



PRIMARY 3 END-OF-YEAR EXAMINATION 2014

Name : _____ () Date: 27 October 2014

Class : Primary 3 ()

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

Parent's Signature : _____

Marks: _____ / 60

SCIENCE BOOKLET A

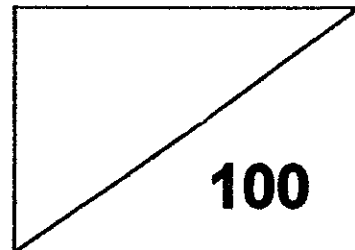
INSTRUCTIONS TO CANDIDATES

Write your name, register number and class.

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

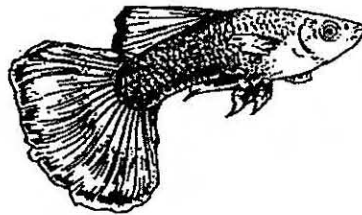
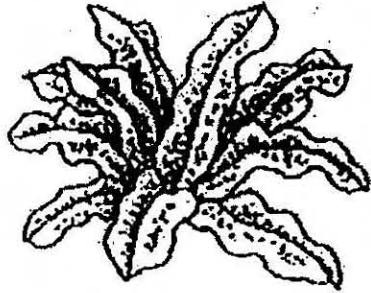
Answer all questions.



Section A (30 x 2 marks)

For each question, 1 to 30, choose the most suitable answer and shade its corresponding oval (1, 2, 3 or 4) in the optical answer sheet.

1. Study the pictures below.



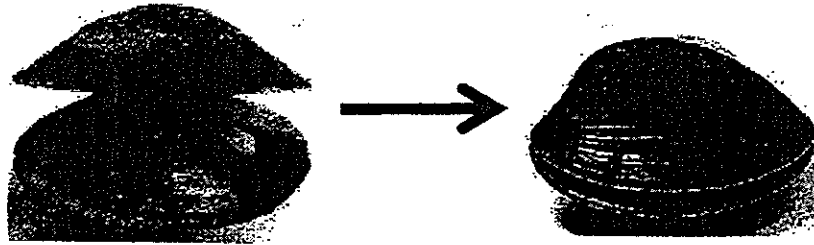
Which of the following is true about the two living things shown above?

- (1) Both reproduce by spores.
 - (2) Both can make their own food.
 - (3) Both need only water to survive.
 - (4) Both can respond to changes around them.
2. Kelly had two pots of similar plants, A and B. She placed Pot A in the sun and Pot B in the shade. She watered both pots of plants daily with the same amount of water. However, after a few days, she observed that the plant in Pot B started to wither. She repeated her experiment and observed the same results.

What can Kelly conclude from her experiment?

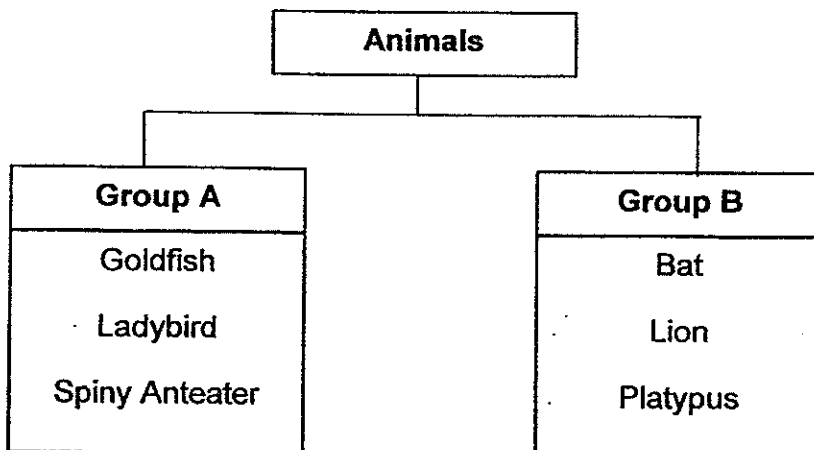
- (1) Plants can grow.
- (2) Plants need air to survive.
- (3) Plants need light to survive.
- (4) Plants need water to survive.

3. When Lucas used a stick to poke the clam as shown below, it closed up.



What can he conclude about living things?

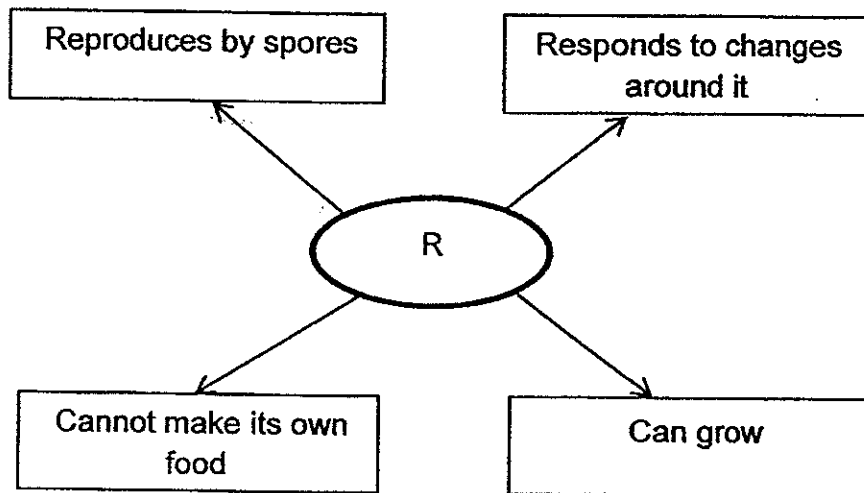
- (1) They can grow.
 - (2) They can reproduce.
 - (3) They need air, food and water.
 - (4) They can respond to changes around them.
4. Study the classification diagram below.



Which animal is grouped wrongly?

- (1) Bat
- (2) Platypus
- (3) Ladybird
- (4) Spiny Anteater

5. Study the diagram below which shows some characteristics of R.



What can R be?

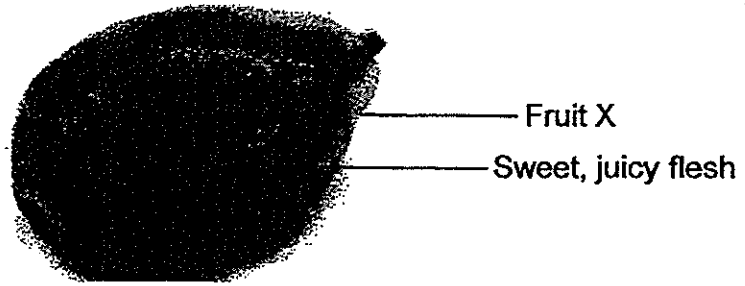
- A Moss
- B Grass
- C Mushroom
- D Bread Mould

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

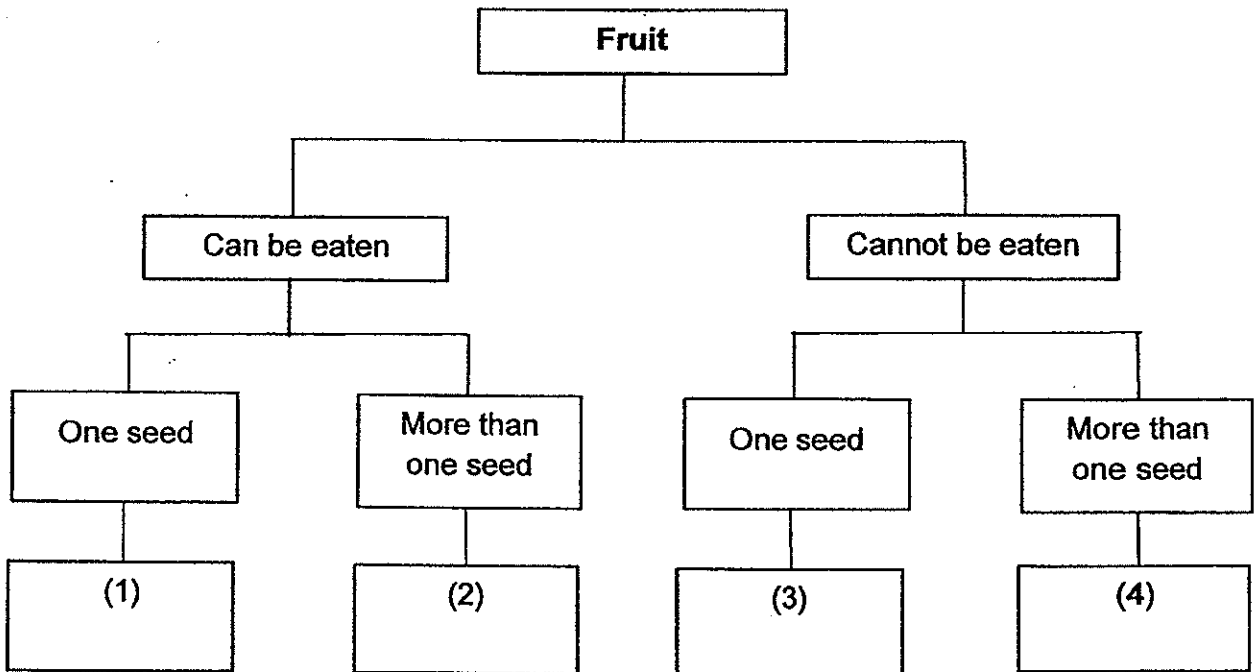
6. Which of the following animals is correctly matched to the way in which they breathe?

