3	Food T	100g

The students checked Animal Z's digestive system at specific time intervals each day to find out how much of the food was left undigested.

The results were plotted in the line graph as shown below.



Based on the results above, the students made the following conclusions.

Put a tick (√) if the conclusion is correct and a cross (X) if the conclusion is wrong in the boxes below. [2]

	Conclusion	(√) or (X)
(i)	None of the organs could digest Food R.	
(ii)	Food T was mostly digested in Organ A.	
(iii)	Organ C is the most effective at digestion.	
(iv)	A high percentage of Food S was digested in Organ C.	

2

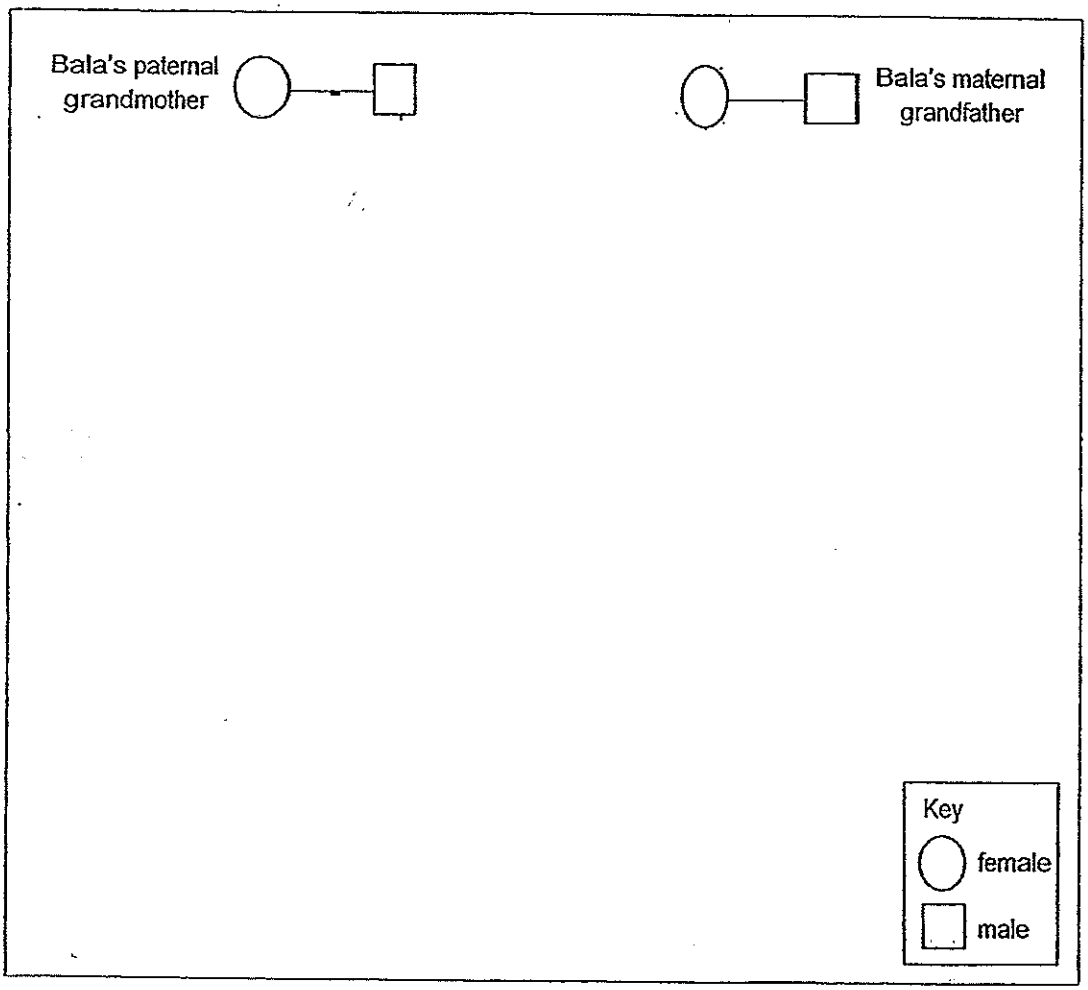
(Go on to the next page)

37. The table below shows the descriptions about Bala and his family.

- Bala's paternal grandmother has two children and one of them is a female.
- Bala's maternal grandfather has only one child.
- Bala has two brothers and a sister.
- Bala has two cousins and one of them is a female.

