

TAO NAN SCHOOL

PRIMARY 4 SCIENCE MID-YEAR EXAMINATION – 2008

Name : _____ () Date : 9 May 2008

Class : P4 _____

Time : 8.00 a.m. to 9.30 a.m.

Booklet A

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

Answer all questions.

	Score	Marks
Section A		60
Section B		40
Total		100

Parent's signature : _____

Section A (30 x 2 marks)

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

1. Which of the following are characteristics of living things?

- A: They can grow.
- B: They need food to survive.
- C: They can reproduce.
- D: They respond to their surroundings.

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

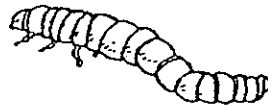
2. Which of the following is **true** about flowering plants?

- (1) They can bear fruits.
- (2) They reproduce by spores.
- (3) They have strong stems to support the leaves.
- (4) They give out a sweet scent during the day and at night.

3. I eat shellfish and worms.
I attach myself onto the sea floor, rocks or animals.
Usually, I do not move but I can slide or swim slowly.
My mouth is surrounded by tentacles.
What am I?

- (1) Crab
- (2) Prawn
- (3) Octopus
- (4) Sea anemone

4. Look at the picture below. What is the adult of this animal?



A mealworm

- (1) Worm
- (2) Beetle
- (3) Cicada
- (4) Butterfly

5. Which of the following young animals resemble their parents?

A: caterpillar

B: calf

C: kitten

D: tadpole

E: wriggler

(1) B and C only

(2) D and E only

(3) A, B and C only

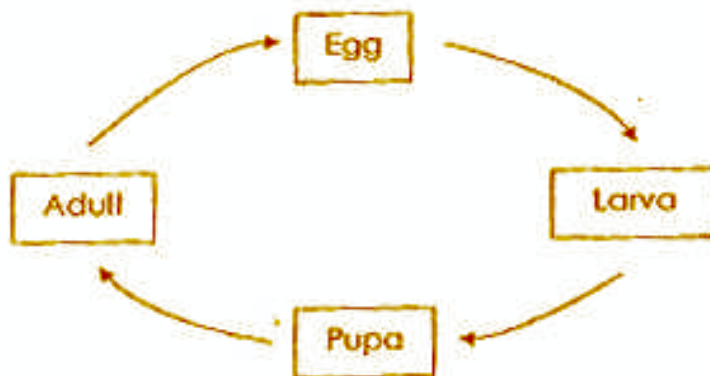
(4) A, D and E only

6. How are the animals in the table below classified?

Group X	Group Y
Frog	Ant
Goldfish	Chicken
Mosquito	Cockroach

	Group X	Group Y
(1)	Live in water	Live on land
(2)	Lay eggs in water	Lay eggs on land
(3)	3-staged life cycle	4-staged life cycle
(4)	Lay eggs	Give birth to young alive

Look at the life cycle below.

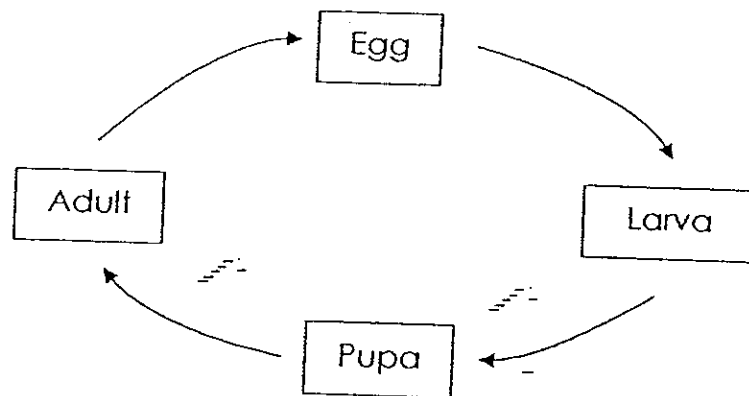


Which of the following animals go through similar stages in their life cycle as the one above?

- A: moth
- B: cricket
- C: dragonfly
- D: mosquito

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

7. Look at the life cycle below.



Which of the following animals go through similar stages in their life cycle as the one above?

- A: moth
- B: cricket
- C: dragonfly
- D: mosquito

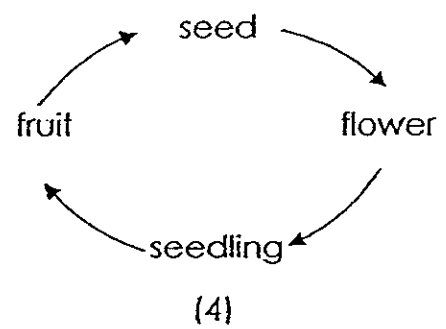
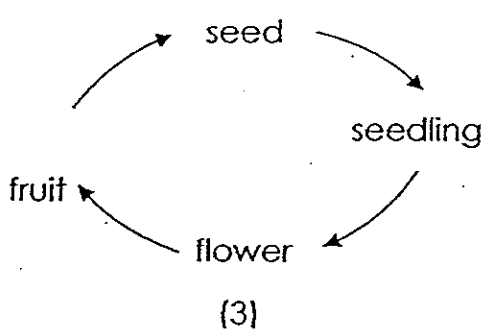
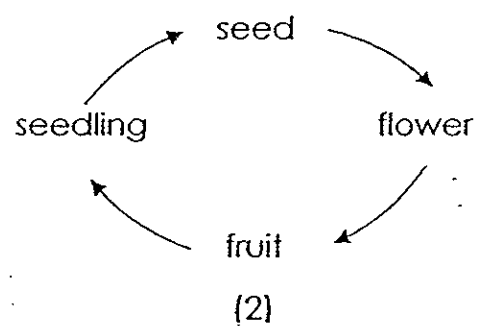
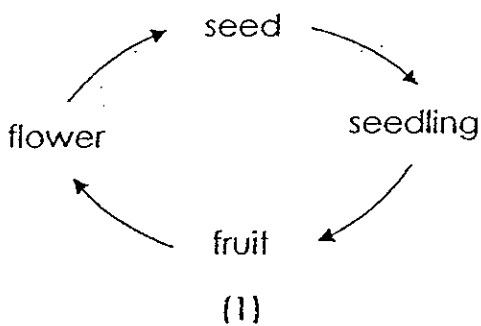
- (1) A and B only
- (2) A and D only
- (3) B and C only
- (4) C and D only

8. Lisa, Serene and Wendy made the following comparison between the life cycle of a bee and a frog.

	Comparison	Bee	Frog
Lisa	Develops from fertilised eggs?	Yes	Yes
Serene	Has three stages in its life cycle?	No	No
Wendy	Young resembles the adult?	No	No

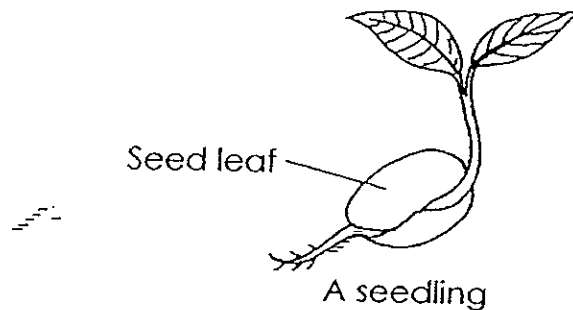
Who made the correct comparison?

