

Pei Chun Public School  
Continual Assessment - 2009  
Science  
Primary 4

Name : \_\_\_\_\_ ( )

Date : 27 August 2009

Class : Pri. 4 ( )

Science Teacher : \_\_\_\_\_

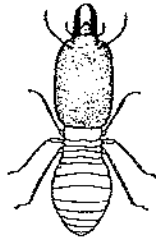
Time : 1 h 20 min

**Section A (25 × 2 marks)**

For questions 1 to 25, choose the most suitable answer and shade its number (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

1. Study the diagrams of the four animals below. Which of them is not an insect?

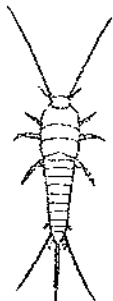
(1)



(2)



(3)



(4)



( )

2. The leaves of the rain tree fold up at night or during rainy periods. This tells us that living things \_\_\_\_\_

- (1) can grow
- (2) can reproduce
- (3) need air, food and water
- (4) respond to changes around them

( )

3. Compare the two organisms in the diagrams below.



Organism A



Organism B

Based on the diagrams, which of the following statements about the two organisms is correct?

- (1) Organism A lives in water but Organism B lives on land.
  - (2) Organism A has leaves but Organism B has no leaves.
  - (3) Organism A does not bear flowers but Organism B does.
  - (4) Organism A is an adult plant but Organism B is a young plant.
- ( )

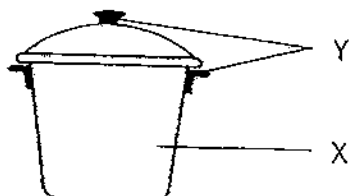
4. The properties of materials, A, B, C and D, are given in the table below.

Type of material	Waterproof	Flexible	Break easily
A	✓	✓	
B	✓		✓
C		✓	✓
D	✓	✓	✓

Which material is most suitable for making a raincoat?

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

5. Study the parts of the pot in the diagram below.

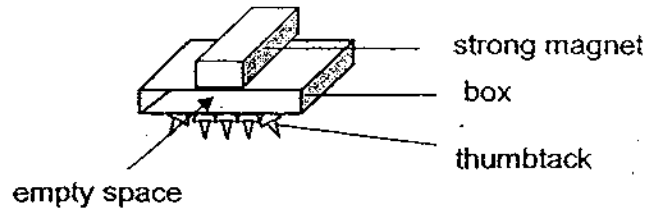


Which materials are most suitable for making the parts, X and Y?

	X	Y
(1)	glass	plastic
(2)	plastic	metal
(3)	metal	glass
(4)	metal	plastic

( )

6. John came up with a simple invention that could pick up sharp thumbtacks from the floor easily. He used a hard paper box and removed the top and bottom flaps. Then he taped a bar magnet on one side of the box and used the opposite side to attract thumbtacks.

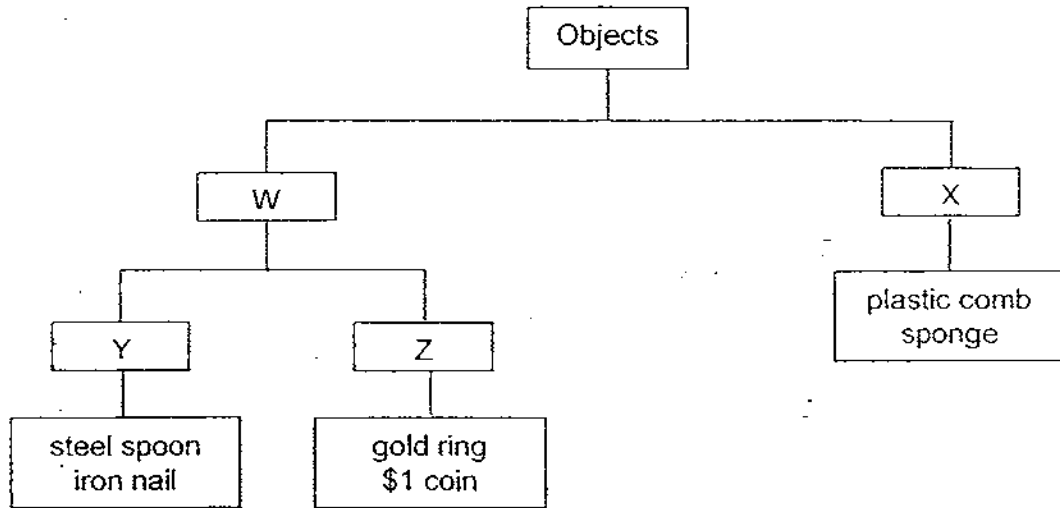


When he inserted a ruler into the empty space of the box, all the thumbtacks fell off. Which material was the ruler made of?