Based on the information given above, complete Bala's family tree below.

Draw and label the symbol for **Bala, his siblings** and his **cousins.** [3]



3

End of Booklet B1

METHODIST GIRLS' SCHOOL

Founded in 1887

CONTINUAL ASSESSENT 2014
PRIMARY 5
SCIENCE
BOOKLET B2

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

Name: _____ ( )

Class: Primary 5._____

Date: 6 March 2014

Booklet A1 & A2	**/ 60**
Booklet B1	**/ 20**
Booklet B2	**/ 20**
Total	**/ 100**

This booklet consists of 11 printed pages including this page

For questions 38 to 44, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

[20 marks]

---

38. Sarah wanted to investigate the effect of pollutant Y on the survival of Water Plant Z using all the materials provided in the table below.

- 1 dropper
- 10 similar Water Plants Z
- 2 identical beakers
- 1 bottle containing pollutant Y
- 1 container containing 600 ml of pond water

The procedures in the table below are the steps that Sarah should take to carry out her experiment. However, the steps are not in order.

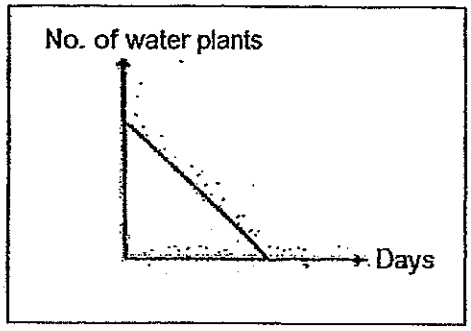
(a) In the table below, arrange the steps in the correct sequence so that Sarah could conduct her experiment properly. **Write** the numbers in the boxes provided in the table below. (The first step has been done for you.) [2]

Step	Procedure
	Place beakers in a sunny area for 1 week.
	Observe the number of Water Plant Z that remained alive after one week.
	Pour 300 ml of pond water from the container into each beaker.
	Put 5 Water Plants Z into each beaker.
	Using the dropper, drop a few drops of pollutant Y into one of the beakers.

2

(Go on to the next page)

Sarah was then given the graph as shown below.



The graph shows the number of water plants in a river after contaminated water was discharged by a factory in the month of April.

(b) Explain how did the decrease in number of water plants in the river affect the marine life? [1]

1

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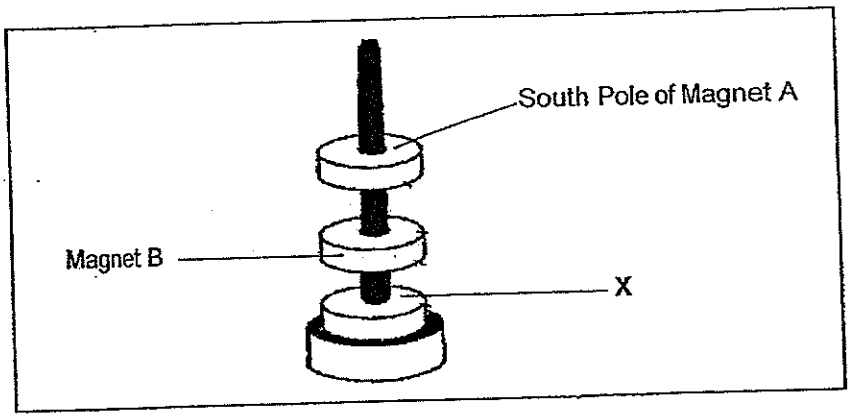
39. Sumei was playing with some ring magnets as shown below. She found out that some of the magnets 'floated' in the air.



