



AI TONG SCHOOL

**2007 SEMESTRAL ASSESSMENT (1)
PRIMARY FOUR SCIENCE**

DURATION : 1hr 45 min

DATE: 15th of May 2007

INSTRUCTIONS

**Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.**

Name : _____ ()

Class : Primary 4 _____

Parent's Signature : _____

Date : _____

Practical Assessment	15
Written Assessment	85
Total	100

Section A (30 X 2 marks)

For each question 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 (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which of the following statements about matter are correct?

- A Some matter can be compressed.
- B All matter have a definite shape.
- C All matter take up space.
- D Some matter have definite volume.

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

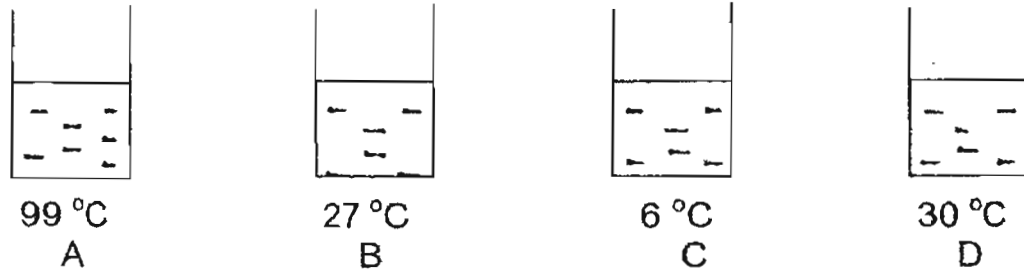
2. Which one of the following groups shows the three different states of matter?

- (1) orange juice, nitrogen, oxygen
- (2) carbon dioxide, apple, tea
- (3) mango, rock, sand
- (4) sugar, coffee, tea

3. Bala had a cup of hot milo. As it was too hot for him to drink, he put in a few cubes of ice. What would happen?

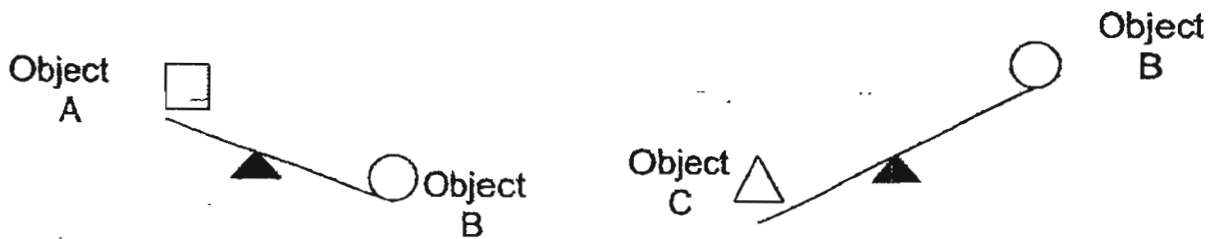
- (1) The hot milo would lose heat to the ice.
- (2) The hot milo would gain heat from the ice.
- (3) The temperature of the milo would become 0°C.
- (4) The temperature of the milo would remain the same.

4. Four containers of water were placed in a classroom. The temperature of water in each container is shown in the diagram below. On which glass would you see droplets of water forming on the outer surface?



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

5. The diagram below shows 3 objects, Object A, Object B and Object C on a balance.



Which one of the following statements can be concluded from the set up above?

- (1) Object A has a greater mass than Object C.
- (2) Object C has a smaller mass than Object B.
- (3) Object C has the greatest mass.
- (4) Objects B and C have the same mass.

6. Which of the following properties best describe shampoo?

- A It can be compressed.
- B It has a definite volume.
- C It has no definite shape.
- D It has no definite mass.

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

7. Bala went to a funfair. In order for him to win a prize, he needed to guess what was in a box. He was only allowed to feel the object but not look at it.

He said, "The object is hard and cannot be squeezed."

What could the object be?