- (1) wood
- (2) steel
- (3) paper
- (4) plastic

( )

7. Study the classification chart below.

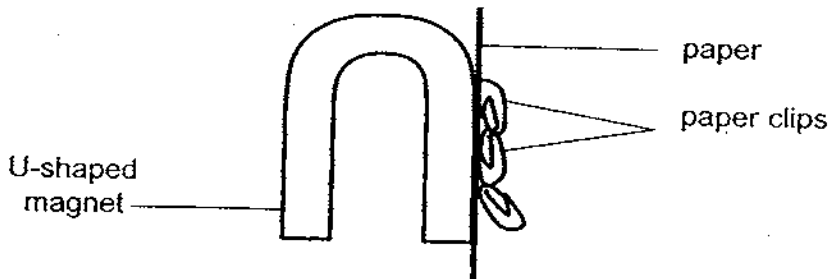


What should be the correct headings represented by W, X, Y and Z?

	W	X	Y	Z
(1)	Metals	Non-metals	Magnetic	Non-magnetic
(2)	Metals	Magnetic	Non-metals	Metals
(3)	Non-magnetic	Non-metals	Metals	Magnetic
(4)	Non-metals	Metals	Magnetic	Non-magnetic

( )

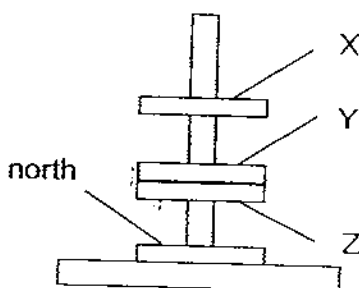
8. Kim put a piece of paper beside a U-shaped magnet as shown in the diagram below. She found that it could attract the paper clips on the other side.



Which of the sentences below explained what Kim had observed?

- (1) Unlike poles attract.
- (2) Magnetic force can pass through the paper.
- (3) The strongest pull of the magnet is at its poles.
- (4) The paper clips are attracted to the strongest part of the magnet. ( )

9. Study the arrangement of the four ring magnets shown in the diagram below. X, Y and Z are the poles of the ring magnets.



Which of the following matches the correct poles to the X, Y and Z?

	X	Y	Z
(1)	south	north	south
(2)	south	south	north
(3)	north	north	south
(4)	north	south	north

( )

10. Salim described the properties of a certain material to his friends.

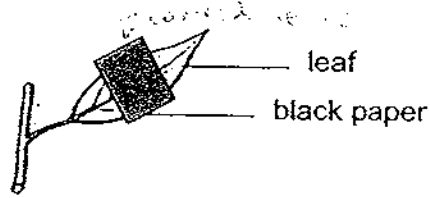
He said, "It can be made into many shapes and comes in almost any colour. It can be flexible or hard. It is light and waterproof."

Which material best matched the description given by Salim?

- (1) wood
- (2) fabric
- (3) glass
- (4) plastic

( )

11. Mrs Sheela set up an experiment as shown in the diagram below.



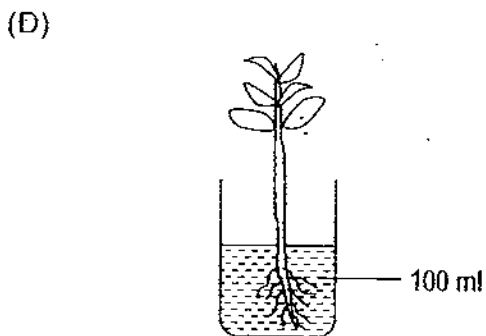
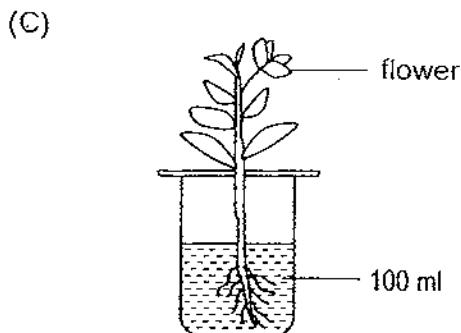
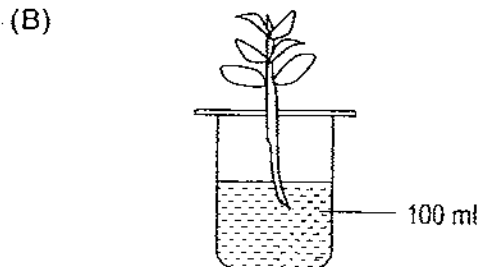
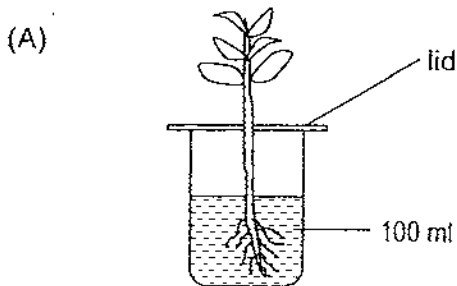
She covered part of a leaf of a healthy potted plant with black paper and put the plant in the open. She watered the plant daily. A week later, she removed the black paper and observed that the covered part had turned yellow. It showed that the covered part of the leaf could not \_\_\_\_\_.