	Animal	Way in which they breathe
(1)	Shark	Lungs
(2)	Frog	Skin
(3)	Lizard	Skin
(4)	Kingfisher	Gills

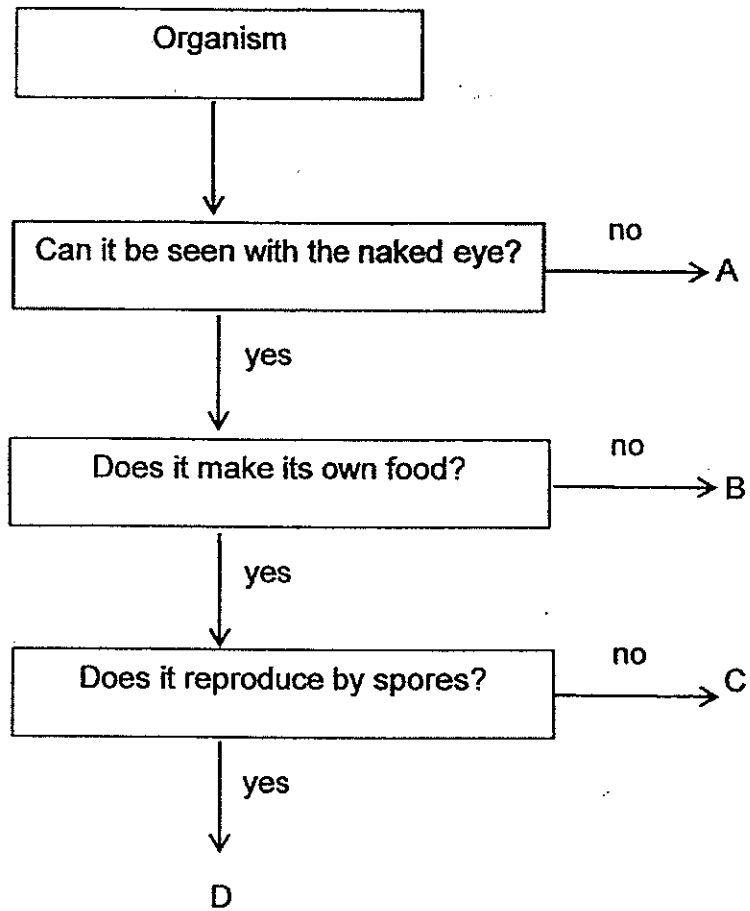
7. Study the cross section of Fruit X below.



Where can you place Fruit X in the classification chart below?



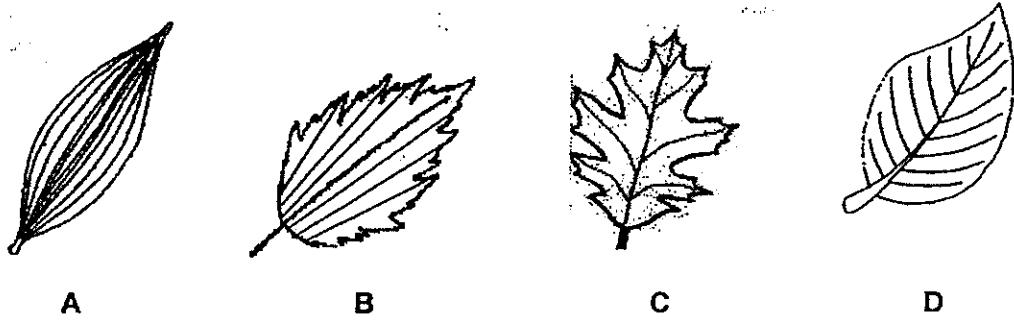
8. Study the flowchart below.



Which of the following correctly identifies organisms A, B, C and D ?

	A	B	C	D
(1)	Yeast	Mimosa	Hibiscus	Bird's Nest Fern
(2)	Bacteria	Bracket Fungus	Staghorn Fern	Mushroom
(3)	Bacteria	Mushroom	Mango	Bird's Nest Fern
(4)	Bracket Fungus	Bread Mould	Orchid	Moss

9. Kate collected the following leaves and classified them according to their leaf edges and vein patterns.



Which one of the following sets of grouping is correct?

	leaf edges		vein patterns	
(1)	C and D	A and B	A and C	B and D
(2)	A and D	B and C	C and D	A and B
(3)	B and D	A and C	B and C	A and D
(4)	A and D	B and C	A and C	B and D

10. Which of the following statements is true?

- (1) The roots of all plants are found underground only.
- (2) All plants have roots, stems, flowers and leaves.
- (3) Leaves have tiny openings to take in and give out gases.
- (4) Leaves of plants must be green in order for the plant to make food.

11. The table below shows some characteristics in which animals P, Q and R have.

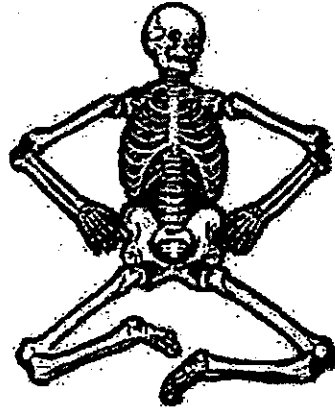
A tick (✓) shows that the animal has the characteristic.

Animal	Has scales	Lays eggs	Has lungs
P	✓	✓	
Q			✓
R		✓	✓

Which of the following animals are correctly identified?

	P	Q	R
(1)	snake	frog	mouse
(2)	whale	kingfisher	toad
(3)	goldfish	dog	mudskipper
(4)	crocodile	lion	platypus

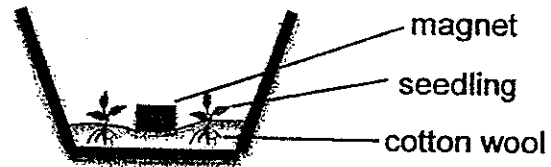
12. The following diagram shows a body system of a human.



Which of the following body systems work directly together with the Skeletal system to enable a human to sit on the floor?

- (1) Muscular System
- (2) Digestive System
- (3) Circulatory System
- (4) Respiratory System

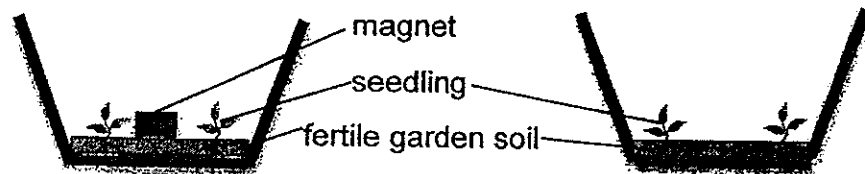
13. Gwen carried out an experiment to find out if the magnetic field of a magnet affects the growth of seedlings of type K. She placed seedlings of type K in set-up 1 as shown below.



The same type of seedlings was put in another set-up. The seedlings in both set-ups were given the same amount of water daily. Which one of the following set-ups would be most suitable for Gwen to use as a control for her experiment?