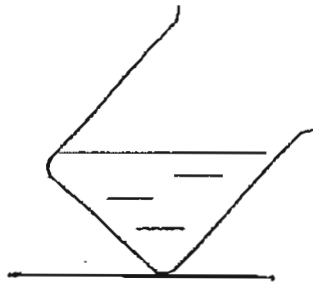
- (1) Soft toy
- (2) Toy car
- (3) Cotton wool
- (4) Paper plate

8. Which one of the following is not matter?

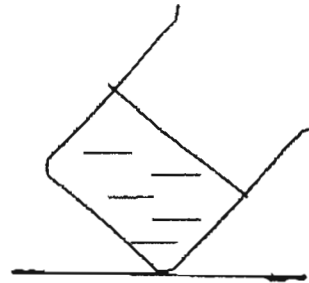
- (1) Dust
- (2) Water Vapour
- (3) Steam
- (4) Heat

9. Which are the 3 Rs that can help in water conservation?
- A Reduce
 - B Reverse
 - C Reuse
 - D Recycle
- (1) A, B and C
 - (2) A, C and D
 - (3) A, B and D
 - (4) B, C and D
10. Which of the following human activities does **not** cause water pollution to take place?
- (1) littering into the sea
 - (2) ships releasing their waste engine oil into the sea
 - (3) factories dumping toxic waste materials into the sea
 - (4) using water from the washing machine to mop the floor
11. Desalination is a process of _____.
- (1) dissolving salt in sea water
 - (2) removing dissolved salt from sea water
 - (3) removing pollutants from sea water
 - (4) increasing water supply to households

12. The diagram shows the contents of a beaker before and after a process has taken place.



start of
activity



end of
activity

The process is _____.

- (1) freezing
 - (2) condensation
 - (3) melting
 - (4) evaporation
13. During a water rationing exercise, _____.
- (1) water supply is disrupted temporarily
 - (2) water cost becomes more
 - (3) water becomes polluted
 - (4) water supply to our homes increases
14. Why is the water cycle important? It _____.
- (1) prevents water pollution
 - (2) provides energy for animals
 - (3) provides water for desalination
 - (4) ensures a constant supply of water

15. Mei Mei wanted to make some ice. She filled up a container with tap water and placed it in a freezer. What would happen to the water the next day?

- (1) The water would lose heat.
- (2) The water would gain heat.
- (3) The water would condense.
- (4) The water would remain a liquid.

16. In which of the following process is heat gained?

- A Melting
- B Evaporation
- C Condensation
- D Freezing

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

17. Which one of the following is not part of the respiratory system?

- (1) Stomach
- (2) Lungs
- (3) Windpipe
- (4) Nose

18. We breathe out air which is mainly high in its _____ content.

- (1) water vapour
- (2) carbon dioxide
- (3) oxygen
- (4) dust

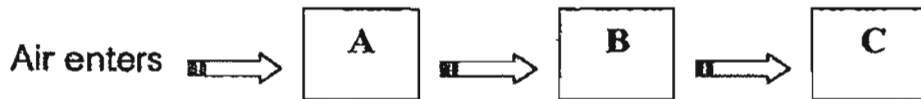
19. Which one of the following animals breathe through gills?

- (1) Bat
- (2) Whale
- (3) Sparrow
- (4) Mudskipper

20. When an insect changes its skin, we say that it is _____.

- (1) reproducing
- (2) moulting
- (3) responding
- (4) breathing

21. Study the flow chart on our respiratory system.



Identify A, B and C.

	A	B	C
(1)	Nose	mouth	lungs
(2)	windpipe	nose	lungs
(3)	Nose	lungs	windpipe
(4)	Nose	windpipe	lungs

22. If you were to choose a material to make a fish tank, which one of the following properties would you consider the most important?