(a) If the pole of the top of Magnet A is South Pole, state the pole of X, of the magnet as shown in the diagram above. [½]

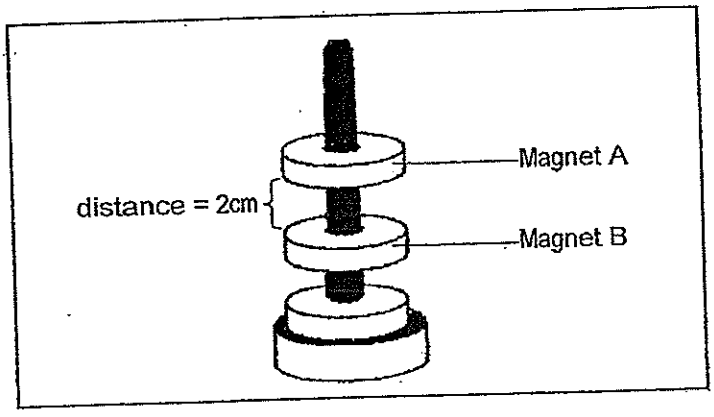
X: _____

(b) Explain why the magnets were able to "float" in the air. [1]

_____

_____

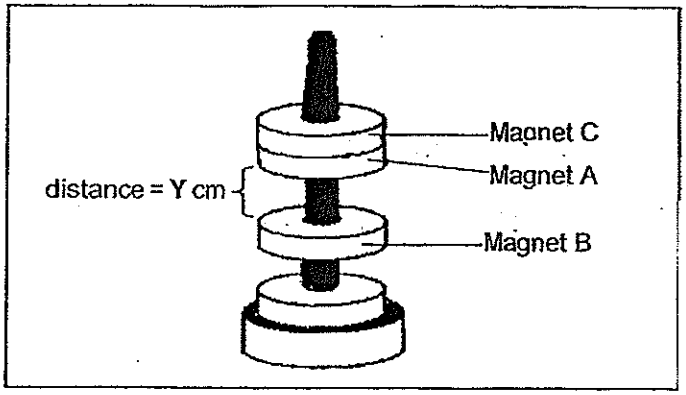
Sumei then measured the distance between Magnet A and Magnet B. It was 2cm apart as shown in the diagram below.



1½

(Go on to the next page)

Next, Sumei added Magnet C on top of Magnet A and realised that Magnet C was attracted to Magnet A. She then measured the distance between Magnet A and Magnet B again as shown in the diagram below.



(c) What is the distance between Magnet A and Magnet B?
Put a tick (√) in the correct box below. [½]

	2 cm
	Less than 2 cm
	More than 2 cm

(d) Give a reason for your answer in (c) [1]

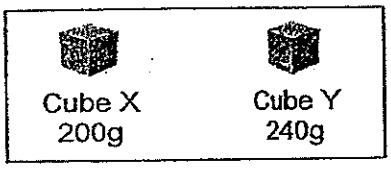
_____

_____

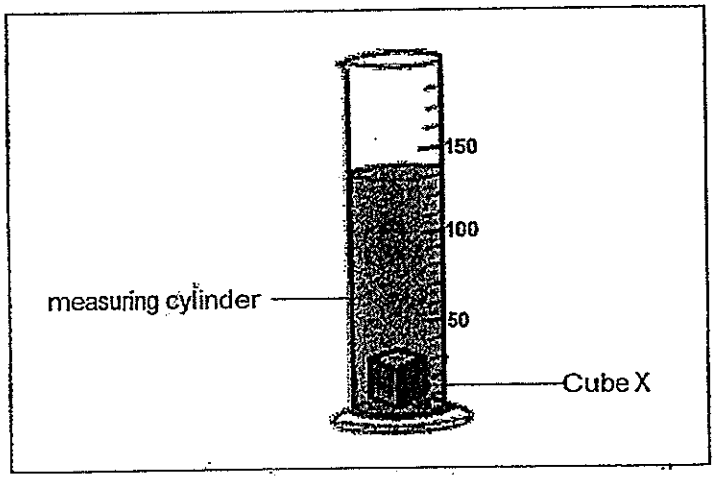
1½

(Go on to the next page)

40. Raju has 2 solid metal cubes of the same size. However, the mass of the metal Cube X is 200g and the mass of metal Cube Y is 240g as shown in the diagram below.