- (1) Serene only
 - (2) Lisa and Wendy only
 - (3) Serene and Wendy only
 - (4) Lisa, Serene and Wendy
9. Which diagram shows the life cycle of a balsam plant?



Look at the diagram below and answer the questions, 10 and 11.

10.



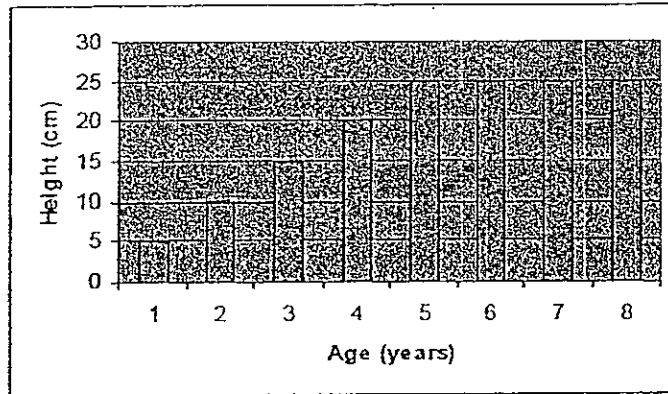
What is the main function of a seed leaf?

- (1) To protect the seed.
- (2) To provide food for the seedling.
- (3) To help the seedling to make food.
- (4) To hold the seedling firmly to the ground.

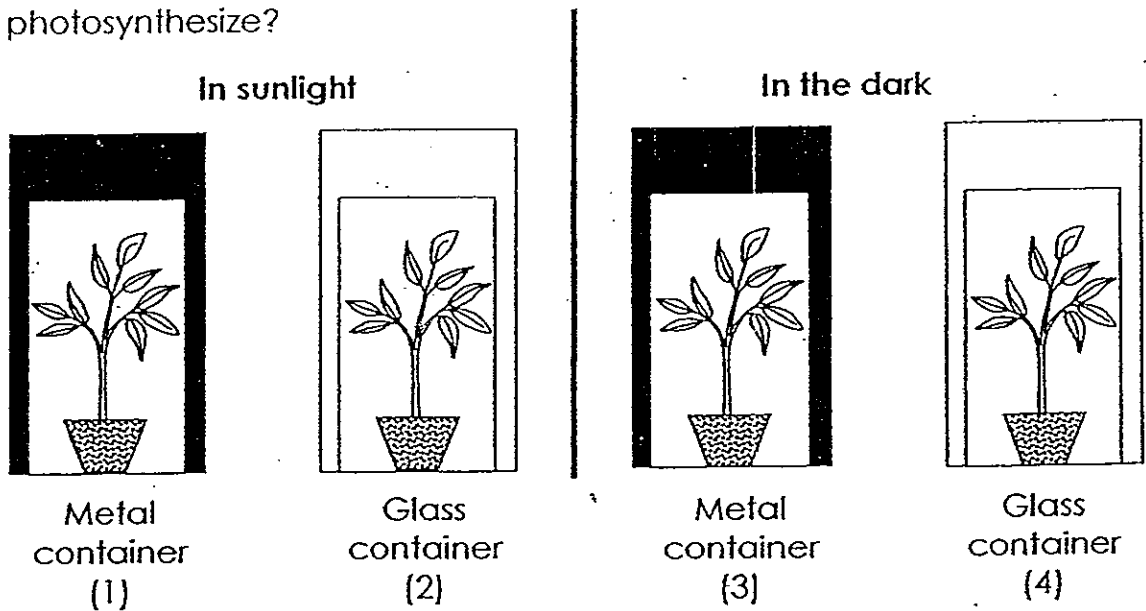
11. What will happen to the seed leaf as the seedling grows?

- (1) It will shrivel and drop off.
- (2) It will develop into green leaves.
- (3) It will develop into a young plant.
- (4) It will help the seedling to make food.

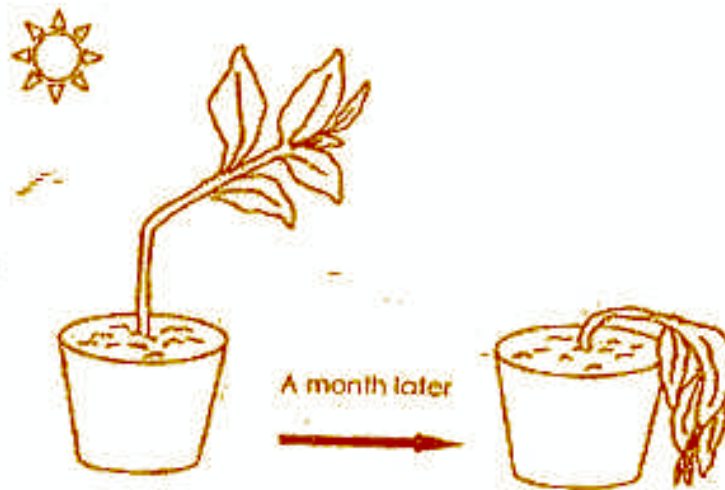
12. The graph below shows the relationship between the height of a cactus and its age. When did the cactus stop increasing in height?



- (1) 1st year
 (2) 3rd year
 (3) 5th year
 (4) 8th year
13. The plants below are watered daily. Which of the plants can photosynthesize?