- (1) the mass of material
- (2) whether it is colourful
- (3) whether it is stretchable
- (4) whether it is transparent

23. The classification table shows some materials and where they come from. Which set is correctly matched?

	Come from the plants	Come from the animals	Come from the ground
(1)	Silk	Paper	Iron
(2)	Rubber	Leather	Wool
(3)	Cotton	Wool	Gold
(4)	Plastic	Silk	Steel

24. Oxygen and water are similar because they _____

- (1) have no definite mass
- (2) have no definite volume
- (3) have no definite shape
- (4) can be compressed

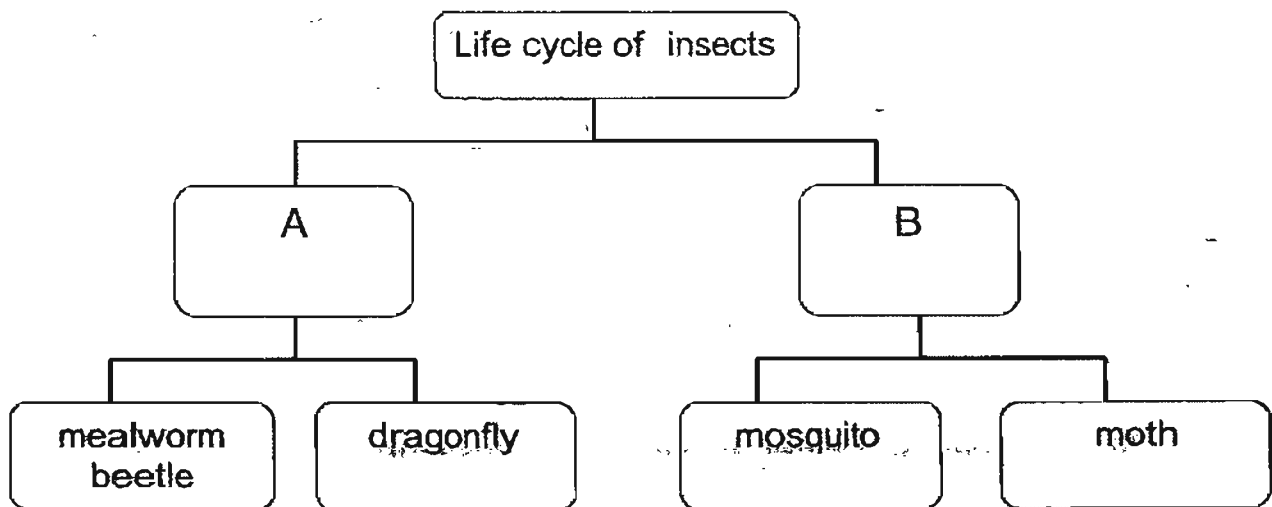
25. In which stage of its life does a female mosquito feed on blood?

- (1) Egg
- (2) Pupa
- (3) Larva
- (4) Adult

26. Which of the following gases is needed for burning and respiration?

- (1) Carbon dioxide
- (2) Oxygen
- (3) Nitrogen
- (4) Hydrogen

27. Which one of the following insects has been classified wrongly?

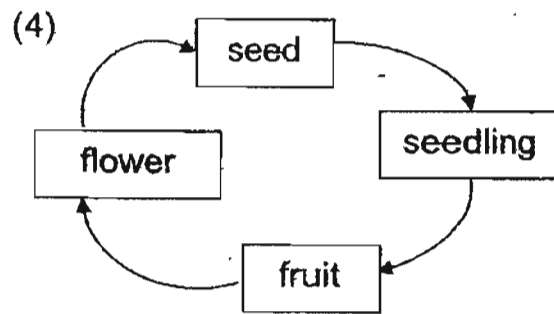
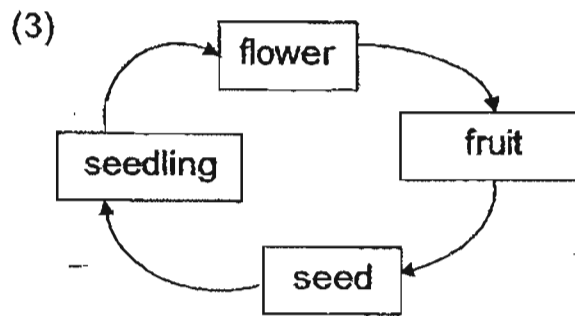
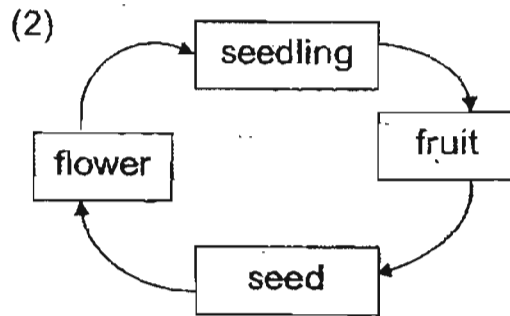
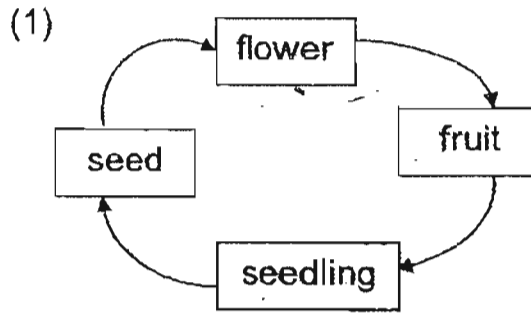