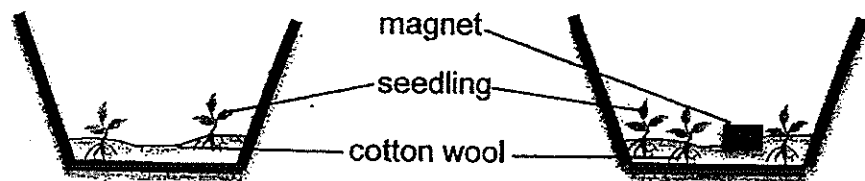
(1)

(2)



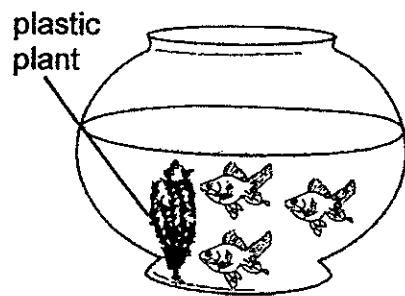
(3)

(4)



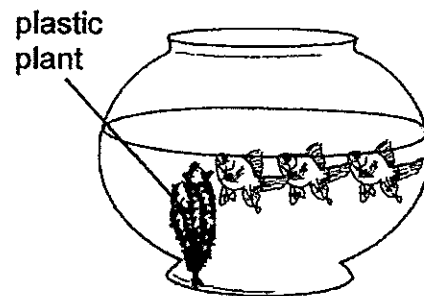
14. Rick set up 2 different aquariums in Set-up A and B as shown below. He placed the same type and number of fish in each aquarium. He fed the fish every day with the same amount and type of food. The diagrams below show what Rick observed happening to the fish after 2 days.

Before

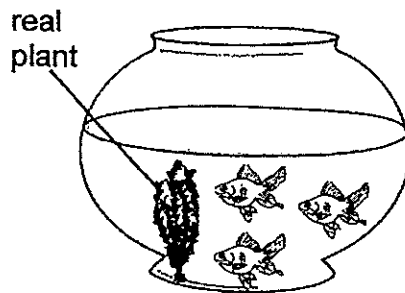


Set-up A

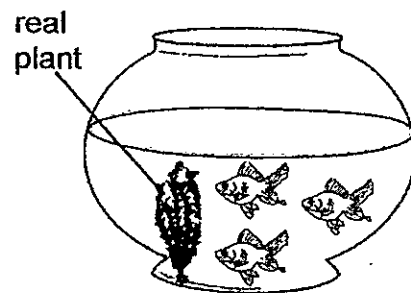
After



Set-up A



Set-up B

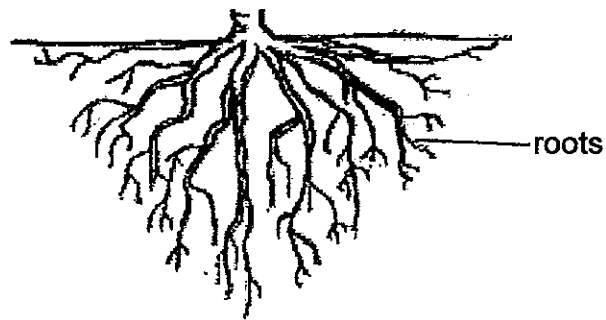


Set-up B

What can Rick conclude from the experiment above?

- (1) The plastic plant makes food for the fish to eat.
- (2) Only the plastic plant provides shelter for the fish.
- (3) Both plants provide additional nutrients for the fish.
- (4) The real plant provides oxygen needed for the fish to breathe.

15. Study the diagram shown below.

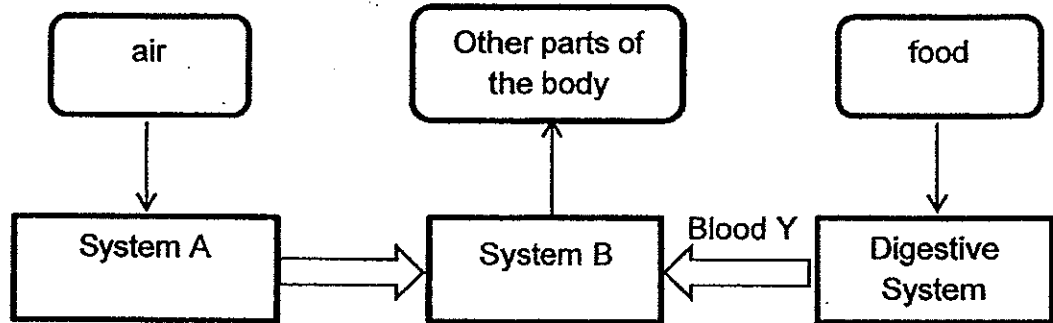


What are the functions of the roots of the plant grown in this manner?

- A: search for water
- B: store food for the plant
- C: store water for the plant
- D: hold the plant firmly to the soil

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

16. The diagram below shows how blood transports substances between different systems in the human body.



Which systems do A and B represent and what is blood Y rich in?

	System A	System B	Blood Y rich in
(1)	circulatory	respiratory	digested food
(2)	respiratory	circulatory	digested food
(3)	circulatory	respiratory	undigested food
(4)	respiratory	circulatory	undigested food

17. Which of the following organs of the digestive system are involved in breaking down food into simple substances?

- (1) mouth, gullet and small intestine
- (2) stomach, small intestine and anus
- (3) mouth, stomach and small intestine
- (4) stomach, small intestine and large intestine

18. A cigarette when lit, releases over 4000 toxic chemicals. These toxic chemicals are harmful to the human body.

Which human system will be directly affected when these toxic chemicals are breathed in ?

- (1) Skeletal System
- (2) Digestive System
- (3) Circulatory System
- (4) Respiratory System

19. Some students were discussing about the human digestive system.

Dean: Digestion of food starts in the stomach.

Tom: All the organs in the digestive system are involved in digestion.

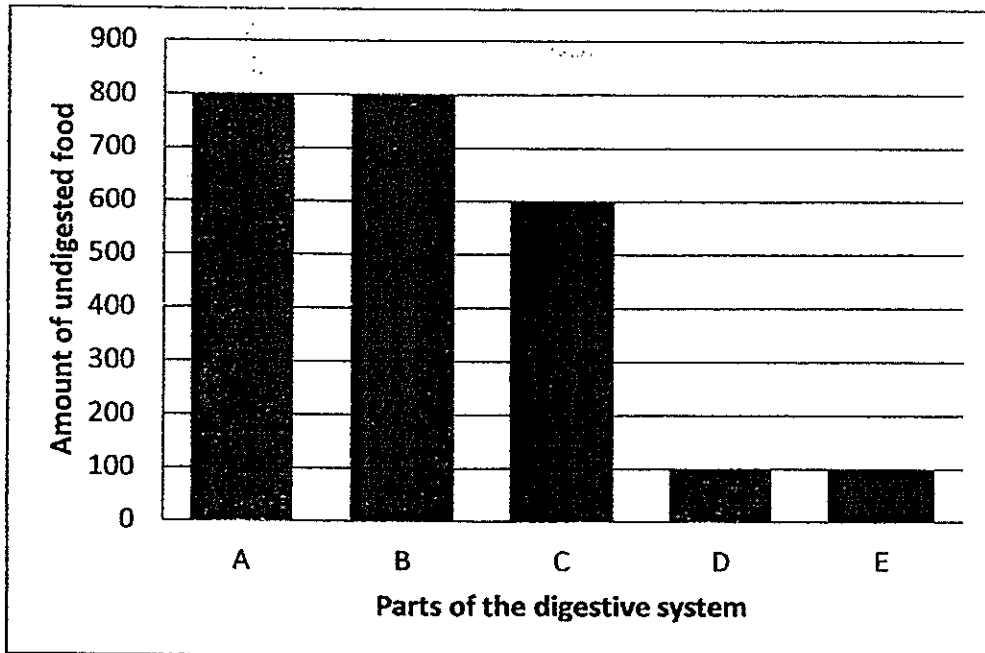
Mary: The digestive system is only involved in breaking down food
and not involved in absorbing food.

Jane: Chewing our food is part of the digestion process.

Which statement(s) made is/are correct?