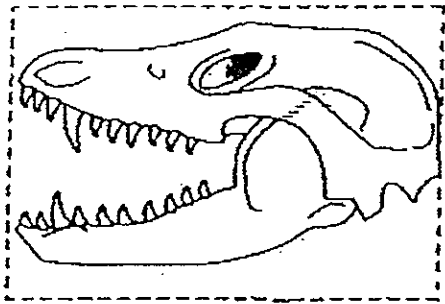
14. Sili wanted to find out if a plant with a broken stem can still grow. She placed a plant with a broken stem in her garden and watered it daily as shown below.



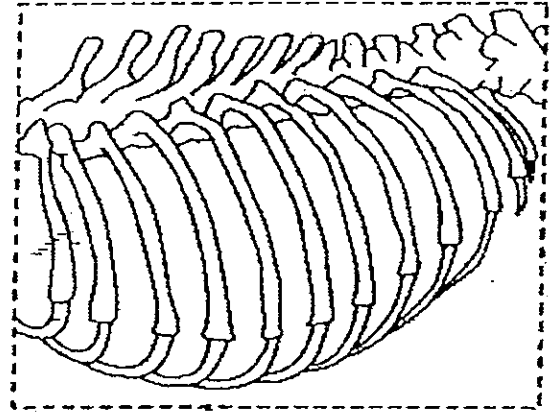
A month later, the plant died. Why?

- (1) The plant did not receive oxygen.
- (2) The plant did not receive sunlight.
- (3) Water cannot be transported to the leaves.
- (4) Carbon dioxide cannot be taken in by the leaves.

15. A group of scientist found two parts, A and B, of an animal as shown in the diagram below.



Part A



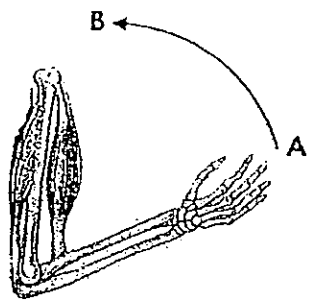
Part B

Which organs do each part protects?

	Part A	Part B
(1)	Brain	Small intestine
(2)	Teeth	Small intestine
(3)	Brain	Lungs
(4)	Teeth	Lungs

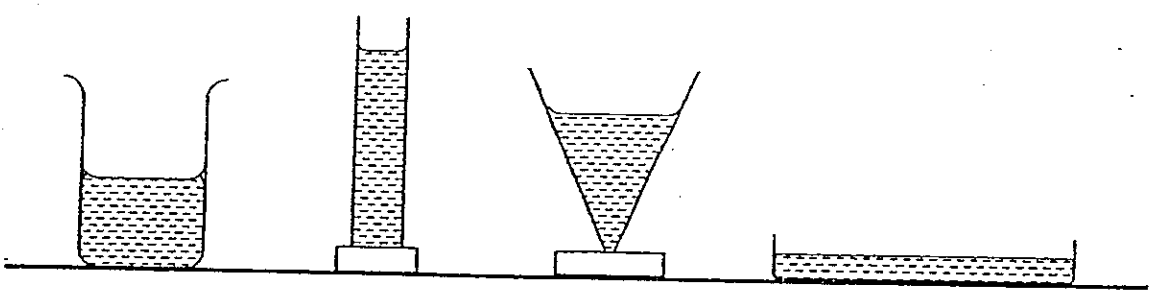
16

The diagram below shows part of the muscular system of an arm. What must the biceps and triceps do in order for the arm to move from A to B?



	Biceps	Triceps
(1)	relax	relax
(2)	relax	contract
(3)	contract	relax
(4)	contract	contract

17. David poured 70 cm³ of water into each of the 4 containers below. What does it tell you about the characteristic of water?



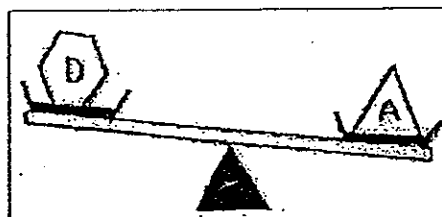
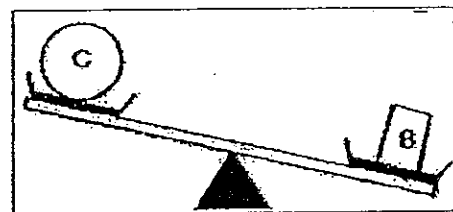
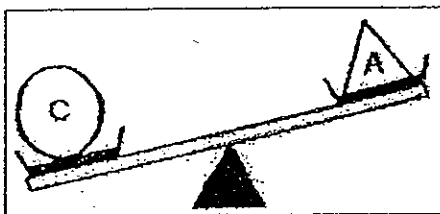
- (1) Water has weight.
- (2) Water has definite volume.
- (3) Water has no definite shape.
- (4) Water cannot be compressed.

18. Look at the table below. Which of the following is represented by Q?

Matter	Non-matter
Sand	Q
Water	
Carbon dioxide	

- (1) Glue, hair, wind
- (2) Fan, gold, paper
- (3) Cloud, air, steam
- (4) Heat, shadow, magnetism

19. Arrange the objects, A, B, C and D, according to their masses in descending order.
heavy → light



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

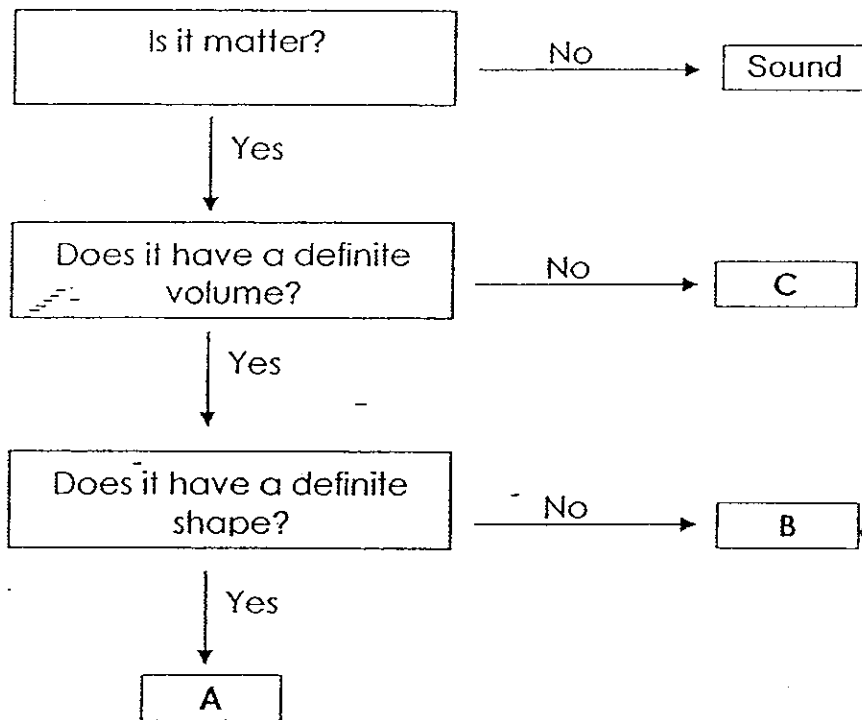
20. Which instrument is used to measure the mass of regular and irregular objects?