- (1) Mealworm beetle
- (2) Dragonfly
- (3) Mosquito
- (4) Moth

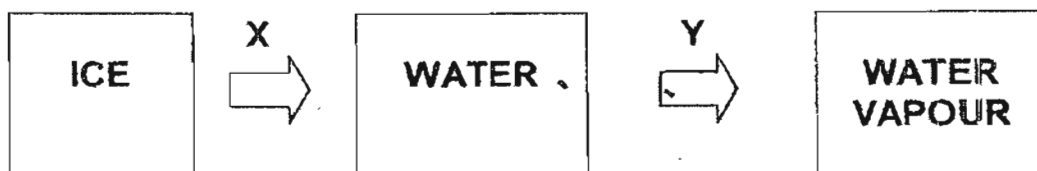
28. Fungi reproduce from _____.

- (1) spores
- (2) seeds
- (3) fruits
- (4) roots

29. Which diagram shows the correct life cycle of a flowering plant?



30.



The diagram above shows the changes of state that water goes through. What would be the possible descriptions for X and Y?

X

Y

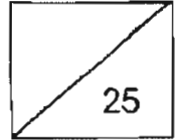
- | | |
|-----------------|-------------|
| (1) lost heat | lost heat |
| (2) gained heat | gained heat |
| (3) lost heat | gained heat |
| (4) gained heat | lost heat |

Primary 4 Science SA1 (2007)

Name : _____ ()

Class : _____

Date : _____



Section B (25 marks)

Answer all the questions in the spaces provided.

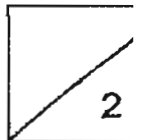
31. A boy carried out an experiment to investigate the rate of evaporation in a week. He poured different amounts of water into 4 similar beakers.

He recorded the volume of water in the four beakers at the beginning and end of the investigation. The results are shown in the table below.

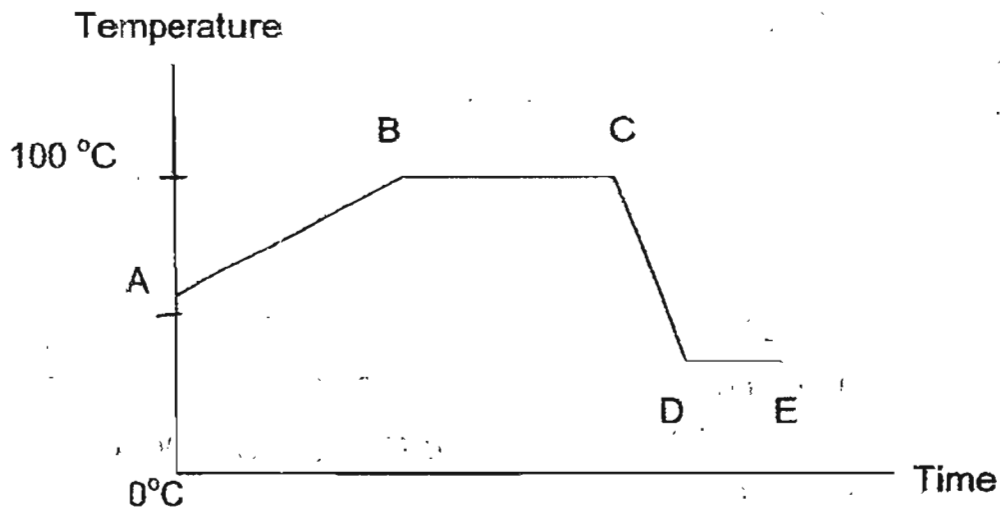
Container	Volume of water at the start of the investigation (ml)	Volume of water at the end of the investigation (ml)
W	65	55
X	75	45
Y	85	55
Z	95	30