- A: get water
- B: make food
- C: trap light energy

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

( )

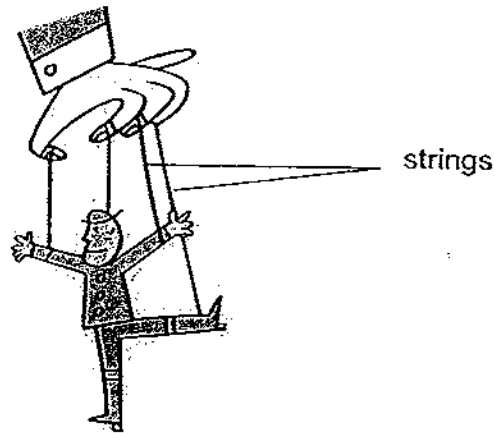
12. Joe wants to find out if plants absorb water through their roots. Which two set-ups should he choose to conduct a fair test?



- A and B only
- A and D only
- B and C only
- C and D only

( )

13. The diagram below shows a string puppet.

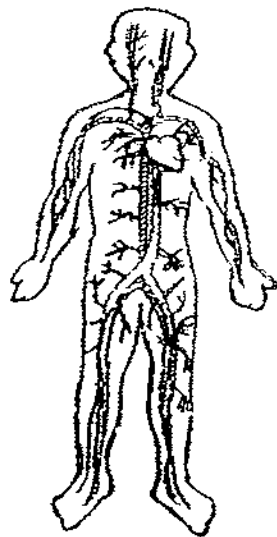


The puppeteer pulls or relaxes the strings attached to the hands and legs of the puppet to make it move. The strings are similar to the \_\_\_\_\_ in our human body.

- (1) blood vessels
- (2) intestine
- (3) muscles
- (4) bones

( )

14. The diagram below shows a system in our body.



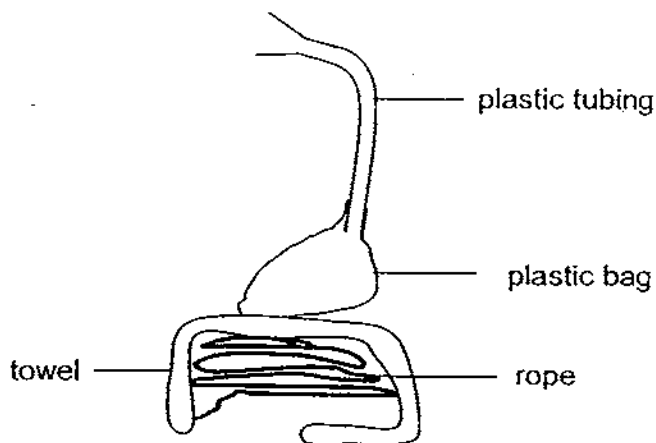
Which of the following processes takes place in the system?

- A: Food is broken down into simple substances.
- B: Undigested food is passed out as waste from the body.
- C: Food, water and oxygen are carried to all parts of the body.
- D: Waste materials are removed from different parts of the body.

- (1) C only
- (2) A and B only
- (3) C and D only
- (4) A, B and C only

( )

15. Zen made a model of the human digestive system as shown below.



What do the materials represent in a human digestive system?

	rope	towel	plastic bag	plastic tubing
(1)	small intestine	large intestine	stomach	gullet
(2)	gullet	stomach	large intestine	small intestine
(3)	small intestine	gullet	stomach	large intestine
(4)	large intestine	stomach	small intestine	gullet

16. In the classification table below, E, F and G, are different states of matter.

E	F	G
wind	flour	juice
oxygen	ice	steam
carbon dioxide	cotton	oil

Which of the items is wrongly classified?

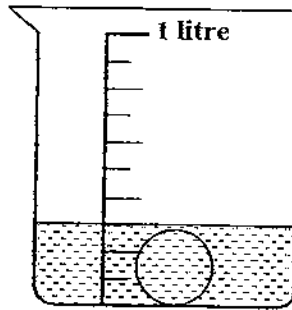
- ~~(1)~~ oil
- ~~(2)~~ wind
- (3) flour
- ~~(4)~~ steam

17. Both gases and solids \_\_\_\_\_.

- ~~A~~ have mass
- ~~B~~ occupy space
- ~~C~~ do not have a definite volume

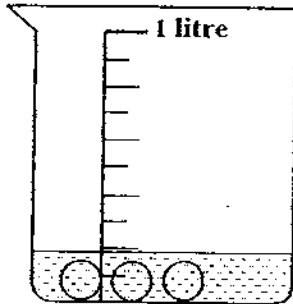
- (1) A only
- (2) A and B only
- (3) B and C only
- (4) A, B and C

18. Josie put one big ball of plasticine into a beaker of water. Then, she read the water level in the beaker.

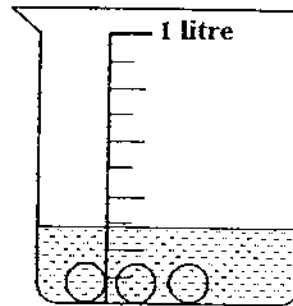


Next, she took the plasticine ball out of the water carefully and cut it up into three equal pieces. She rolled all the pieces into three identical balls and put them into the beaker again. Which of the following diagrams shows the correct water level in the beaker?