- (1) Ruler
- (2) Thermometer
- (3) Lever balance
- (4) Measuring Cylinder

21. Peter threw an inflated beach ball at a chair and the chair toppled. Peter then deflated the beach ball and threw the deflated ball at another similar chair. This time, the chair remained upright. What characteristic of air does this activity show?

- (1) Air has weight.
- (2) Air takes up space.
- (3) Air has no fixed shape.
- (4) Air can be compressed.

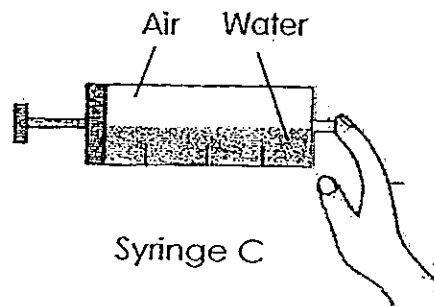
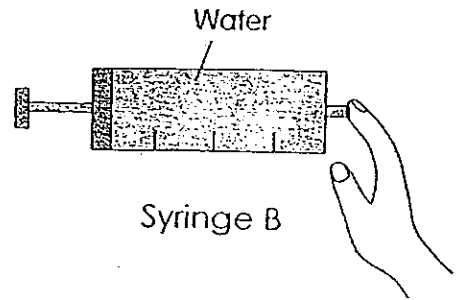
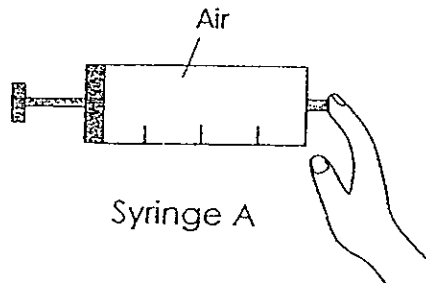
22. Study the flow chart below.



Which of the following represents A, B and C?

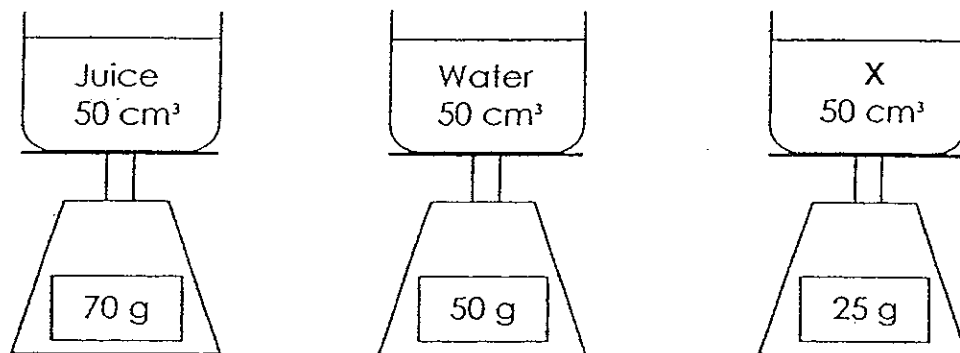
	A	B	C
1)	Feather	Helium	Kerosene
2)	Helium	Kerosene	Feather
3)	Kerosene	Feather	Helium
4)	Feather	Kerosene	Helium

23. In which syringe(s) can the plunger be pushed in?



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

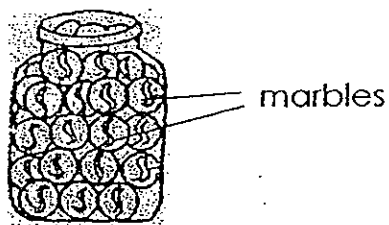
24.



What can X be?

- (1) Milk
- (2) Glue
- (3) Sand
- (4) Flour

25. The diagram below shows a jar which is fully filled with marbles.



When Shirley poured a small amount of water into the jar, none of the water overflowed. Why?

- (1) The water is absorbed by the jar.
- (2) The water took the shape of the jar.
- (3) The water is absorbed by the marbles.
- (4) The water took up the space between the marbles.

26. A swimming board is likely to be made of _____ or _____.

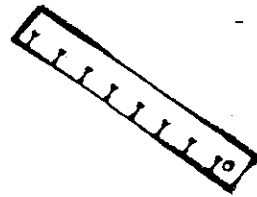
- A: Iron
- B: Glass
- C: Plastic
- D: Styrofoam

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

27. Which of the following objects is made of more than one material?



A. Iron nails



B. Metal ruler



C. Mobile phone



D. Stainless steel knife

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

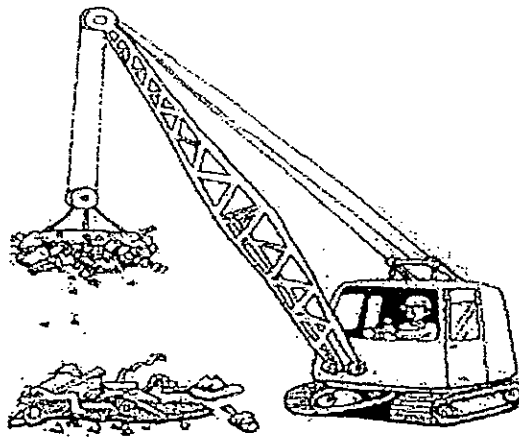
28. Samy grouped some objects into the following table below.

Metal	Ceramic	Rubber
tin box	tile	tyre
window grille	vase	door stopper
thumbtack	screw	life buoy

He placed one of the objects in the wrong group. Which object was placed wrongly?