- (a) In which container was evaporation the slowest? [1]

- (b) Why do you say so? [1]



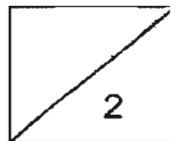
32. Cindy heated some water in a container. She recorded the temperature of the water every 3 minutes. After 10 minutes, she turned off the fire. She then left the container of water on the table. She recorded the temperature of the water in a graph as shown below.



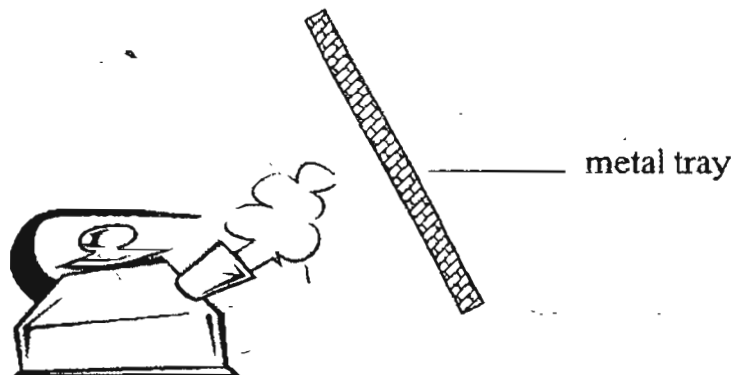
- (a) What is the likely temperature of the water at the Point of A?

[1]

- (b) What does the horizontal line BC tell us about the water? [1]

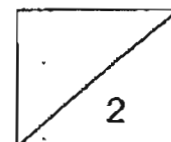


33. Mary is boiling some water in a kettle. She places a metal tray near the mouth of the kettle.

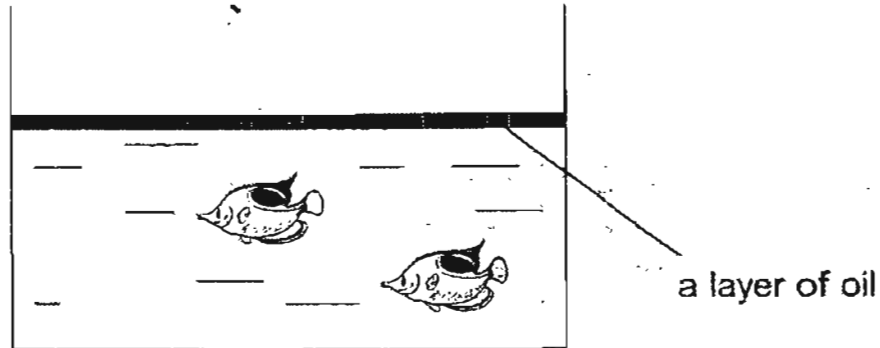


- (a) What will she observe on the underside of the metal tray? [1]

- (b) Explain how the substance is formed. [1]



34. Weiming wanted to find out the consequences of an oil spill. He set up an aquarium with some fish ~~and a water plant~~ as shown in the picture below. He poured some oil into the water.