- (1) Jane
- (2) Tom and Jane
- (3) Mary, Tom and Dean
- (4) Dean, Tom, Mary and Jane

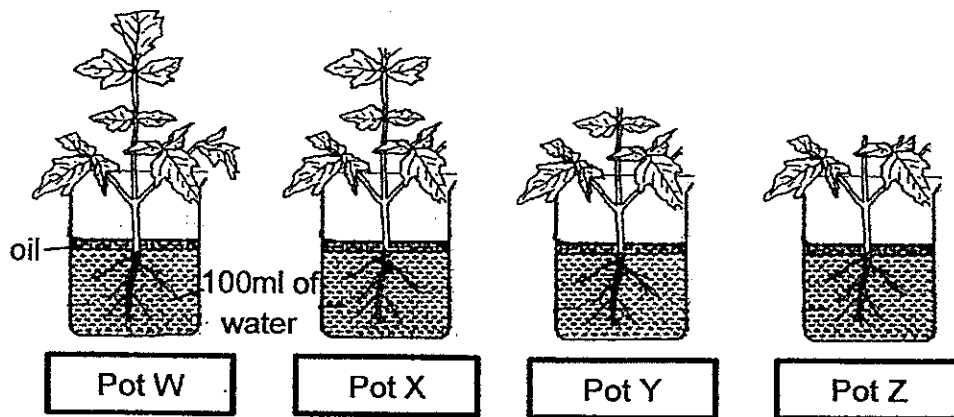
20. The graph below shows the amount of undigested food in each part of the digestive system just before it travels to the next part.



Which part of the digestive system does D represent?

- (1) gullet
- (2) stomach
- (3) large intestine
- (4) small intestine

21. Jess wanted to find out if the number of leaves affects the amount of water taken up by a plant. She set up an experiment with four similar plants with different number of leaves. She placed all four pots of plants in her garden. Each pot contains 100ml of water in the beginning.



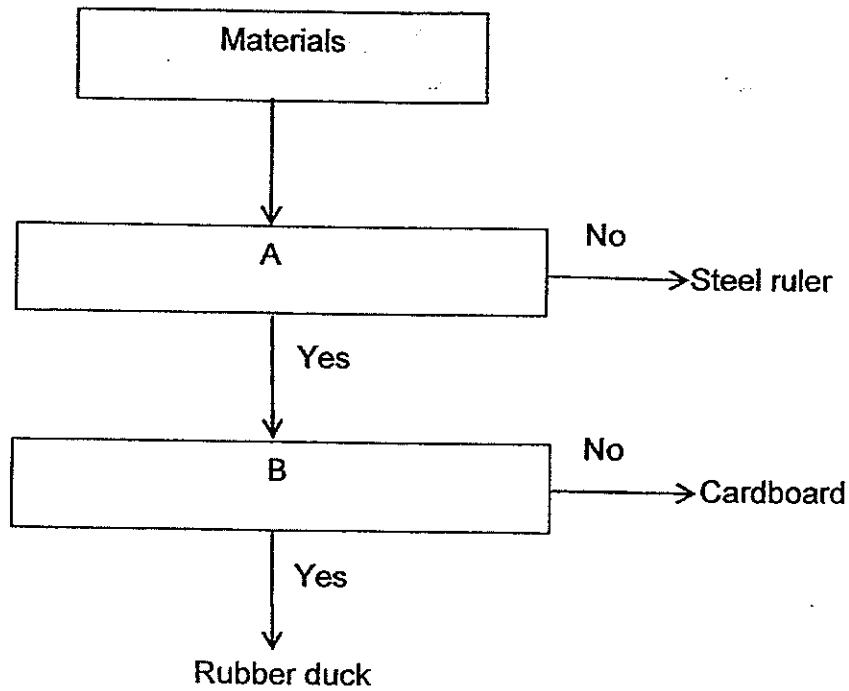
She recorded her results in the table shown below.

Pot	Number of leaves on plant	Amount of water left in the pot after 4 days (ml)
W	40	20
X	30	40
Y	20	60
Z	10	80

Which of the following conclusion can Jess make, based on the above results?

- (1) The more leaves the plant has, the less water is taken up by the plant.
- (2) The more leaves the plant has, the more water is taken up by the plant.
- (3) The plant in pot X takes up more water than the plant in pot Y.
- (4) The number of leaves the plant has, does not affect the amount of water taken up by it.

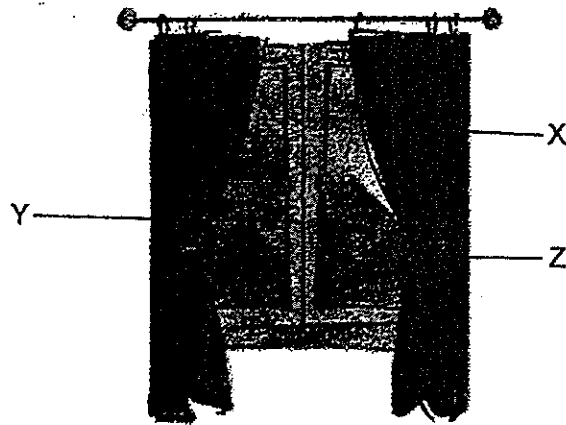
22. Study the flowchart below.



Which one of the following identifies A and B correctly?

	A	B
(1)	Is it flexible?	Can it be magnetised?
(2)	Does it allow light to pass through?	Is it flexible?
(3)	Does it float in water?	Is it waterproof?
(4)	Is it strong?	Does it sink in water?

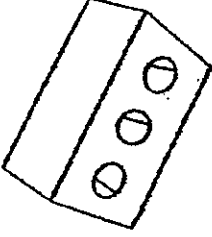


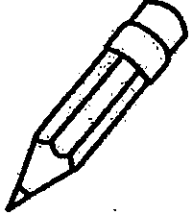
23. The picture below shows a window with curtains in a living room.



Which of the following shows the correct combination of materials X, Y and Z?

	Material X	Material Y	Material Z
(1)	Fabric	Metal	Glass
(2)	Metal	Rubber	Plastic
(3)	Fabric	Plastic	Wood
(4)	Rubber	Metal	Glass

24. Which of the following objects are made of only 2 materials?

			
Brick	Envelope	Cooking pan	Pencil

- (1) Cooking pan only
- (2) Brick and Envelope
- (3) Envelope and Pencil
- (4) Pencil and Cooking pan

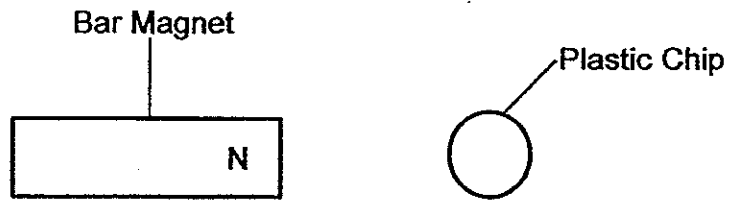
25. The properties of a new material are listed below:

- It is flexible.
- It is waterproof.
- It does not allow light to pass through.
- It does not break easily when dropped from a height.

Which of the following can be made from this material?

- (1) scarf
- (2) car tyre
- (3) window
- (4) bookshelf

26. Jack placed a bar magnet near a plastic chip.

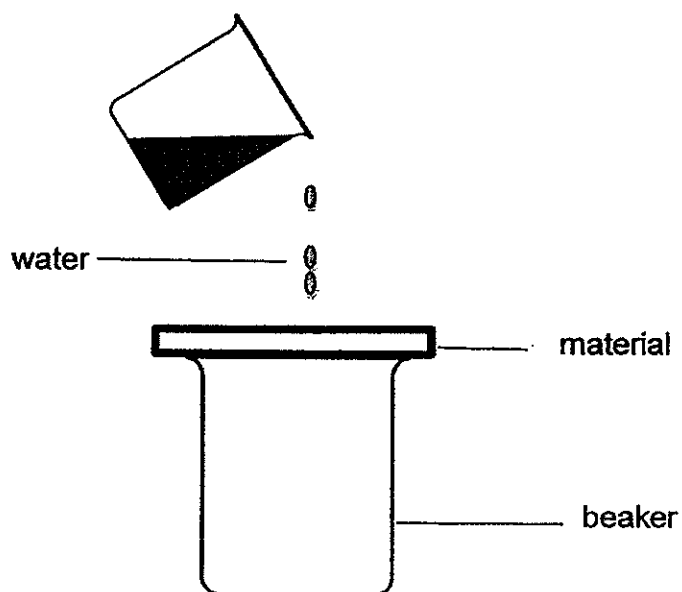


What will Jack observe?

