Rosyth School
First Semestral Assessment for 2009
STANDARD SCIENCE
Primary 6

Total Marks: ____ / 100

Name: _____

Class: Pr_____ Register No._____ Duration: 1 h 45 min

Date: 14th May 2009 Parent's Signature: _____

Instructions to Pupils:

1. Do not open the booklets until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 booklets, Booklet A and Booklet B.
4. For questions 1 to 30 in Booklet A, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.
5. For questions 31 to 46, give your answers in the spaces given in the Booklet B.

	Maximum	Marks Obtained
Booklet A	60 marks	
Booklet B	40 marks	
Total	100 marks	

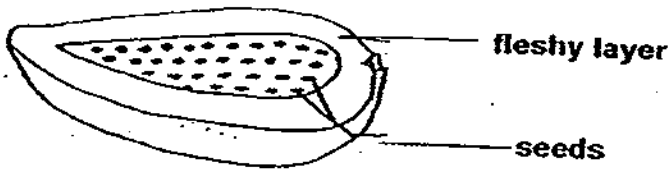
* This booklet consists of 19 pages. (Pg. 1 to 19)

Rosyth School/ P6 Standard Science /Semestral Assessment 1/ 2009

Booklet A (60 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 and 4) on the Optical Answer Sheet.**

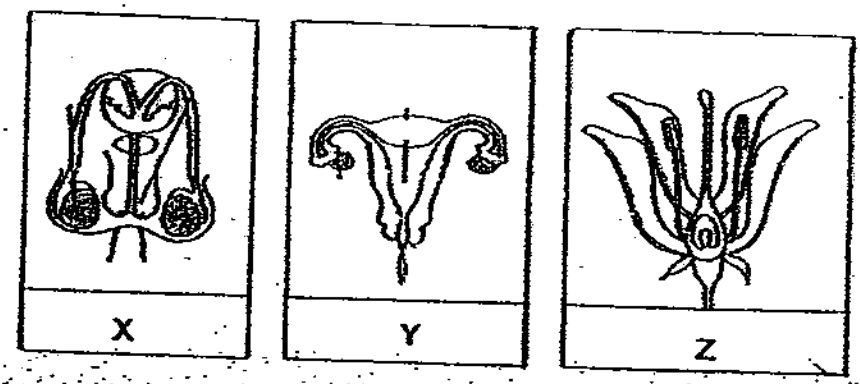
1. The picture below shows the cross section of a papaya fruit.



Which part of the papaya flower swells to form the fleshy layer of the fruit?

(1) Ovule
(2) Ovary
(3) Stigma
(4) Stamen

2. The diagrams X, Y and Z below show the reproductive organs of some organisms.



Which statements about the reproductive organs of X, Y and Z are correct?

A: Fertilisation can take place within Z itself.
B: Z contains both the male and the female sex cells.
C: The reproductive organs of X and Y produce different types of sex cells.

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

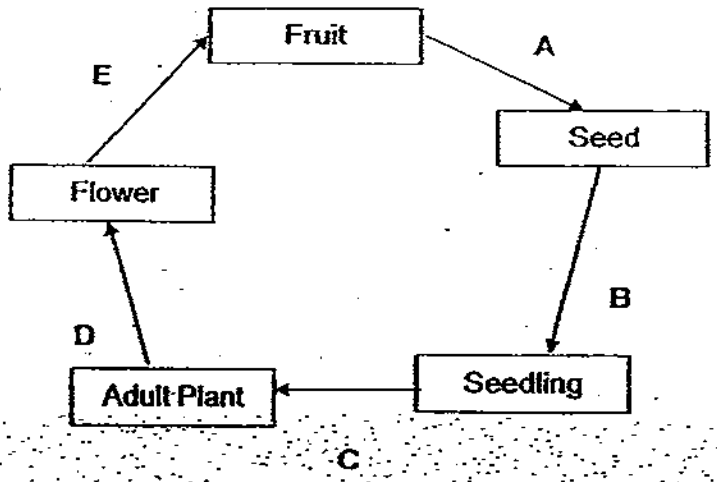
3. Four children made the following statements about the life cycle of a mealworm beetle and a cockroach.