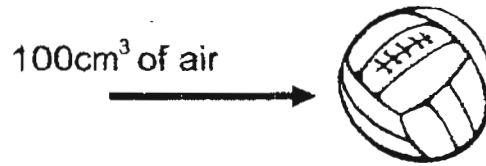


- (a) The fresh fish died after a week. Explain why they died? [1]
-
-
- (b) If oil spills in the sea, how would the body covering of birds be affected? [1]
-
-

35. Write 'True' or 'False' against each statement in the table. [2]

	Statement	True/ False
i)	All objects are made of a combination of different materials.	
ii)	Wood is an example of natural material.	
iii)	Rubber comes from the rubber trees.	
iv)	Clay is used to make bricks.	

36. A ball had 300cm^3 of air. Lily pumps another 100cm^3 of air into it.



- (a) How much air is there in the ball now? [1]

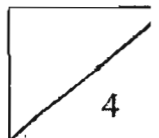
- (b) What does this activity tell us about air? [1]

37. The table below shows the water consumption used by three families who attended a "Water Conservation" talk in May. After the talk, the 3 families tabulated their water consumption.

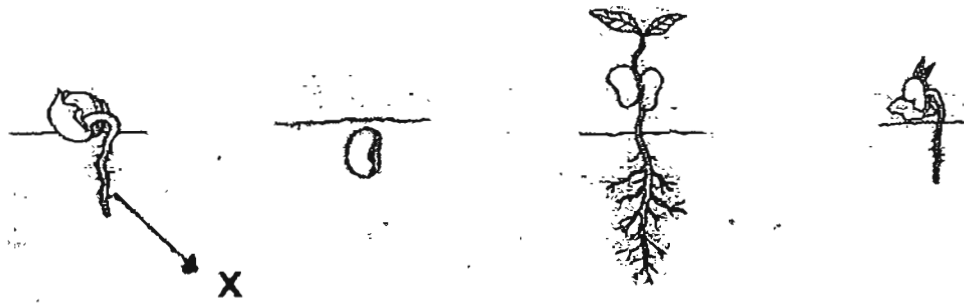
	23 litres	33 litres	46 litres
	15 litres	35 litres	47 litres
	19 litres	29 litres	41 litres
	45 litres	22 litres	50 litres

- (a) Which family shows a great understanding of water conservation after the talk? [1]

- (b) Explain your answer in (a). [1]



38. The pictures below show the different stages in the life cycle of a plant.

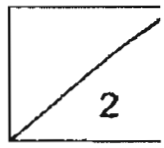


Picture A Picture B Picture C Picture D

(a) Arrange the pictures in the correct order to show how a seed can grow into a seedling. [1]

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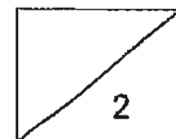
(b) Why does X grow downwards? [1]



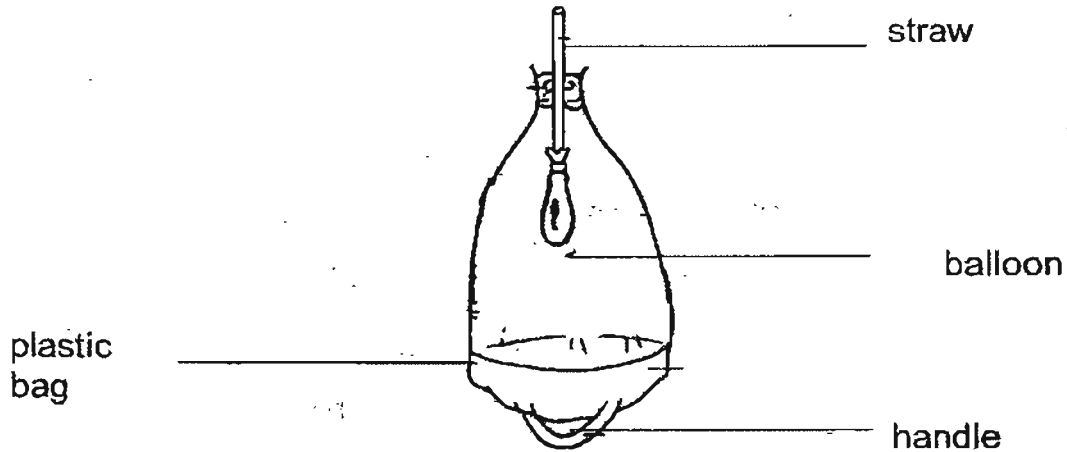
39. Write the four examples of matter in the table. [2]