- (1) The plastic chip will remain in the same position.
- (2) The plastic chip will move towards the bar magnet.
- (3) The plastic chip will move away from the bar magnet.
- (4) Both plastic chip and magnet will move away from each other.

27. Sue wanted to choose a material to make rain boots. She conducted an experiment to find out which material A, B, C or D, is best suited for making the rain boots.

She poured 100 ml of water over each material as shown in the diagram and then measured the amount of water collected in the beaker after 1 minute.



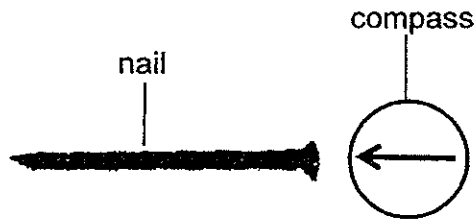
She recorded the results in the table below.

Material	Amount of water collected (ml) in the beaker
A	20
B	0
C	30
D	10

Which of the above materials is most suitable for making the rain boots?

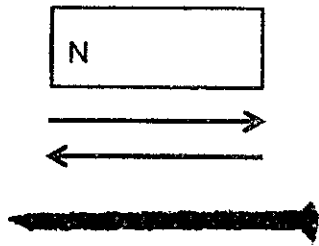
- (1) A
- (2) B
- (3) C
- (4) D

28. An iron nail was magnetised using the stroke method. The diagram below shows the direction of compass when placed beside the magnetised iron nail.

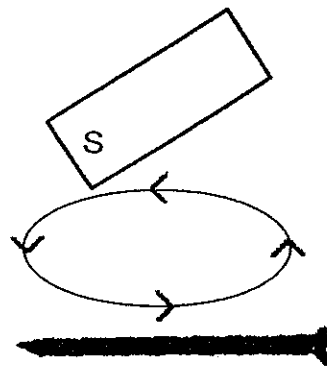


Which of the following diagrams shows the correct way of stroking the iron nail and the correct pole used to stroke it?

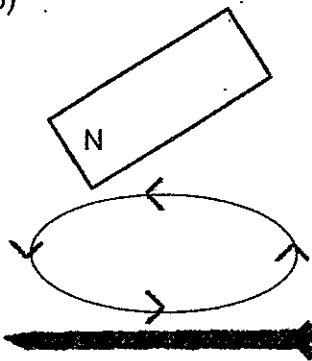
(1)



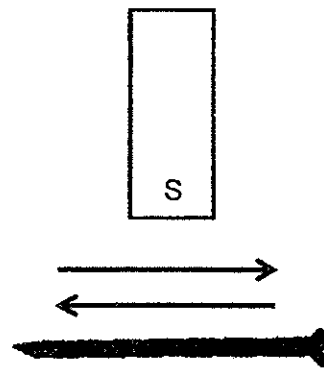
(2)



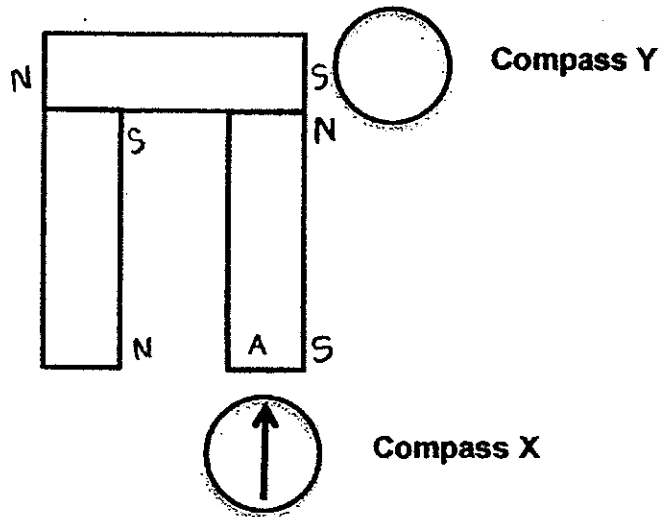
(3)




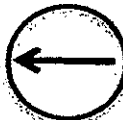
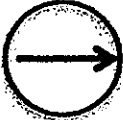

(4)



29. Jim set up 3 bar magnets. He brought Compass X towards end A of a bar magnet as shown in the diagram below.



Which one of the following diagrams correctly represents the direction Compass Y will point to?

<p>1.</p> 	<p>2.</p> 
<p>3.</p> 	<p>4.</p> 

30. Mary used the five items given below to conduct an experiment.

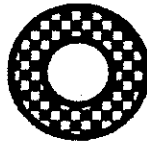
Magnet 1



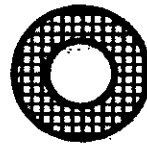
Magnet 2



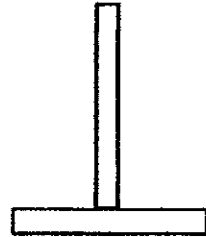
Magnetic material A



Non-magnetic material B

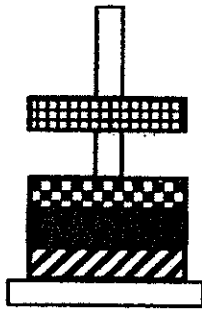


Wooden stand

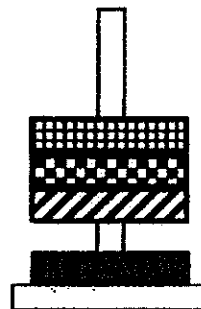


Which of the following is a possible observation when all 4 rings were stacked one on top of another through the wooden stand?

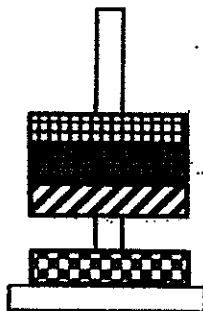
(1)



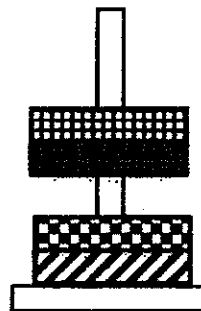
(2)



(3)



(4)





PRIMARY 3 END-OF-YEAR EXAMINATION 2014

Name : _____ () Date: 27 October 2014

Class : Primary 3 () Time: 8.00 a.m. to 9.30 a.m.

Parent's Signature _____ Marks: _____ / 40

SCIENCE BOOKLET B

INSTRUCTIONS TO CANDIDATES

Write your name, register number and class.

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Section B (40 marks)

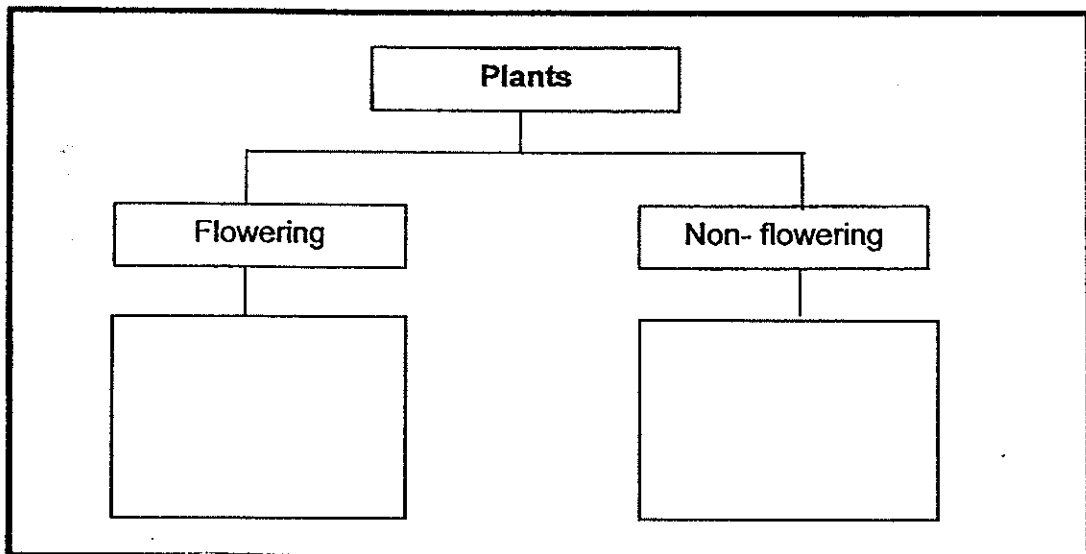
For the questions, 31 to 44, write your answers in the spaces provided.