Adrian: The young of a cockroach and mealworm beetle hatch from fertilized eggs.
Bob: The young of a mealworm beetle and cockroach go through the moulting stage.
Cathy: There are 3 stages in the life cycle of the cockroach and 4 stages in the life cycle of a mealworm beetle.
Dora: The young of a mealworm beetle looks like its parents but the young of a cockroach does not look like its parents.

Which of them made true statements?

(1) Adrian and Bob only
(2) Bob and Cathy only
(3) Bob, Cathy and Dora only
(4) Adrian, Bob and Cathy only

4. The diagram below shows the stages of growth of a plant.



At which stages do the processes of germination and fertilization take place?

	Germination	Fertilization
(1)	D	A
(2)	B	E
(3)	B	D
(4)	C	E

5. Shu Min germinated some balsam seeds and recorded her observations in the table as shown below.

Day	Observation
2	The seed becomes swollen
5	The seed coat breaks
7	The roots start to appear
10	The shoot starts to appear
17	The shrivelled seed leaves have dropped off

On which day will the seedling most probably be able to carry out photosynthesis?

(1) Day 5

(2) Day 7

(3) Day 10

(4) Day 15

6. Look at the classification table below.

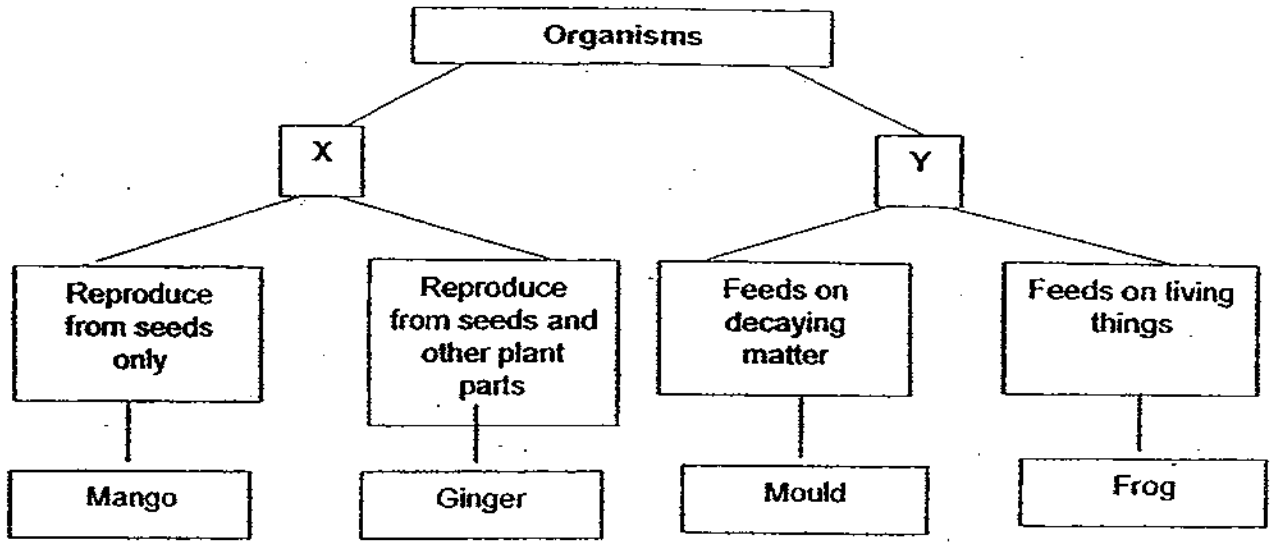
Group A
Goldfish Guppy Shark

Group B
Elephant Horse Cow

Which of the following sentences is correct?

(1) A parrot can be placed in group A because it lays eggs.
(2) A cat can be placed in group A because it gives birth to its young.
(3) A cat can be placed in group B because it has an outer covering of hair.
(4) A parrot can be placed in group B because it has an outer covering of feathers.