When Raju lowered Cube X into a measuring cylinder filled with $100cm^3$ of water, the water level rose to $130cm^3$ as shown in the diagram below.



(a) What is the volume of Cube X? [1]

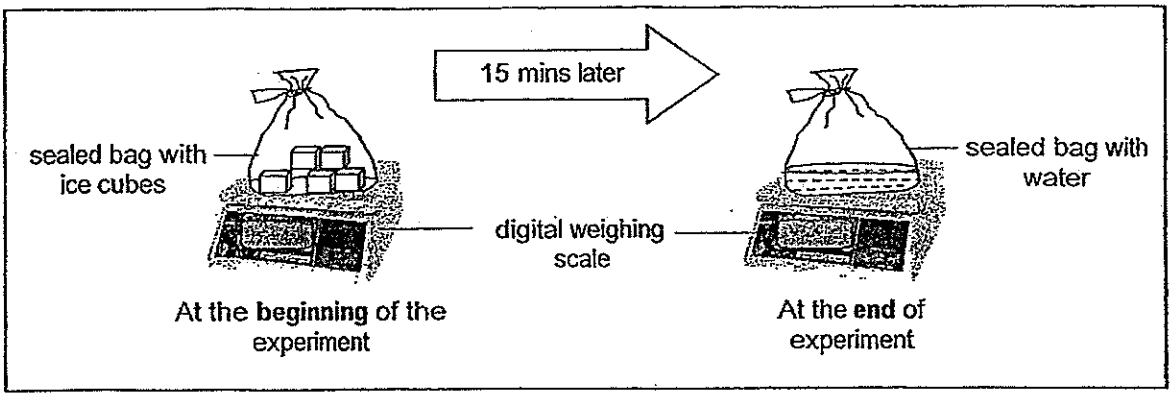
Raju then removed Cube X and lowered CubeY into the water.

(b) Assuming that there was no water loss during the procedure, what would the water level in the measuring cylinder be? [1]

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

3

41. Bala, Charlie and Deyu were having an argument about what happens to mass when matter changes from one state to another. They placed 5 ice cubes in a sealed bag. They recorded the mass of ice in the bag at the beginning of the experiment as shown in the diagrams below.



Each of them made these predictions:

Bala: The mass of the bag containing water will be the same as the mass of the bag containing ice cubes. A change in state will not affect its mass.

Charlie: The mass of the bag containing water will be less than the mass of the bag containing ice cubes. A change in state will result in a decrease in its mass.

Deyu: The mass of the bag containing water will be more than the mass of the bag containing ice cubes. A change in state will result in an increase in mass.

(a) Who made the correct prediction? [1]

_____

(b) Mrs Lee, their teacher, told them that they need to ensure the outer part of the sealed bag is dry before recording the mass of the bag of water. Do you agree with her? [1]

_____

(c) Explain the reason for your answer in (b). [1]

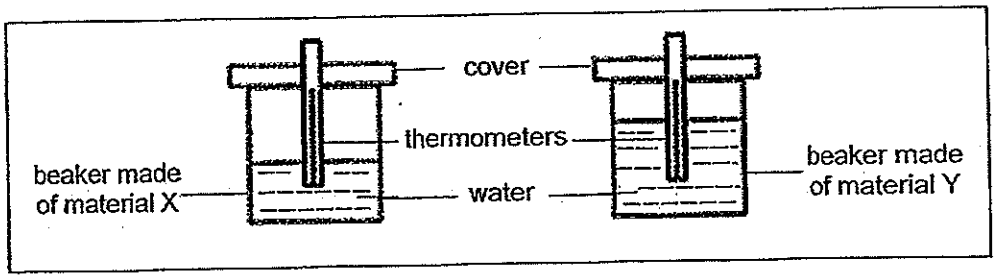
_____

_____

3

(Go on to the next page)

42. Darren set up an experiment to find out more about materials X and Y. The two set-ups below are identical except for the material of the beakers and the amount of water in the beakers.