~~honey~~ ice cube ~~hydrogen~~ ~~wine~~

	DEFINITE VOLUME	NO DEFINITE VOLUME
i) DEFINITE SHAPE		
ii) NO DEFINITE SHAPE		



40. The picture below is a model of a respiratory system of a human body.

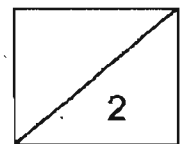


(a) Which part of the human organs is represented by the objects in the set up? [1]

i) straw _____

ii) plastic bag _____

(b) What will happen to the balloon when the handle is pulled away from the bottle? [1]



41. The table below shows two rivers with different conditions.

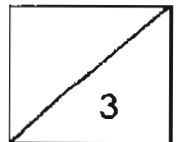
River A	River B
Water is cloudy	Water is clear
Few aquatic animals are living in the water	Many aquatic animals are living in the water
Scum on the surface of the water	No scum on the surface of the water

(a) State 2 reasons which tells us that River B is not polluted? [1]

(b) Besides the signs stated in the table, state two more signs of water pollution. [2]

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- ---

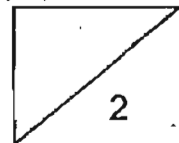


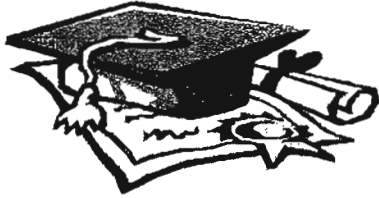
42. Mr Ling hung out 3 similar towels. She recorded the time taken for each towel to dry.

Towel	Description	Time
A	Not folded	10 minutes
B	Folded into halves	20 minutes
C	Folded into quarters	30 minutes

- (a) What is the pattern between the number of folds and the time taken for the towels to dry? [1m]

- (b) What is the factor that affects the rate of evaporation in this activity. [1m]





ANSWER SHEET

AI TONG PRIMARY SCHOOL - PRIMARY 4 SCIENCE 2007
SEMESTRAL ASSESSMENT (1)

1. 4
2. 2
3. 1
4. 3
5. 3
6. 3
7. 2
8. 4
9. 2
10. 1
11. 2
12. 1
13. 1
14. 1
15. 1
16. 2
17. 1
18. 1
19. 1
20. 2
21. 1
22. 4
23. 3
24. 3
25. 4
26. 2
27. 1
28. 1
29. 3
30. 2
- 31) a) Container W.
b) The water evaporated is the least.
- 32) a) The likely temperature is 60°C .
b) The horizontal line BC tell us that the water is remain at 100°C
- 33) a) She would observe water droplets on the underside of the metal.
b) This is because the boiling kettle had produced hot steam and so the hot steam touched the cool surface of the metal tray and then it condensed into water droplets.
- 34) a) The oil prevented air from passing through and so fish could not breathe.
b) The body covering of birds will clump together.
- 35) i) False ii) True iii) True iv) True
- 36) a) There are 300cm^3 air in the ball now.
b) This activity tells us that air can be compressed.
- 37) a) The Lim family.
b) The water consumption of the Lim Family decreased after but the other two family increased.

- 38) a) B, A, D, C
b) It is the roots, the roots go downwards in search of water.
- 39) i) Ice cube.
ii) Wine honey, hydrogen
- 40) a) i) windpipe. ii) diaphragm.
b) It will inflate.
- 41) a) One of the reasons is there are many aquatic animals are living in the water and there is no scum on the surface of the water.
b) .water is muddy.
.oil spill.
- 42) a) The more the towel is folded the longer it takes to dry.
b) The factor is the area of exposed surface.

---end---