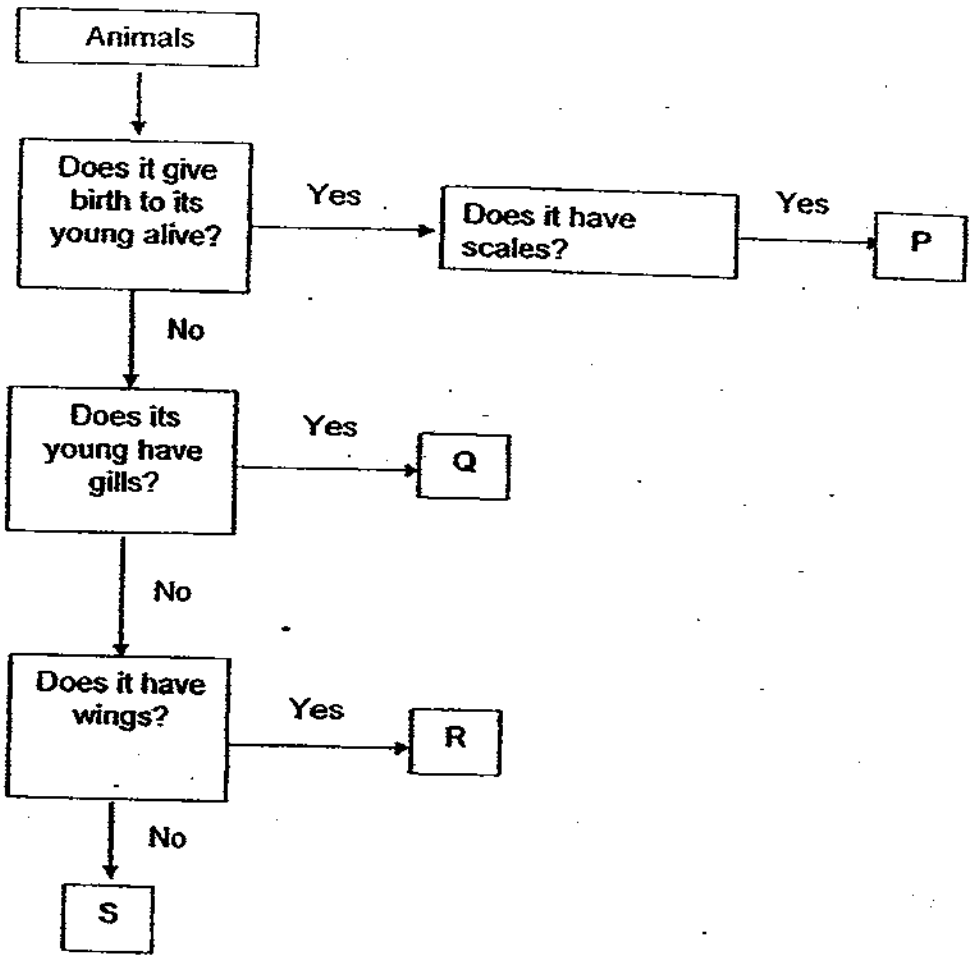
7. Look at the classification chart below



Which one of the following can headings X and Y be?

	X	Y
(1)	Plant	Animal
(2)	Lives on land	Lives in water
(3)	Have chlorophyll	Do not have chlorophyll
(4)	Cannot move from place to place	Can move from place to place

8. The flowchart below shows the characteristics of some animals.



Which letter P, Q, R or S best represents the spiny anteater?