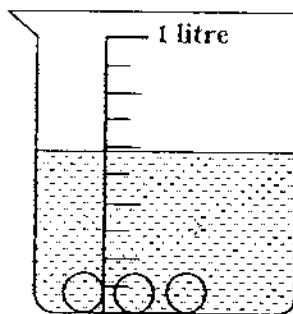
(1)



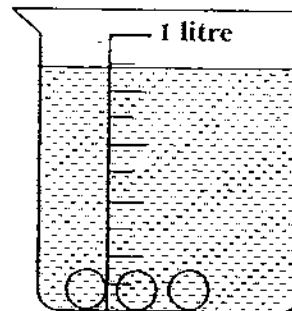
(2)



(3)



(4)



( )

19. Which of the following statements about light is incorrect?

- (1) We can see only objects that give out light.
- (2) The sun is our main source of light energy.
- (3) A shadow is formed when light is blocked.
- (4) We can see only when there is light.

( )



20. A tap has been left running to fill up a pail with water. After some time, a puddle of water is formed around the pail.

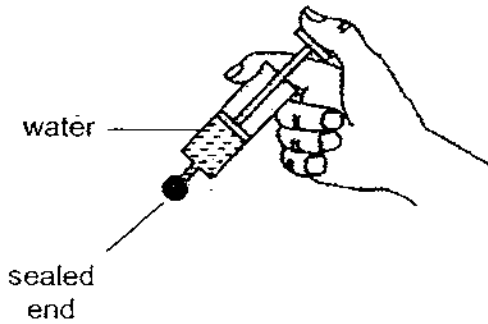
What can be learnt about water from the observation?

- A. Water has mass.
- B. Water occupies space.
- C. Water has a definite volume.
- D. Water does not have a definite shape.

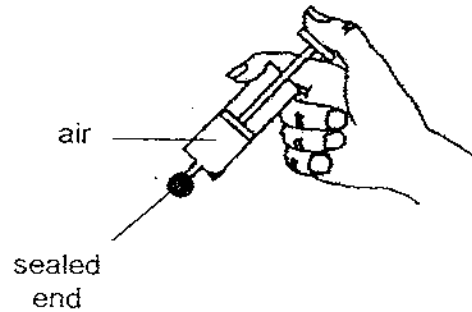
- (X) B and C only
- (X) A, B and C only
- (X) B, C and D only
- (X) All of the above

( )

21. George carried out an experiment. He filled Syringe A with 10 ml of water and sealed the nozzle with plasticine. Then he pushed the plunger in as far as it could go. He recorded the volume of water. He repeated the steps with 10 ml of air in Syringe B.



Syringe A



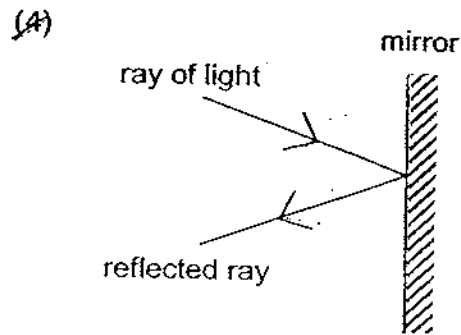
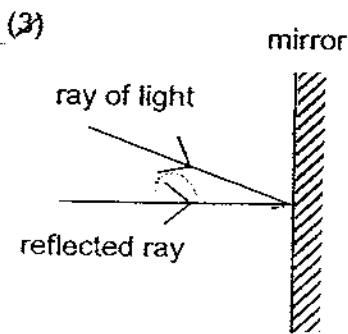
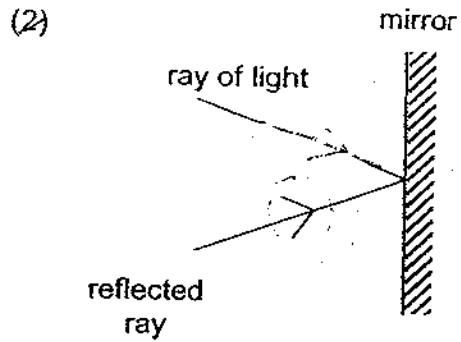
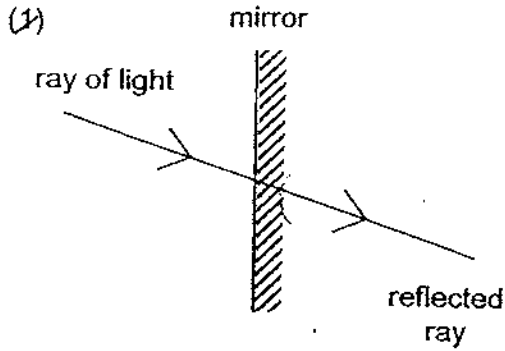
Syringe B

Which is most likely to be the correct set of results?