He recorded the results of his experiment as shown in the table below:

	Temperature of water (°C)	
Time (min)	Beaker made of Material X	Beaker made of Material Y
0	80	80
5	75	65
10	60	35

(a) Based on Darren's experiment, what was he trying to find out about Material X and Y? [1]

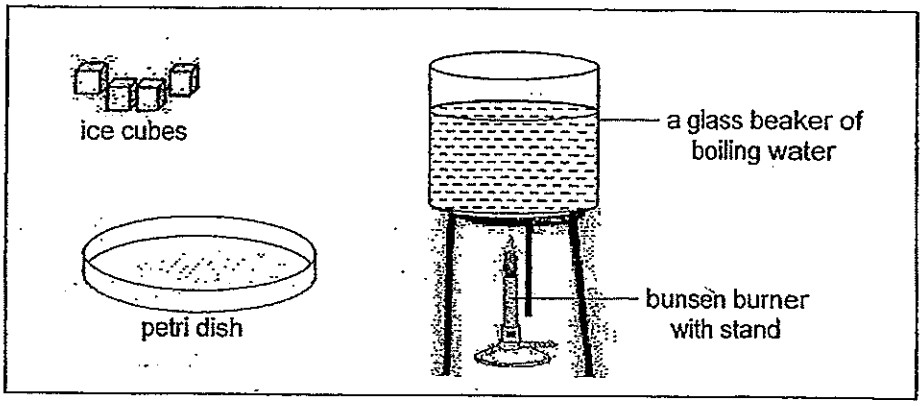
(b) Explain why his experiment is not a fair test. [1]

(c) If Darren had made his experiment a fair one, what can you conclude about Material X as compared to Y based on his results? [1]

3

(Go on to the next page)

43. Siti was asked to set up an experiment to show the changes of state in the water cycle, using the following apparatus:

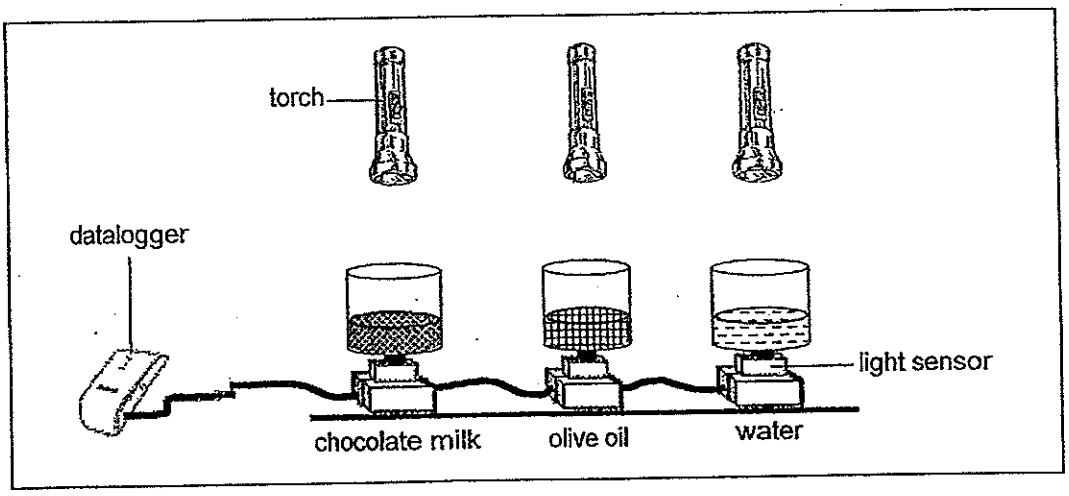


(a) In the box provided below, **draw and label** clearly a possible experimental set-up to show the changes of state in the water cycle using **all** the apparatus provided above. [1½]