(1) P
(2) Q
(3) R
(4) S

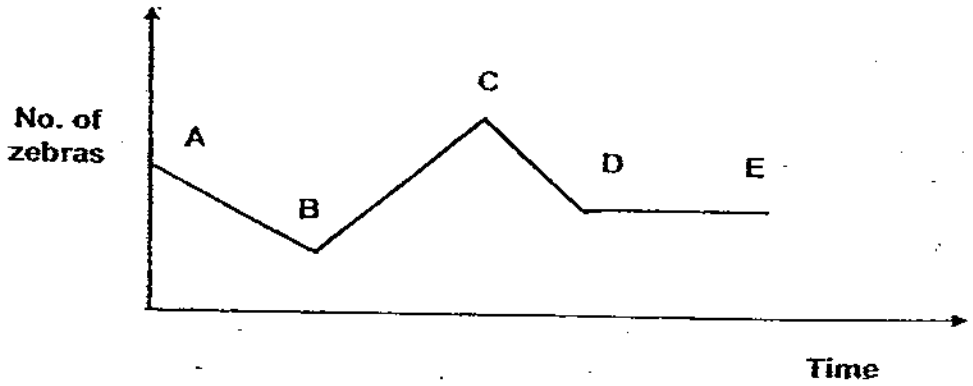
9. The table below shows the characteristics of 4 things W, X, Y and Z.

Thing	Changes in size	Reproduces	Moves freely from place to place	Produces its own food
W	✓	✓		✓
X	✓		✓	
Y	✓			
Z	✓	✓	✓	

Which of the above could be a living thing?

(1) W and X only
(2) X and Y only
(3) W and Z only
(4) W, Y and Z only

10. The graph below shows the change in the population of zebras in a grassland habitat over a period of time.



Which of the following events could have led to the change in the zebra population from Point B to Point C?

(1) There was a drought in the grassland.
(2) There was overgrazing which led a shortage of food
(3) The death rate of the zebra increased more than its birth rate.
(4) There was a decrease in the population of the zebra's predators.

11. Joyce set up an experiment to find out which conditions were most suitable for plants to live. The set-up consisted of five bell-jars containing a plant each. Each plant was given a different set of conditions. All the plants were identical and healthy at the start of the experiment. The table below shows the conditions given to the five plants.

Bell Jar	A	B	C	D	E
Oxygen	√	√	√	√	√
Fertilizer	√			√	
Carbon dioxide	√	√		√	√
Water			√		√
Sunlight		√	√	√	√

Which 2 bell-jars of plants would be suitable to show that water is needed for the plant to make food?

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

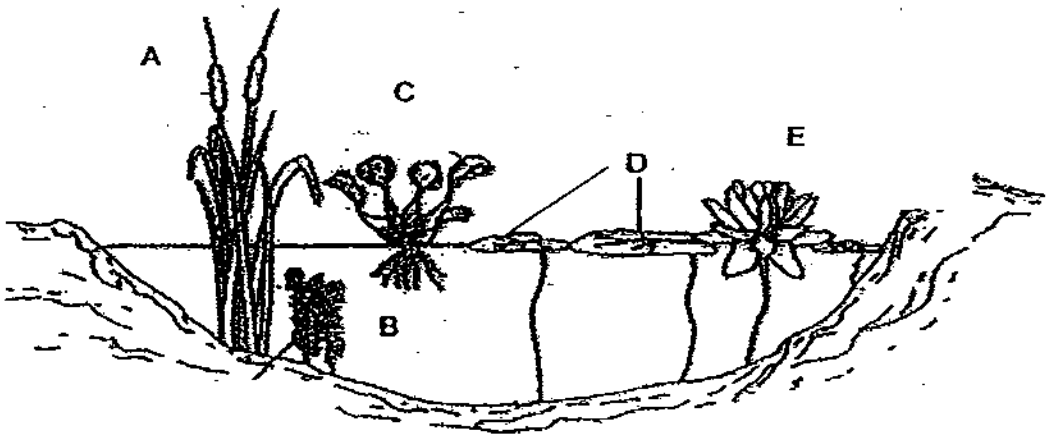
12. Ronice conducted an experiment by planting one string bean seedling each in 5 identical pots A, B, C, D and E. She planted each seedling in the same amount of identical garden soil under various conditions as shown in the following table. She recorded their growth in height after two weeks, as shown below.