31. Study the living things given in the table below.

Living Things	
Maiden Hair Fern	Dragon Soale Fern
Water Lily	Mimosa

(a) The living things above can be classified.

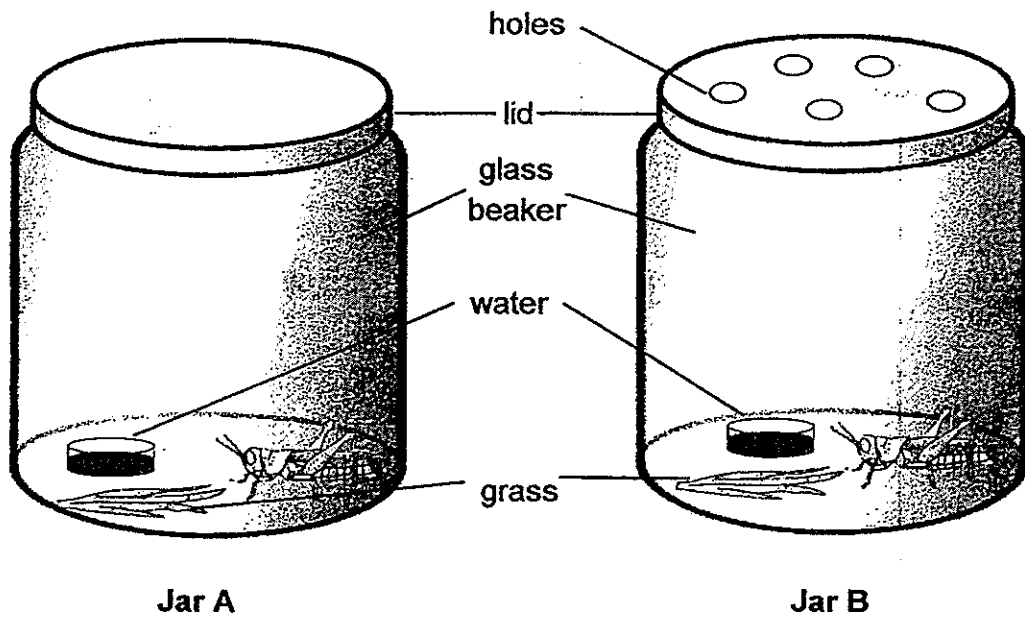
Fill in the classification diagram to show how they can be classified. (2m)



(b) Can you place bacteria in any of the group above? Explain your answer.

(1m)

32. Eunice placed a grasshopper each in jars A and B, as shown in the diagrams below.



(a) Which grasshopper will survive for a longer time? Explain your answer.

(1m)

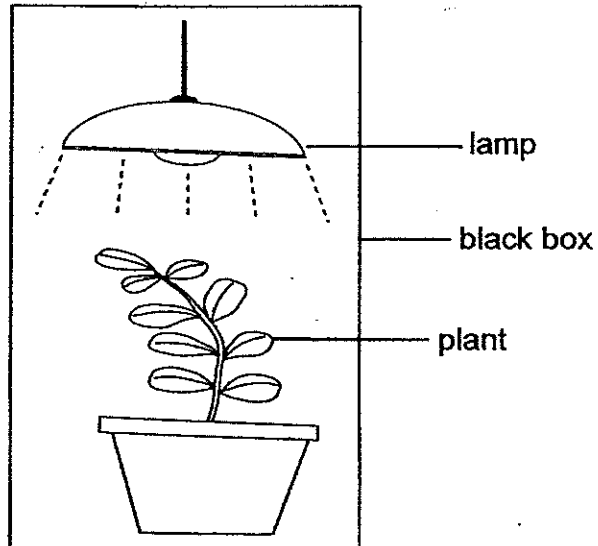
(b) Eunice left Jar B untouched for 2 months. What will happen to the grasshopper in Jar B? Explain your answer.

(1m)

(c) What is the aim of this experiment?

(1m)

33. Jay's plant was growing towards one side. He wanted his plant to be upright. So he placed the plant directly below a lamp. The diagram shows what he did.



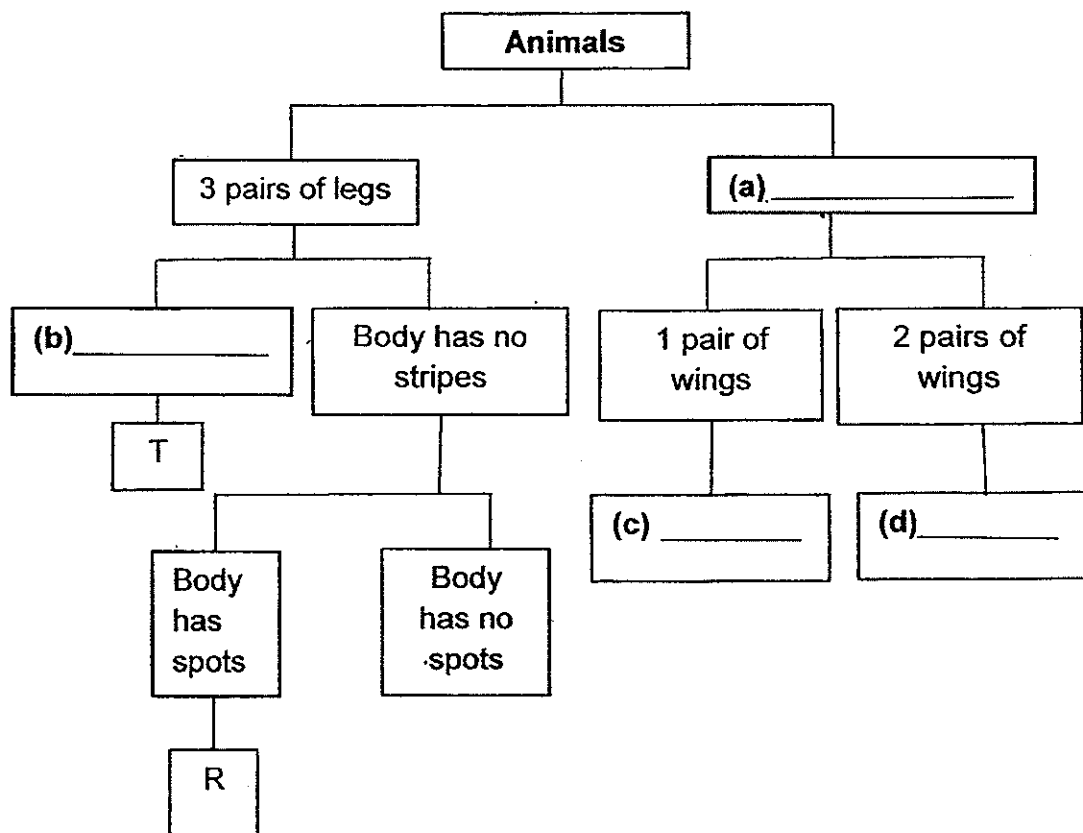
(a) Will Jay's experiment work? Explain why. (1m)

(b) State the characteristic of living things which the plant is showing. (1m)

34. The table below shows some characteristics of some organisms.

Organisms	Characteristics		
	Pairs of legs	Pattern on body	Pair of wings
R	3	Spots	-
S	4	-	1
T	3	Stripes	-
U	4	-	2

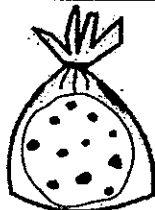

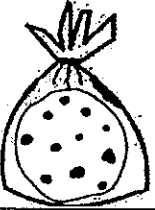

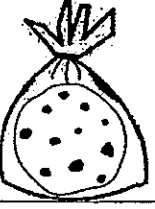

Study the table above and complete (a) to (d) in the classification diagram below. (2m)



(e) What characteristics does organism R have?

(1m)

35. Dave conducted an experiment to find out if the amount of vinegar used would affect the size of the biscuit. He placed 3 similar biscuits into 3 similar sized bags and added in different amount of vinegar. He observed the size of these biscuits after 8 hours. The results are shown in the table below.