- (1) tile
- (2) screw
- (3) life buoy
- (4) window grille

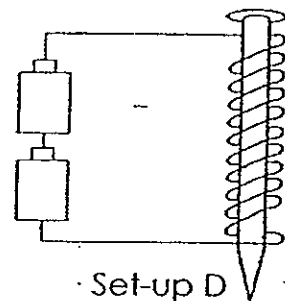
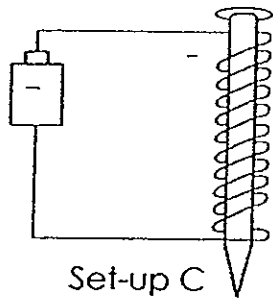
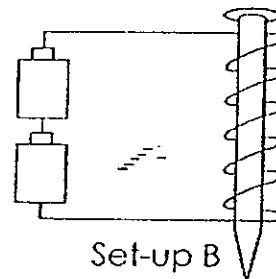
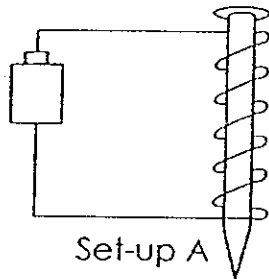
29. Strong magnets are used in the machine below to separate magnetic materials from other materials. Which materials will be attracted by the magnets?



- (1) Steel and iron
- (2) Iron and copper
- (3) Steel and aluminium
- (4) Nickel and aluminium

50.

Sean prepared the four set-ups below and made four temporary magnets.



Which set-up will attract the most number of paper clips?

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

TAO NAN SCHOOL

PRIMARY 4 SCIENCE MID-YEAR EXAMINATION – 2008

Name : _____ () Date : 9 May 2008

Class : P4 _____

Time : 8.00 a.m. to 9.30 a.m.

Booklet B

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

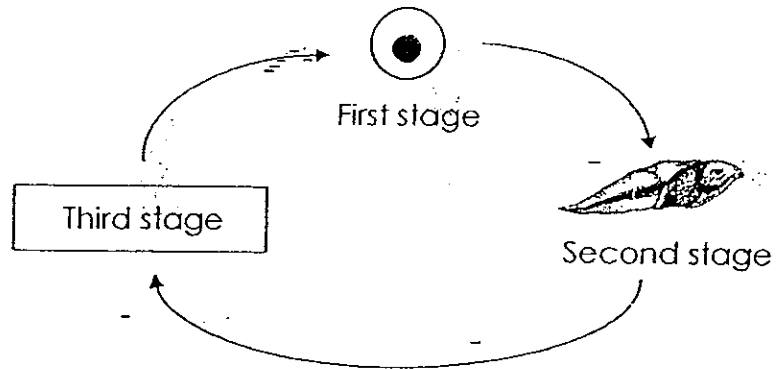
Answer all questions.

	Score	Marks
Section B		40

Section B (40 marks)

Write your answers in the spaces provided.

31. The diagram below shows the development of an animal.



(a) Name the third stage of this animal.

(1 mark)

(b) Write down one difference about its appearance or habitat between this animal in its second stage and this animal in its third stage.

(1 mark)

(c) Name an animal that has a similar life cycle as this animal.

(1 mark)

32. Fill in each blank below with a suitable word.

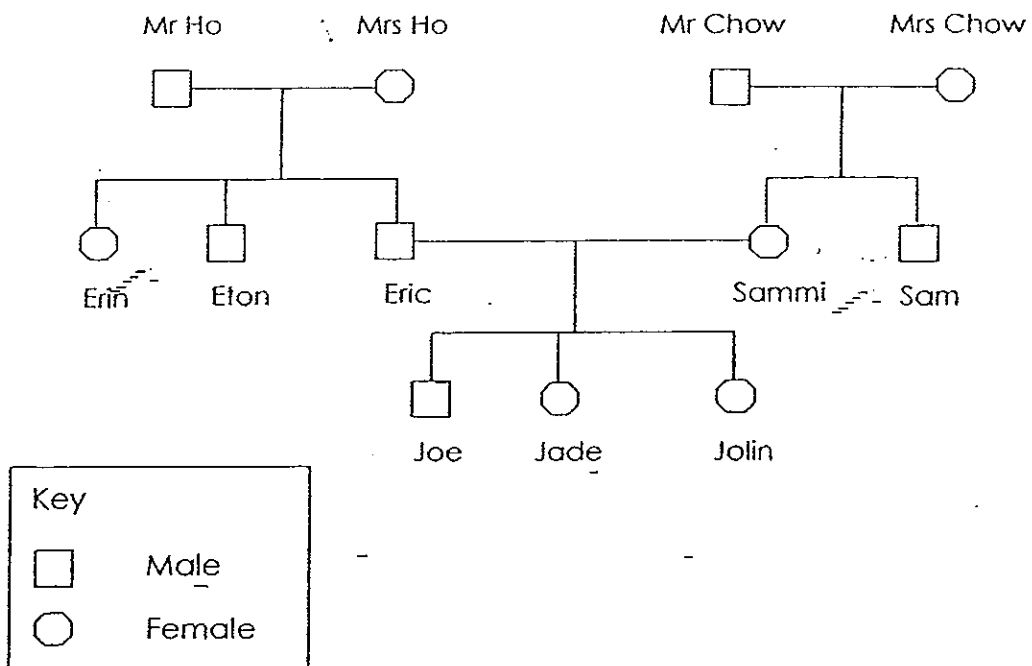
(2 marks)

Seeds are found in fruits. The seed _____ protect the seeds. When a seed receives the right conditions, it germinates. The _____ will appear first. Then, it is followed by the _____. Eventually, it will grow into an adult plant. The adult plant will _____ to ensure that its own kind will continue to live on.

33. Write 'T' for 'True' and 'F' for 'False' for each of the following statements in the boxes provided. (2 marks)

	Statements	T/ F
(a)	The main function of an adult butterfly is to reproduce.	
(b)	The first stage of any life cycle is always the fertilised egg.	
(c)	The pupa does not eat at all.	
(d)	The larva of a butterfly is a caterpillar.	

34. Look at Jade's family tree below.



(a) Who are Jade's parents?

(1 mark)

(b) How many siblings does Erin have?

(1 mark)

(c) Who are Jade's maternal grandparents?

(1 mark)

35. Ali wanted to find out what condition will enable seeds to germinate. He placed equal number of seeds into the soil of three similar flower pots, Q, R and S. The three pots were then placed in three different places as shown below and watered daily.