	Volume of water in Syringe A	Volume of air in Syringe B
(1)	10 ml	10 ml
(2)	8 ml	7 ml
(3)	7 ml	7 ml
(4)	10 ml	7 ml

( )

22. Which of the diagrams below correctly shows the reflected ray when a light ray shines on a mirror?



( )

23. Harizah observed the position and the length of the shadow of a pole at two different times of the day.



shadow S



shadow W

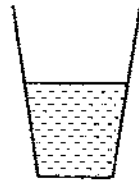
If shadow S was observed at 10 a.m., what was the most possible time that shadow W was observed?

- 9 a.m.
- 11 a.m.
- 1.30 p.m.
- 6 p.m.

( )

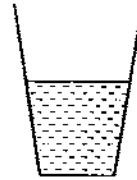
24. Susie filled four identical glasses with different amounts of tap water at different temperatures. Which of the following glasses of water had the most heat?

(1)



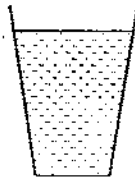
50°C

(2)



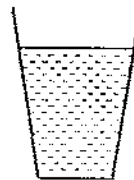
60°C

(3)



30°C

(4)



80°C

( )

25. Four pupils tried to explain what happened when ice cubes were added into a cup of hot water.

Eddy: The ice was losing its coldness to the hot water.

Faizal: Heat caused the ice cubes to become smaller.

Gopal: Heat was transferred from the hot water to the ice.

Huiluan: There was a change in temperature in the hot water.

Which pupil gave the wrong explanation?

(1) Eddy

(2) Faizal

(3) Gopal

(4) Huiluan

( )

For Questions 26 to 30, please refer to Booklet K.

End of Section A

**Pei Chun Public School**  
**Continual Assessment - 2009**  
**Science**  
**Primary 4**

Name: \_\_\_\_\_ ( )

Class: Pri. 4 ( )

Date: 27 August 2009

Time: 1 h 20 min

Science Teacher: \_\_\_\_\_

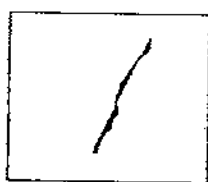
Parent's Signature: \_\_\_\_\_

Section A	60
Section B	20
Booklet K (excludes MCQs)	10
Practical Test	10
Total	100

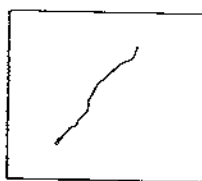
**Section B (20 marks)**

For questions 31 to 38, write your answers in the spaces provided.

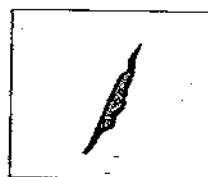
31. Zainal wanted to compare the hardness of three different materials of the same size and thickness. He used an iron nail to scratch each material once with the same strength. The diagrams below showed what he observed.



Material A



Material B



Material C

- (a) What was the only variable that was changed in the experiment? (1 m)

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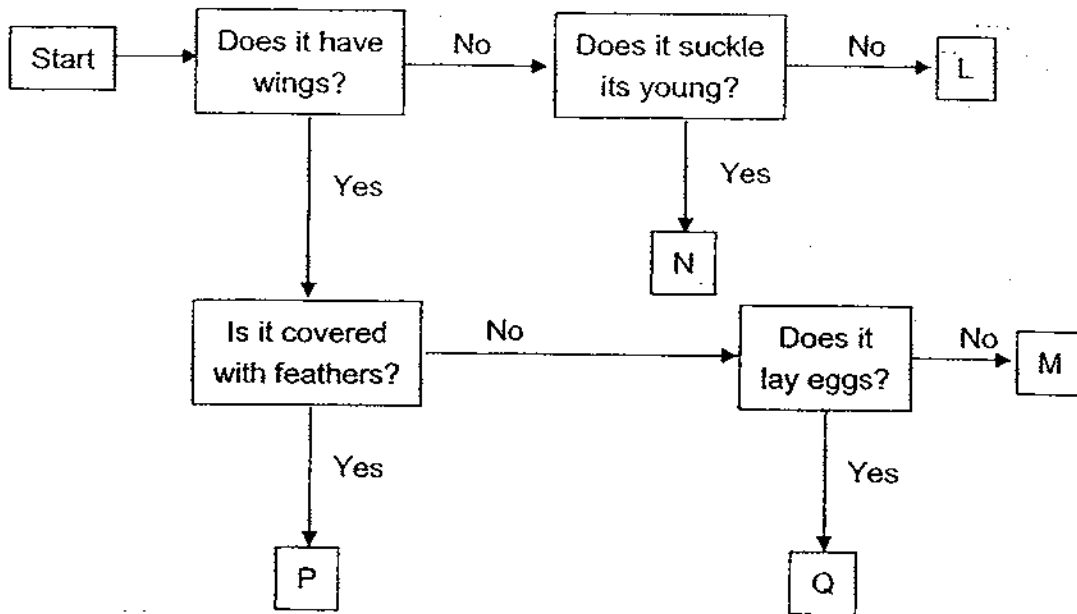
- (b) Based on the diagrams, what did Zainal conclude from his experiment? (1 m)

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32. Study the flow chart below.