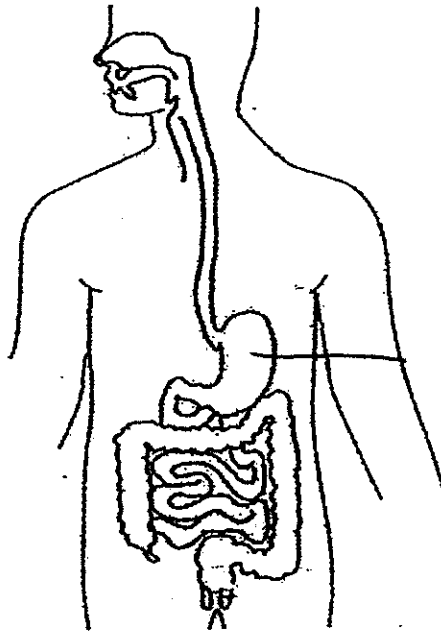
Amount of vinegar (ml)	Size of biscuit	
	Before	After
100		
200		
300		

(a) From the table, what is the relationship between the amount of vinegar and the size of the biscuit? (1m)

(b) Using only 100 ml of vinegar and another similar biscuit, what can Dave do to shorten the time taken to break down the biscuit? (1m)

(c) List all the organs in the digestive system that will have a similar effect on the biscuit. (1m)

36. The diagram below shows the human digestive system.

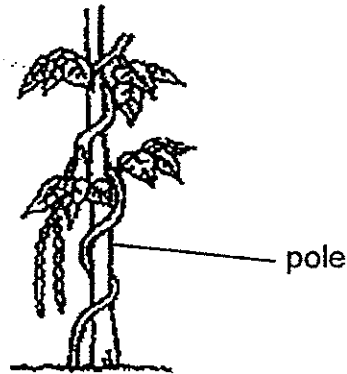


(a) Label the stomach in the diagram above. (1m)

(b) Where is the food completely digested? (1m)

(c) What happens to the food after it has been completely digested? (1m)

37. Study the picture of Plant X below.

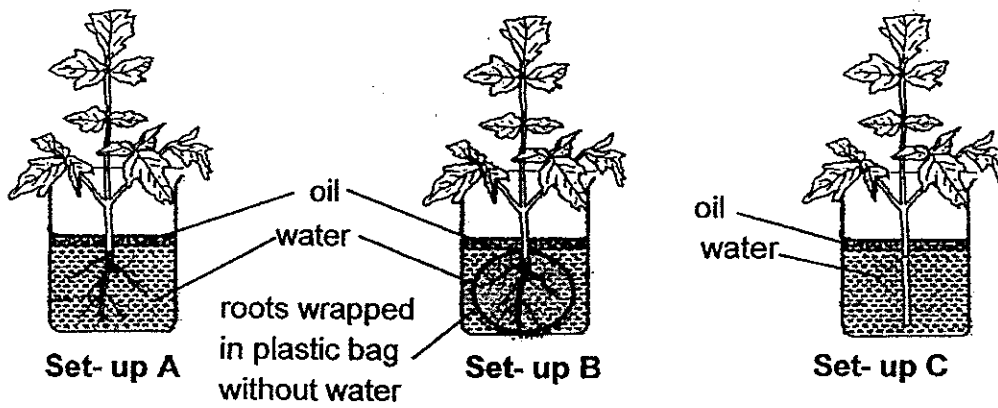


(a) State the main function of the stem of a plant. (1m)

(b) What kind of stem does Plant X have? (1m)

(c) What is the purpose of the pole? Explain how this helps the plant. (1m)

38. An experiment was carried out to find out if plants take in water through their roots. The set-ups were placed near an opened window for 3 days. The diagram below shows the set-ups.



(a) Which set-up A, B or C, will the plant wilt first? (1m)

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

(c) State another function of roots. (1m)

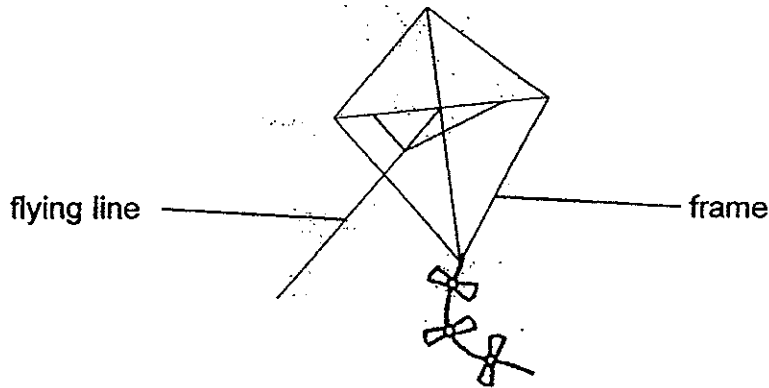
39. The diagram below shows a plant.



(a) Label the (i) stem and (ii) leaf in the diagram above. (2m)

(b) Do all plants produce fruits? Explain. (1m)

40. Holly wants to make a kite. The diagram below shows the different parts of simple kite.



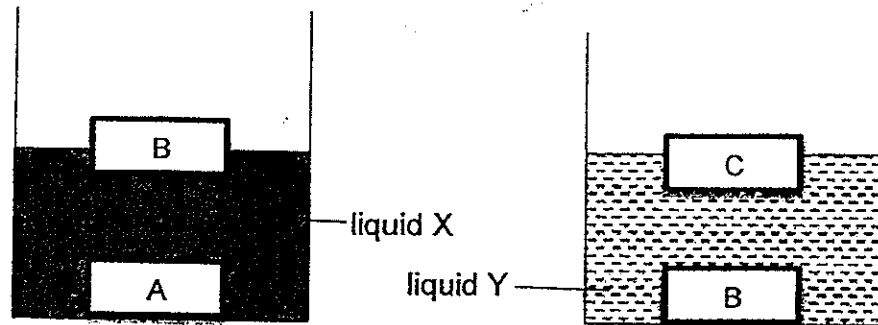
(a) The table below shows the functions of the different parts of the kite. Circle the suitable materials that Holly should use to make the different parts of the kite. (1m)

Part of the Kite	Function of the part	Material to be used
Frame	Forms the shape and provides support for the kite.	(i) Glass / Wood
Flying Line	To allow the person to hold and fly the kite.	(ii) Rubber / Fabric

(b) Why is the material written in (a)(i) suitable to be used to make the frame of the kite? (1m)

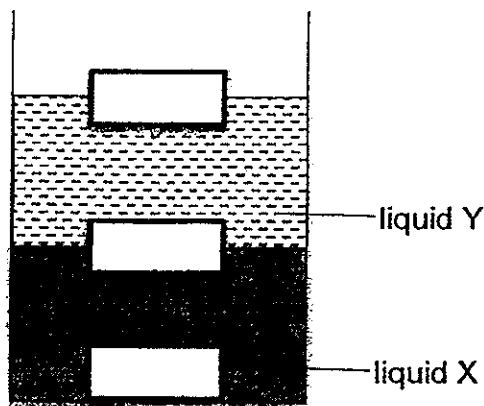
(c) Is the kite a system? Why? (1m)

41. Similar sized blocks of different materials, A, B and C, were placed in liquids X and Y. The blocks stayed at the positions as shown below.

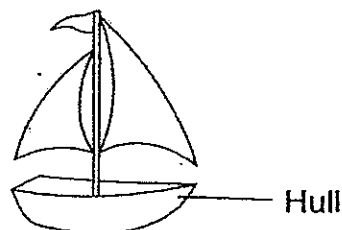


Liquid X and liquid Y do not mix together. When they are poured into a container, liquid Y floated on top of liquid X. If similar blocks of materials A, B and C were added to this container, how would the positions of the blocks be?

(a) Fill in the blocks with materials A, B and C in the diagram below. (1m)



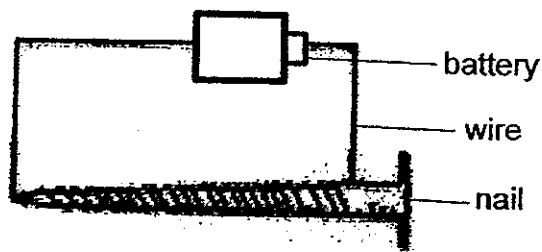
Holly wants to build a sailboat to be placed in liquid Y.



(b) Which material A, B or C should she use to build the hull of the sailboat? Explain why.