Pot Q: In an enclosed box	Pot R: In a garden	Pot S: In a freezer
-------------------------------------	------------------------------	-------------------------------

(a) In which pot(s) would the seeds germinate after two days? (1 mark)

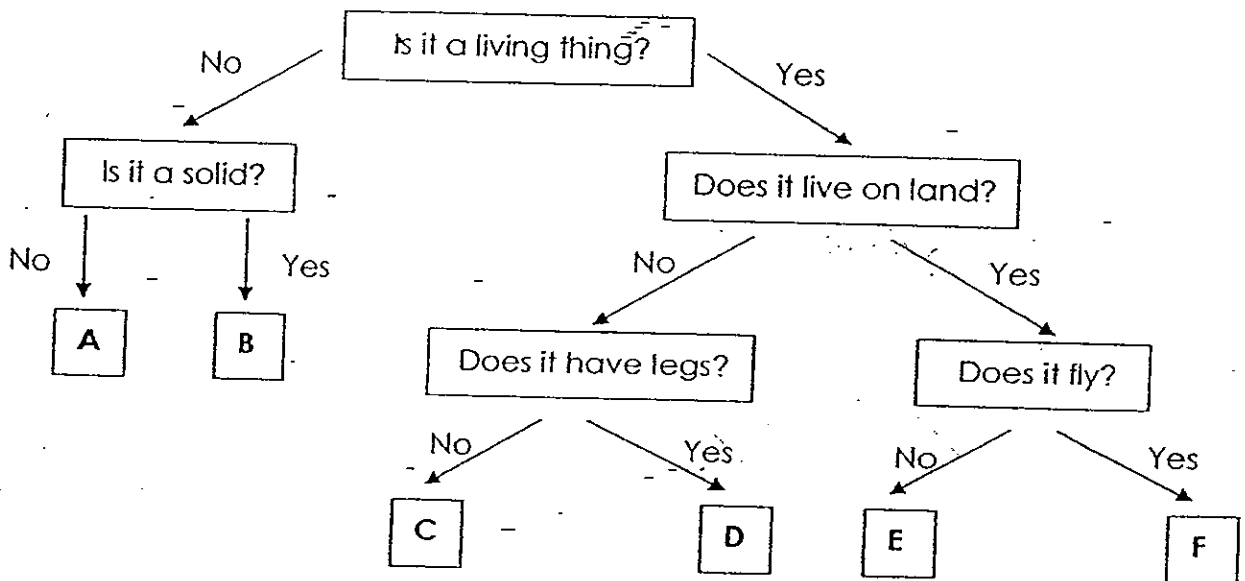
(b) Besides water, name two other conditions which must be present for a seed to germinate? (1 mark)

36. Faith saw the following when she was at the eco-garden.

What Faith saw at the eco-garden

Water	Prawn	Dragonfly	Scorpion	Stone	Guppy
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She classified them using the flowchart below.

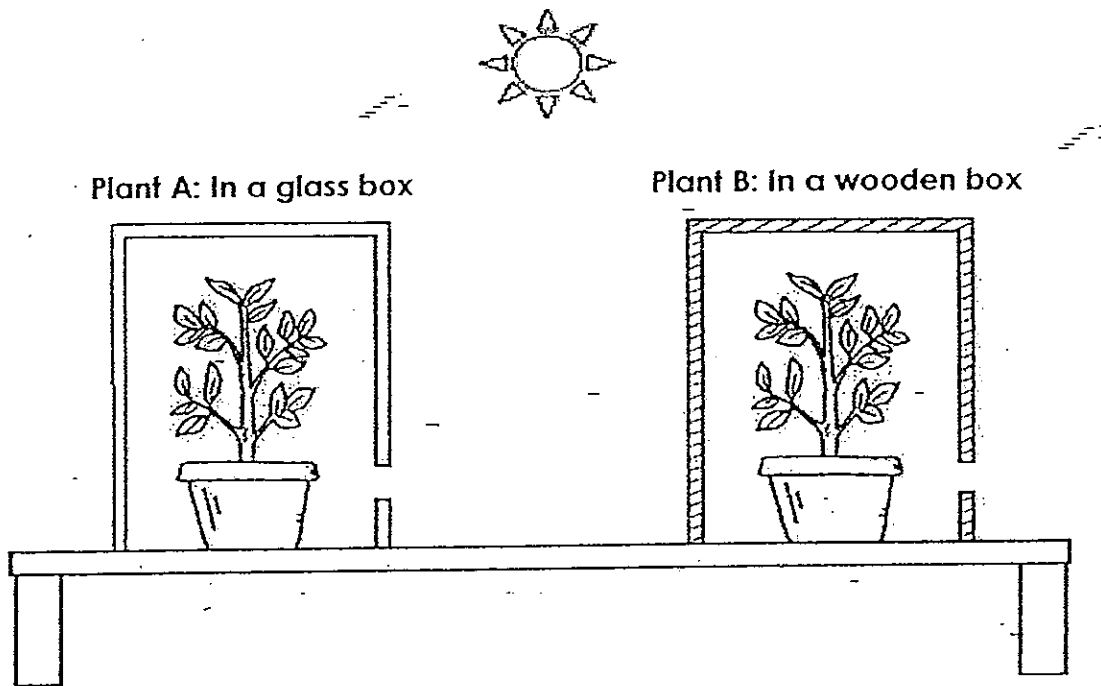


Based on the flowchart, classify what Faith saw at the eco-garden.

(3 marks)

	What Faith saw at the eco-garden
A	
B	
C	
D	
E	
F	

37. Tom sets up an experiment. He puts 2 identical pots of green plants, A and B, in his garden. Each pot of plant is placed in a box made of different materials and a hole is cut at the side of each box to allow the movement of air as shown below.



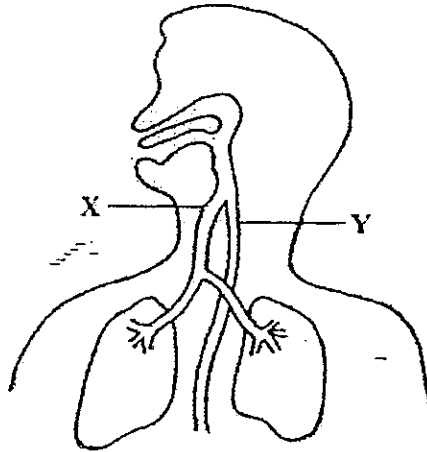
The plants are watered every day with the same amount of water and left under the sun.

- (a) Which plant is most likely to grow taller after one month? (1 mark)

- (b) What is most likely to happen to the other plant? (1 mark)

- (c) What is the aim of Tom's experiment? (1 mark)

38. The diagram below shows part of a human body.



(a) Which channel, X or Y, will food pass through?