(a) Based on the flow chart, describe two characteristics of Animal N. (1 m)

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(b) Based on the flow chart, state one difference between animals P and Q. (1 m)

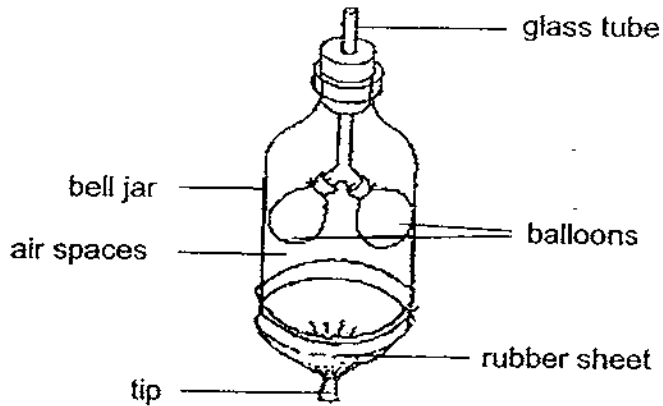
\_\_\_\_\_

\_\_\_\_\_

(c) Match each animal correctly with its letter, L, M, N, P or Q. You can only use each letter once. (2 m)

Animal	Letter
bat	
shark	
ostrich	
mosquito	

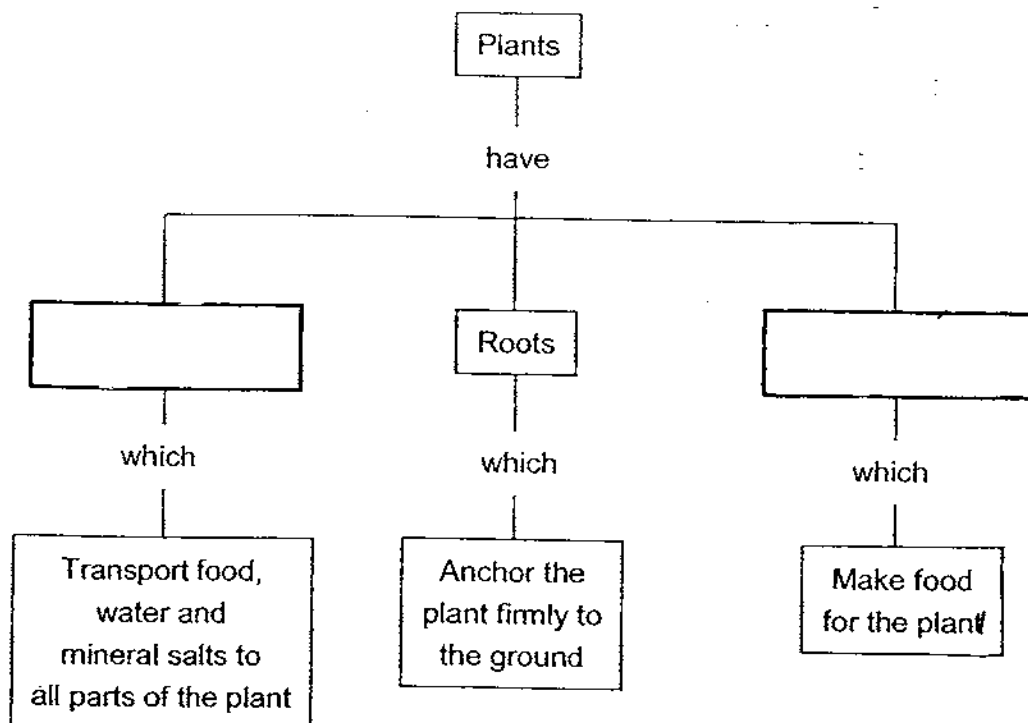
33. The diagram below shows a model of a human respiratory system. A rubber sheet is stretched across the bottom of the bell jar and tied firmly in place.



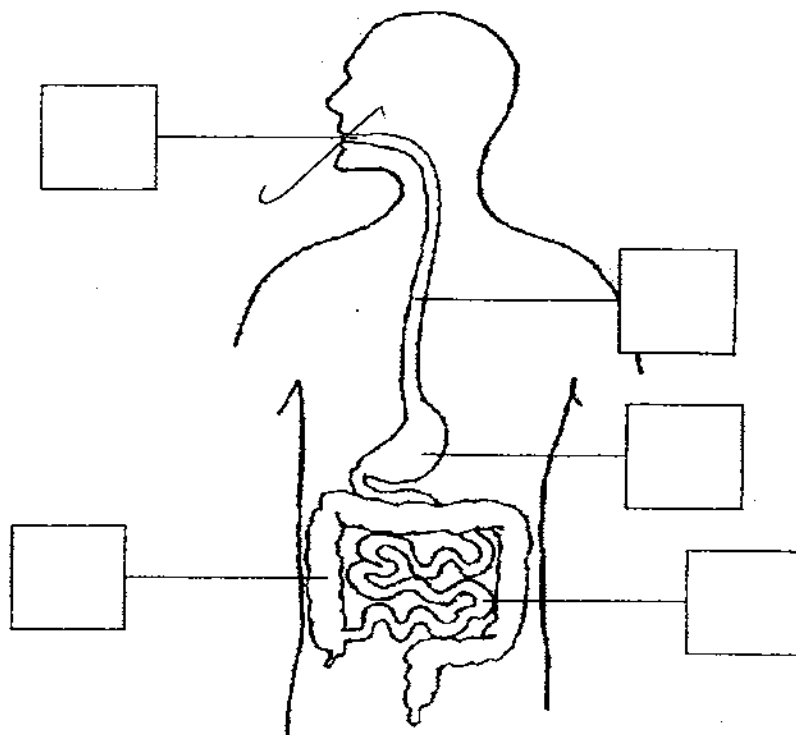
- (a) Complete the table by filling in the parts of a human respiratory system that are represented by the model. (1 m)