(b) Describe clearly the process how **water changes its states** during the water cycle. [1½]

3

44. Kim Song set up the following experiment with 150cm^3 of three different liquids.



He used light sensors to measure the amount of light that passed through each beaker of liquid and recorded the data in the table below.

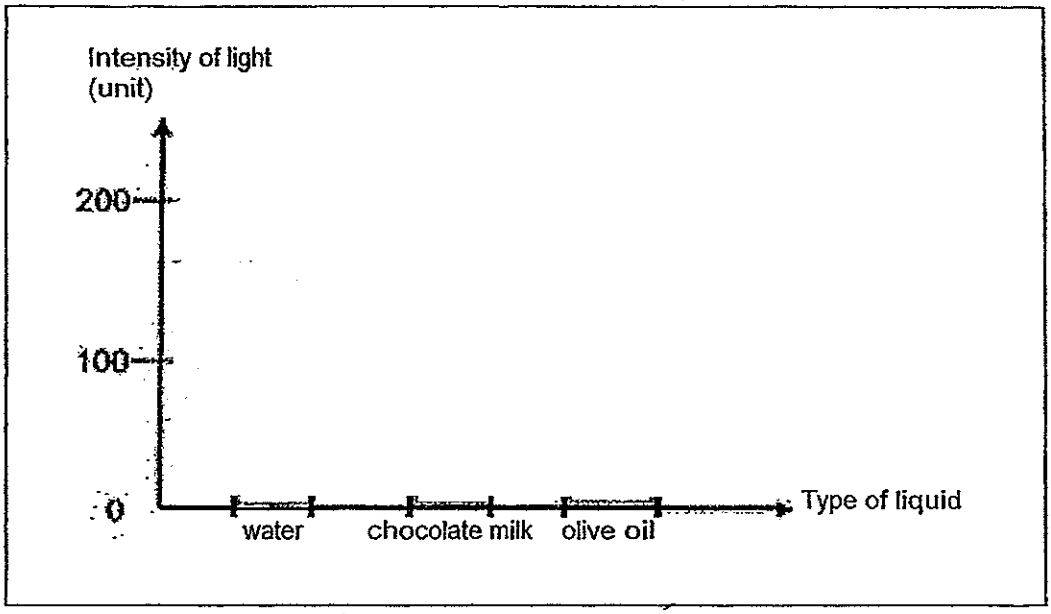
Type of liquid	Chocolate Milk	Olive Oil	Water
Intensity of light (unit)	50	150	200

(a) Which of the following would be the aim of the experiment?
Put a tick(√) in the correct box. [1]

(i)	To test if the volume of a liquid affects the amount of light that can pass through.	
(ii)	To test if the type of liquid affects the amount of light that can pass through.	
(iii)	To test if the state of the liquid affects the amount of light can pass through.	

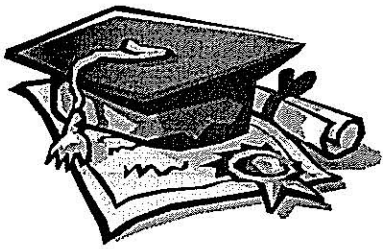
1

(b) Based on the data collected, **complete** the graph by **drawing three bars** to represent the results. [1]



1

End of Booklet B2



ANSWER SHEET

EXAM PAPER 2014
SCHOOL : MGS
PRIMARY : P5
SUBJECT : SCIENCE
TERM : CA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
2	2	1	3	3	4	4	1	2	3	1	2	3	3	1	3	4

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
1	3	3	3	2	2	4	4	3	2	1	4	4

31)a)24 days.
b)Larva.
c)Adult. Its bite can cause fatal illnesses.