(1m)

42. Adam wants to find out if the number of batteries used to make an electromagnet affects the strength of the electromagnet. He prepares several set-ups like the one shown below.

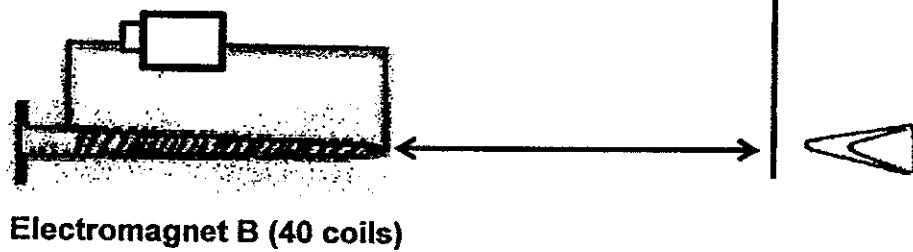
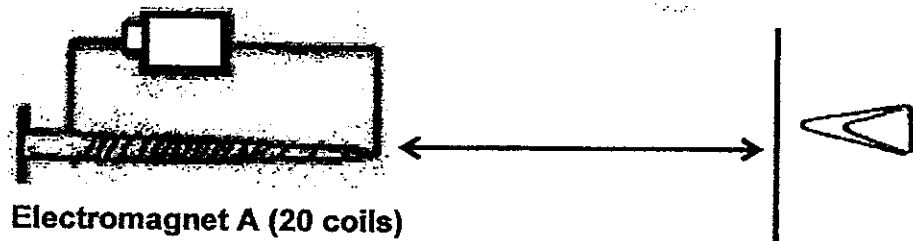


(a) To ensure that Adam carries out a fair test, what are the variables that he must keep the same? Put a tick (✓) in the box/es to indicate the variables that must be kept the same. (1m)

Variables	Tick (✓)
The type of nail used.	
The type of batteries used.	
The number of coils of wire around the nail.	
The number of batteries used.	

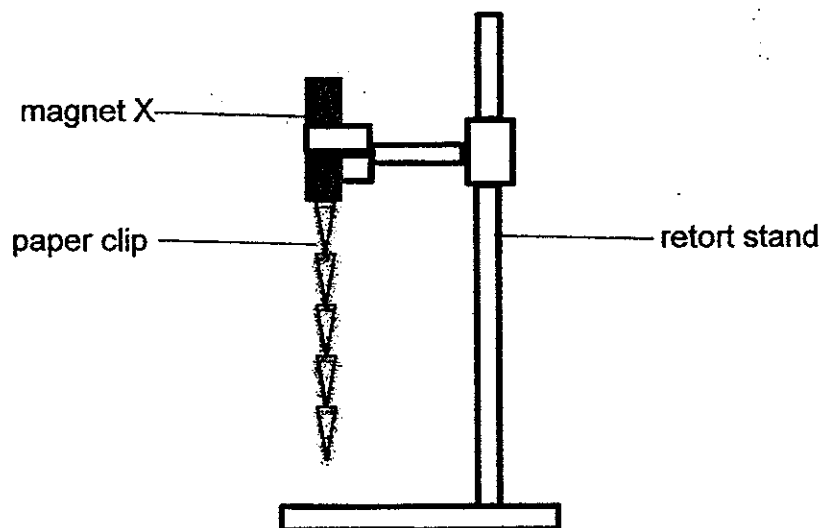
(b) Adam used an aluminium nail for one of his set-ups. Will he be able to make an electromagnet? Explain why. (1m)

Adam wanted to test the strength of the electromagnets from the different set-ups. He prepares a set-up using 2 electromagnets as shown below.



(c) Which electromagnet will be able to attract the paper clip from a further distance? Explain why. (1m)

43. Jasper carried out the following experiment. He clamped magnet X and arranged 5 paper clips hanging from the magnet as shown in the diagram below. The paper clips were found to remain in position.



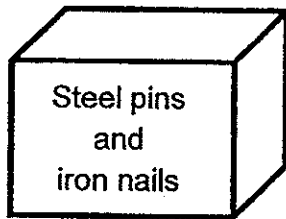
(a) What material is the paper clip made of? (1m)

(b) Explain why the paper clips remain in the position and not drop. (1m)

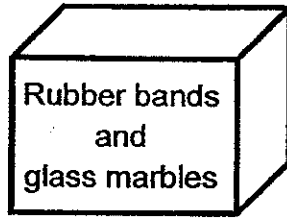
Jasper replaced magnet X with a larger magnet. He observed that the larger magnet also attracted 5 paper clips.

(c) What can he conclude about the size and strength of a magnet? (1m)

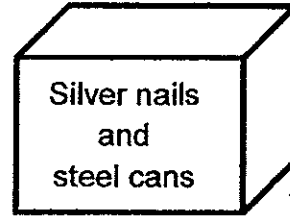
44. A student was given 3 boxes, each containing a mixture of two different types of items.



Box A



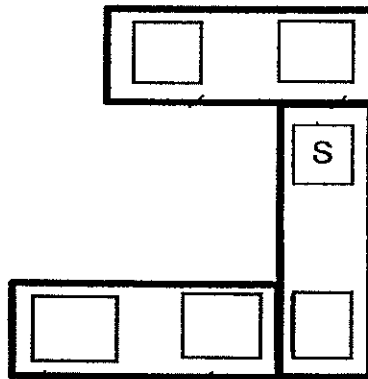
Box B



Box C

(a) In which box would the student be able to separate the items successfully using a magnet? Explain why. (1m)

The diagram below shows the arrangement of 3 magnets.



(b) Write the poles of each of the magnet in the boxes provided in the magnets. (2m)



EXAM PAPERS 2014

SCHOOL: TAO NAN SCHOOL
SUBJECT: SCIENCE
LEVEL: PRIMARY 3
TERM: SA 2

BOOKLET A

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

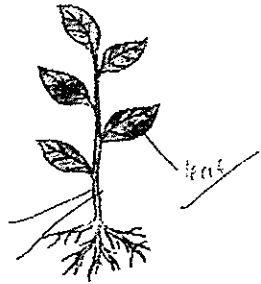
BOOKLET B

- Q31 a) Flowering: Water Lily, Mimosa. Non-flowering: Maiden hair fern, Dragon scale fern
b) No. Bacteria is not a plant.
- Q32 a) The grasshopper in Jar B. It has air, food and water but the grasshopper in Jar A did not have enough air.
b) The grasshopper died. It did not have enough food, air and water.
c) The aim of this experiment is to find out if living things need air to stay alive.
- Q33 a) Yes. The plant will grow towards the light from the lamp.
b) Living things respond to changes around them.
- Q34 a) 4 pairs of legs
b) Body has stripes.
c) S d) U
e) Organism R have 3 pairs of legs, body has no stripes and body has spots.
- Q35 a) As the amount of vinegar increases, the size of biscuit decreases.
b) He can break the biscuit into small pieces.
c) Mouth, stomach, small intestine.
- Q36 a) stomach
b) The small intestine.
c) The digested food will be absorbed into the blood and transported to all parts of the body.
- Q37 a) To transport the water and food to other parts of the plant.
b) Plant X have a weak stem.
c) The pole helps to support the stem of Plant X such that it is able to grow upright to reach for sunlight it needs to make more food.
- Q38 a) Set-up B



- b) Set-up B did not have water and water is important to the plant.
 c) To anchor the plant firmly to the ground.

Q39 a)



- b) No. Only flowering plants produce fruits.

Q40

- a) (i) Wood (ii) Fabric

- b) Wood is light and if it is too heavy it cannot fly.

- c) Yes. It is made up of more than one part working together to carry out a function.

Q41

- a) C, B, A

- b) Material C. It is light and would be able to make the sail boat float.

Q42

- a) The type of nail used. The type of batteries used. The number of coils of wire around the nail. The number of batteries used.

- b) No. To make an electromagnet work, Adam must use a magnetic material and aluminium is a non-magnetic material.

- c) Electromagnet B. There are more number of coils around the nail, thus making it a stronger electromagnet.

Q43

- a) A magnetic material.

- b) The magnetism in magnet X was very strong and could attract the paper clips.

- c) The size of a magnet does not affect its strength.

Q44

- a) Box C. It has non-magnetic and magnetic materials and the magnets would attract the magnetic material, leaving the non-magnetic material in the box.

b)