(1 mark)

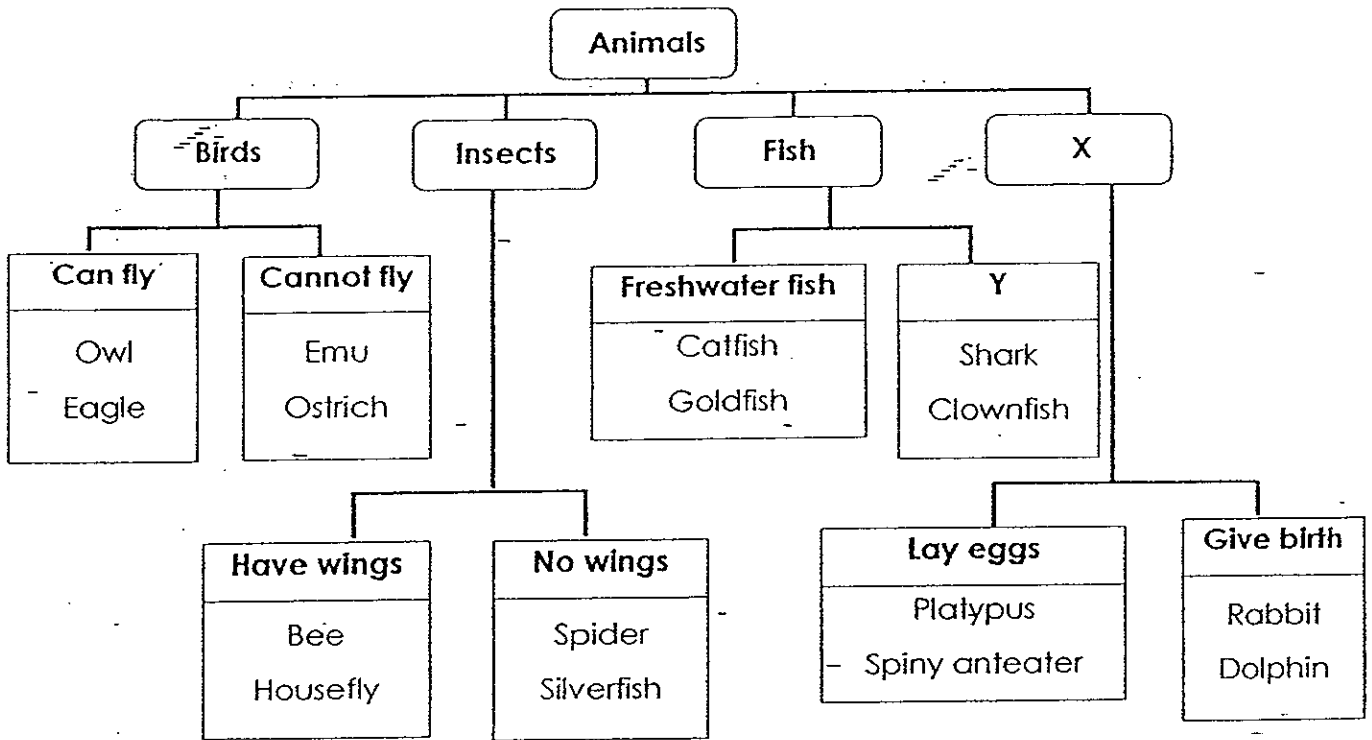
(b) Name the channel in (a).

(1 mark)

(c) Which part of the human body does the channel in (a) join the mouth to?

(1 mark)

39. During George's Science lesson on diversity, he learns how different types of animals can be grouped. At the end of the lesson, he draws the flowchart below to classify various animals.

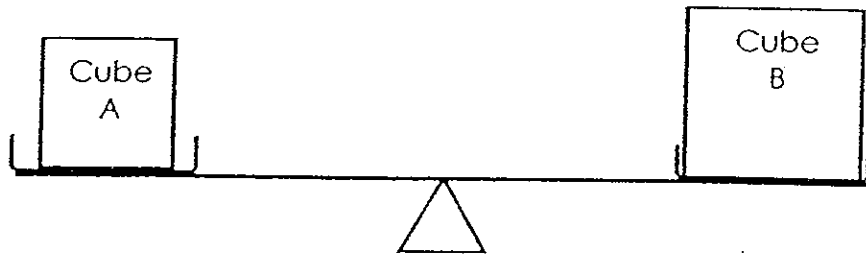


(a) George had forgotten to put in the two headings, X and Y. What should the two headings be? (1 mark)

X: _____ Y: _____

(b) His teacher, Mrs Ong, spotted a mistake in the flowchart. One of the animals was grouped **wrongly**. Which is it? Explain why. (1 mark)

40.



Compare the properties of Cube A and Cube B which are placed on an equal arm balance as shown above.

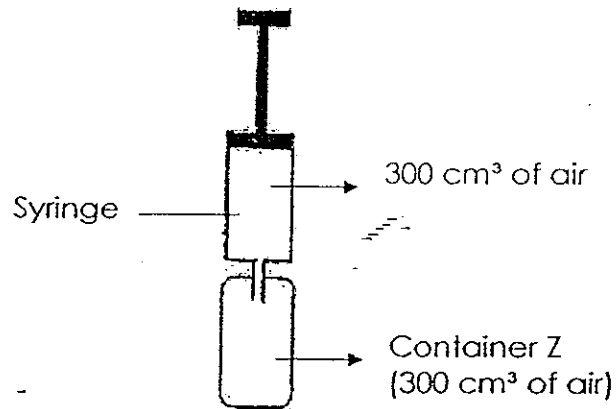
Place a tick (✓) in the correct column.

(3 marks)

Property	Same	Different
Mass		
Volume		
Material		

41. Container Z below contains 300 cm^3 of air.

Another 300 cm^3 of air is pumped into Container Z with a syringe.



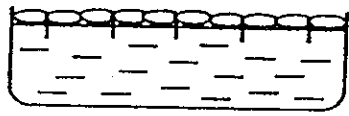
(a) What is the volume of air in Container Z now?

(1 mark)

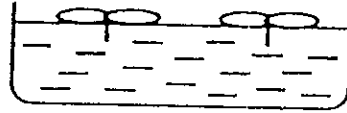
(b) Explain your answer in (a).

(1 mark)

42. At the start of an experiment shown below, 5 floating water plants were placed in Tray A while 2 were placed in Tray B.