32)a)Three pairs of legs.
b)It has a hard covering, more than 3 main body parts and has 2 pairs of legs in each segment.
c)i)P ii)M

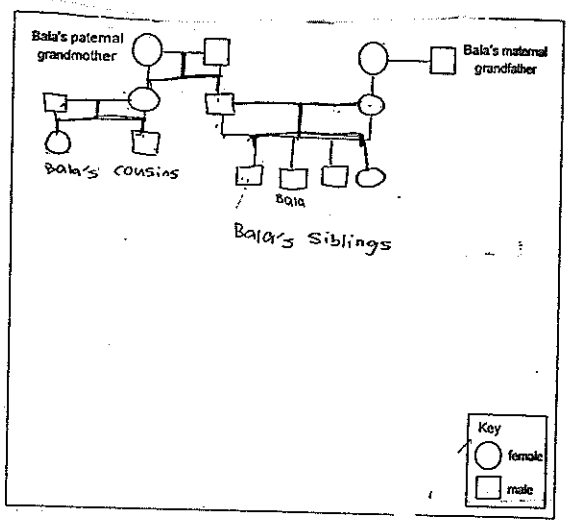
33)a)The more water is given, the more leaves the plants will grow as they need water to carry out photosynthesis.
b)D.
c)It has more leaves to capture more light energy to carry out photosynthesis.

34)a)The leaves were unable to make food as water was transported to part X.
b)The stem.

35)a)Three.
b)i)Xena is Diane's niece.
ii)They are siblings.

36)i) ii) √ iii)X iv) √

37)



38)a)4, 5, 1, 2, 3
b)The decrease in water plants will reduce the amount of oxygen produced by them. The marine life will eventually die because they cannot survive when all the oxygen has been used up.

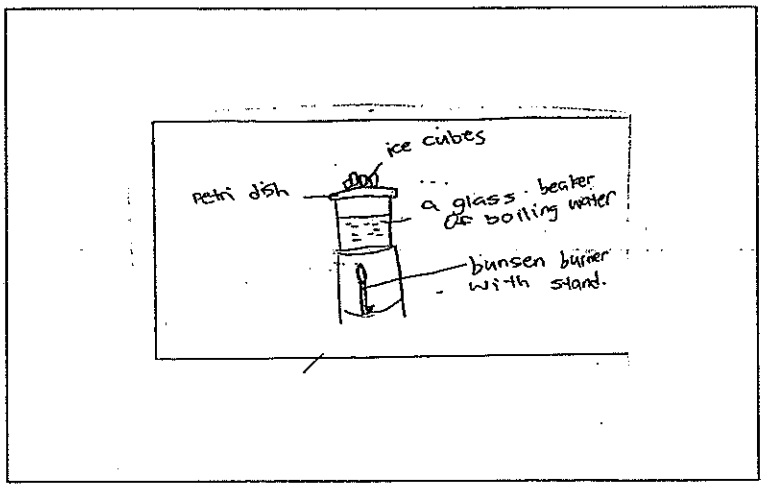
39)a)X: South
b)The like poles of the magnet are facing each other so they repel.
c)Less than 2 cm
d)Magnet C has mass, so its mass pushes Magnet A down resulting in a decrease of distance.

40)a)30 cm^3
b)130 cm^3
c)Although they both have different mass, they have the same size and shape.

41)a)Bala.
b)Yes.
c)The water droplets that formed on the outer part of the bag will add mass to the bag.

42)a)To find out the heat conductity of Material X and Y.
b)The water in each beaker is different.
c)Material X is able to keep water hot for a longer period of time compared to Material Y.

43)a)



b)Water evaporates into water vapour rises and comes into contact with the cooler surface of the base of the Petri dish. It loses heat and condenses into water droplets. The water droplets will drip back into the beaker again.

44)a)ii)

b)