Model	Respiratory System
Glass tube	
Balloons	

- (b) Complete the chart below with a suitable heading for each box. (1 m)



34. The diagram below shows the digestive system of the human body.



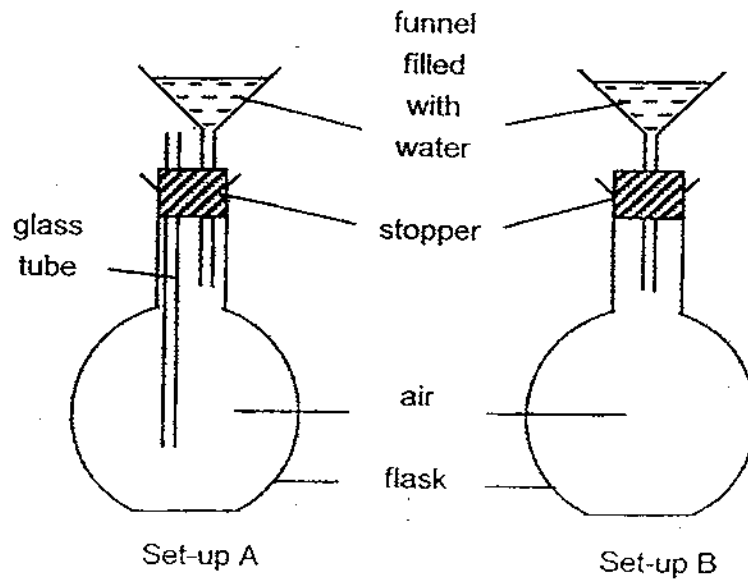
Use the information in the table below to label the parts in the diagram. Write the letters, D, E, F and G, in the correct boxes. ( 2 m )

What happens to the food we eat in the organ	Organ
Churned, crushed and mashed until it becomes like a thick liquid.	D
Completely digested and absorbed into the blood vessels.	E
Pushed downwards by strong muscles.	F
Cut and grind into smaller pieces.	G

35. Aini wants to find out the mass of 50 ml of water. The instructions below are not arranged in order. Write the numbers, 1, 2, 3 and 4, in the correct boxes to help Aini carry out her experiment. ( 2 m )

Instruction	Correct Order
Pour 50 ml of water into the container.	
Find the difference between the total mass and the mass of container. The answer gives the mass of 50 ml of water.	
Find the total mass of the container and the water.	
Find the mass of an empty container.	
Step 4 gives the mass of 50 ml of water.	5

36. Roger conducted an experiment using identical apparatus in both set-ups as shown below.



- (a) When the same amount of water was poured into the funnels, which set-up allowed water to flow through more quickly? (1 m)

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- (b) Explain your answer in (a). (1 m)

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- (c) What property of air can be concluded from this experiment? (1 m)

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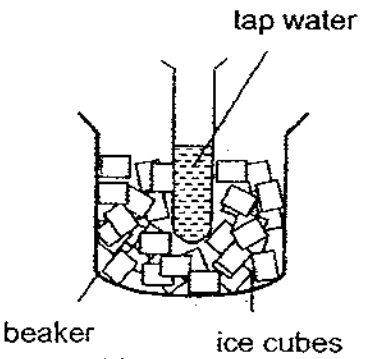
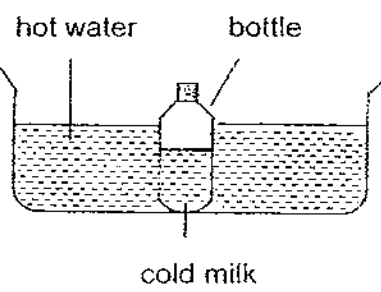


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37. Study the set-ups below. Some of the labelled items will gain heat and some will lose heat.