Tray A

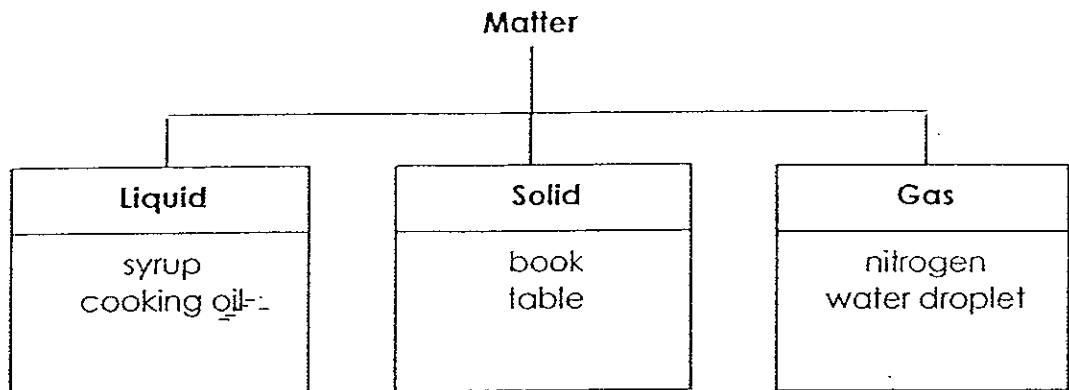


Tray B

Based on your observation, put a tick (✓) in the appropriate box against each statement in the table below. (2 marks)

	Statement	True	False	Not possible to tell
(a)	There are more floating water plants in Tray A than in Tray B.			
(b)	The floating water plants in Tray B are bigger than those in Tray A.			
(c)	The floating water plants in Tray B absorb water better than those in Tray A.			
(d)	There are 7 floating water plants in Tray A and Tray B after 1 week.			

43.

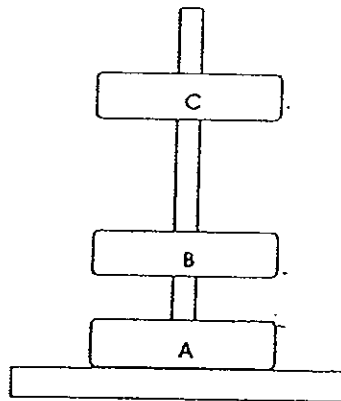


(a) In the chart above, which object/substance is placed under the wrong heading? (1 mark)

(b) Explain your answer in (a). (1 mark)

(c) What is the state of matter of a sponge? (1 mark)

44. The setup below shows three ring magnets, A, B and C.



(a) What could have caused the gap between the magnets, A and B?

(2 marks)

(b) If magnet B is flipped, what will happen to the three magnets?

(1 mark)

45. Weiming compared the hardness of four rocks, A, B, C and D, by scratching them with different discs.

He recorded his observations in the table below, using a tick (✓) to indicate the presence of scratch marks on the rocks.

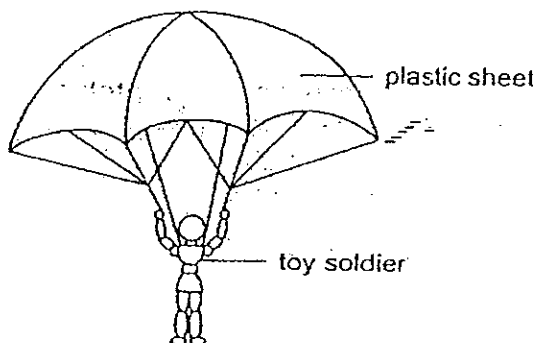
Rock	Presence of scratch marks made by		
	plastic disc	wooden disc	iron disc
A			✓
B	✓	✓	✓
C	-		✓
D		✓	✓

Arrange the four rocks in increasing order of hardness. (2 marks)

→ Hardest

46. Stephen wanted to find out how the area of a plastic sheet affected the time a toy soldier took to fall vertically to the ground from a certain height.

The diagram below shows the set-up which was dropped from a certain height.



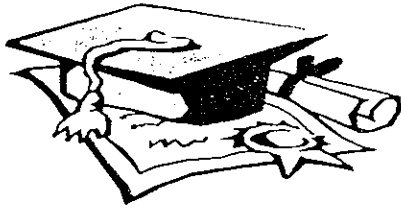
Stephen recorded his readings in the table below.

Area of plastic sheet(cm^2)	Time taken to reach the ground (s)
5	6
10	10
15	13
20	18
25	22

- (a) Based on the information above, what could Stephen conclude? (1 mark)

- (b) Stephen wanted to find out if the mass of the toy soldier would affect the time taken for it to reach the ground. Use a tick (\checkmark) to indicate the variable which should be kept the same and the variable which should be changed, to ensure a fair test. (1 mark)

Variable	Kept the same	Changed
i) Area of plastic sheet		
ii) Mass of the toy soldier		



ANSWER SHEET

EXAM PAPER 2008

SCHOOL : TAO NAN PRIMARY SCHOOL

SUBJECT : PRIMARY 4 SCIENCE

TERM : SA 1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
4	1	4	2	1	2	2	2	3	2	1	3	2	3	3	3	3
Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30				
4	2	3	1	4	3	4	4	4	4	2	1	4				

31) a) Adult frog.

b) In the second stage, it has a tail but not in the third stage.

c) Toad.

32) coat, roots, shoot, reproduce

33) a) T b) F c) T d) T

34) a) Jade's parents are Eric and Sammi.

b) He has 2 siblings.

c) Mr and Mrs Chow

35) a) Pot Q and Pot R.

b) 1. air 2. warmth

36) A: water B: stone C: Guppy G: prawn

E: Scorpion F: Dragonfly

37) a) Plant A.

b) It will die.

c) He wants to know if plants can live without sunlight during photosynthesis.

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- 38)a)Channel Y.
b)Gullet.
c)Stomach.

- 39)a)X: Mammals Y: Saltwater fish
b)Spider. The spider is not an insect.

- 40)Mass --- Same
Volume --- Different
Material --- Different

- 41)a)300cm
b)Air can be compressed to a certain point.

- 42)a)T b)T c)Not d)Not

- 43)a)Water droplet.
b)Water droplet is a liquid and is not a type of gas.
c)Solid.

- 44)a)The like poles of magnets A and B are facing each other and like poles repel causing the gap between the 2 magnets.
b)The three magnets will stick together as unlike poles attract.

- 45)B, D, C, A

- 46)a)The bigger the plastic sheet is, the time to reach the ground longer.
b)i)Kept the same
ii)Changed