(a) Put a tick in the correct boxes. ( 2 m )

Set-up	Item	Gains heat	Loses heat
	tap water		
	ice cubes		
	beaker		
	cold milk		
	hot water		

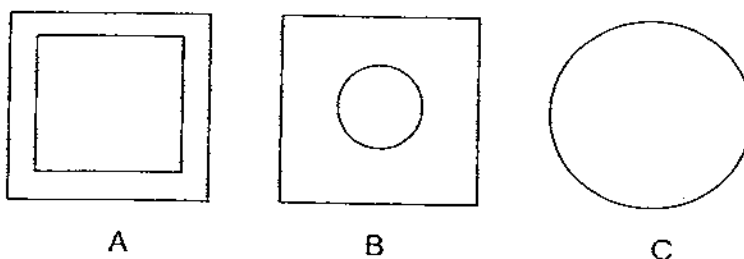
(b) Tom could not remove the metal lid of a new bottle of jam. He ran warm water over the lid for some time and found that he could remove the lid more easily. Explain why that was so. ( 1 m )

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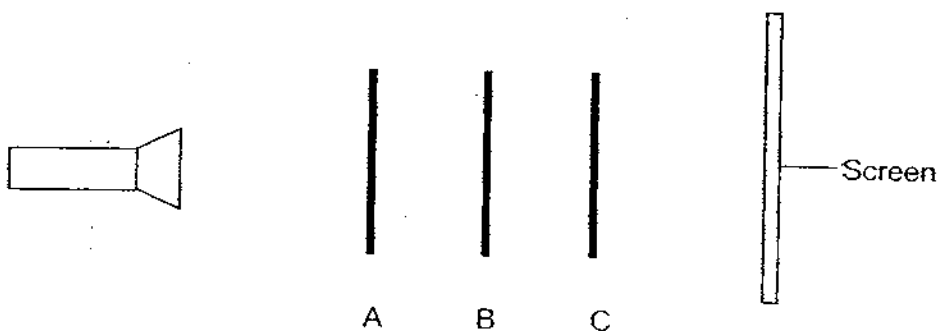


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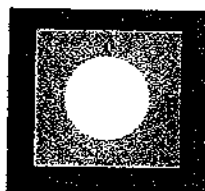
38. Three objects, A, B and C, of similar thickness, are made of different materials. Object A has a square hole in its centre. Object B has a circular hole in its centre.



The three objects are placed one behind the other in a straight line. A lighted torch is shone on the objects.



The diagram below shows the shadow that is cast on the screen.



What can we tell from this experiment? Put a tick in the correct boxes. (2 m)

Statement	True	False	Impossible to tell
Object A allows all light to pass through.			
Object B is translucent.			
Object C is opaque.			
Object B is plastic.			

For Questions 39 to 42, please refer to Booklet K

End of Section B

Set by : Mrs Yeo-Chong K.Y.  
 Vetted by: P4 Science Committee teachers

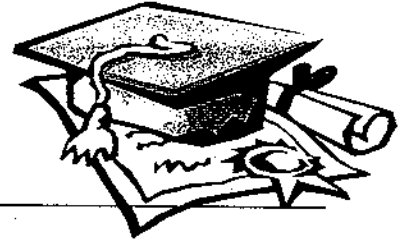


# ANSWER SHEET

## EXAM PAPER 2009

SCHOOL : PEI CHUN PRIMARY  
 SUBJECT : PRIMARY 4 SCIENCE

TERM : CA2



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

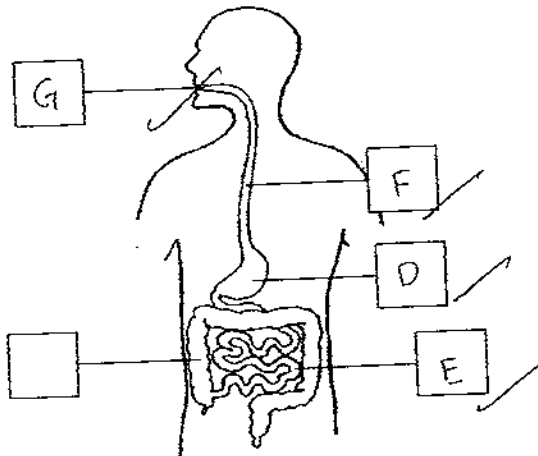
Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25
2	1	3	4	4	3	4	1

31)a)The material he was scratching with the iron nail.  
 b)material B is the hardest, followed by material A and the softest is material C.

32)a)i)Animal N does not have wings.  
 ii)Animal N suckles its young.  
 b)Animal P is covered with feathers while Animal Q is not.  
 c)M, L, P, Q

33)a)Glass tube: Windpipe                      Balloons: Lungs  
 b)Stem, Leaves

34)



**35)2,4,3,1**

**36)a)Set-up A.**

**b)As water is poured quickly into the funnel, of set-up A air in the flask could escape through the glass tube, allowing the water to flow in more quickly.**

**c)Air occupies space.**

**37)a)Loses heat**

**Gains heat**

**Loses heat**

**Gains heat**

**Loses heat**

**b)When Tom ran warm water over the lid for some time, the heat from the warm water cause the metal lid to expand, allowing Tom to remove the lid more easily.**

**38)F, T, F, Impossible to tell**