	Plant A	Plant B	Plant C	Plant D	Plant E
Height of plant (cm)	10	20	30	15	45
Amount of fertilizer added (grams)	1	4	6	2	8
Water added (ml per day)	55	55	55	55	55

Based on the information shown, what conclusion can we draw from this experiment?

(1) The plant needs water and fertilizer for healthy growth.
(2) The plant would not grow if no fertilizer was added to the soil.
(3) The plant grew faster when more fertilizer was added to the soil.
(4) Different amounts of fertilizer affects plant growth more than different amounts of water.

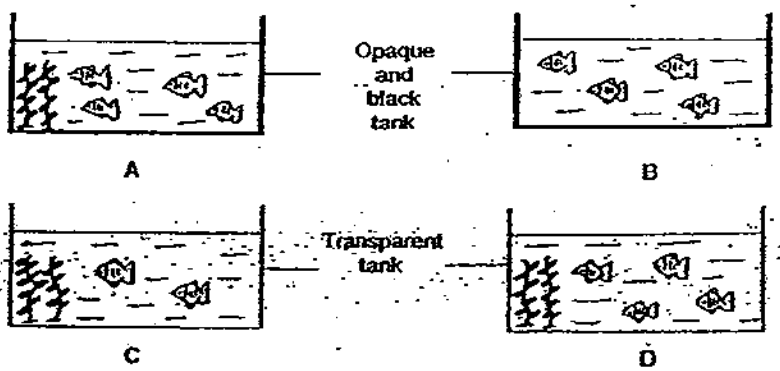
13. The diagram below shows 5 plants, A, B, C, D and E. They are found growing near and in a pond.



Which of the plants shown above, A, B, C or E will not grow well if plant D multiplies at a rapid rate?

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

14. Tracy set up 4 tanks, A, B, C and D as shown below to find out how the amount of light affects the survival of fishes in the water. She filled each of the tanks with 1000 ml of water.



From the above set- ups, which 2 tanks should she use to ensure that she is carrying out a fair test?

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

15. Beatrice carried out an experiment to find out the effects of carbon dioxide on four organisms W, X, Y and Z living in the pond over a period of five months. She recorded her observations in the table below.

Concentration of carbon dioxide (mg/l)	Size of population			
	Organism W	Organism X	Organism Y	Organism Z
1	75	107	99	213
5	75	106	99	257
10	75	110	99	274
15	80	110	110	289

Which one of the organisms could most likely be water plants?

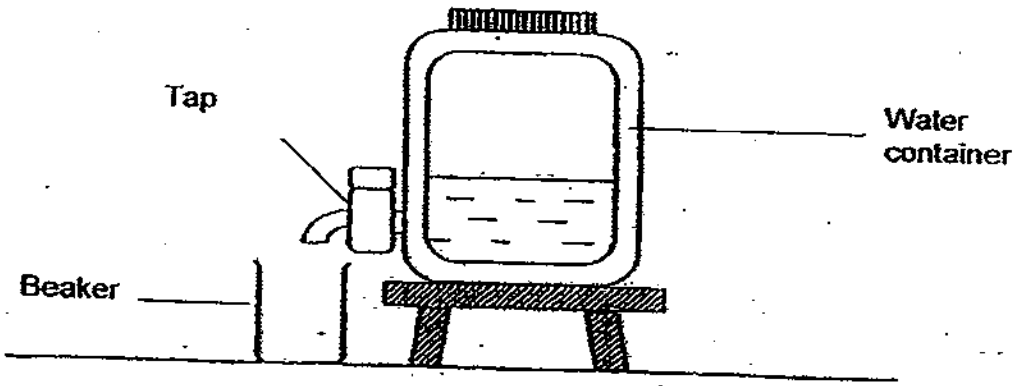
(1) W

(2) Y

(3) X

(4) Z

16. The diagram below shows a water container holding 1000 cm^3 of water. The capacity of the container is 5000cm^3.



When the tap of the container was turned on and off, 500 cm^3 of water was collected in the beaker. What would be the final volume of air in the container?

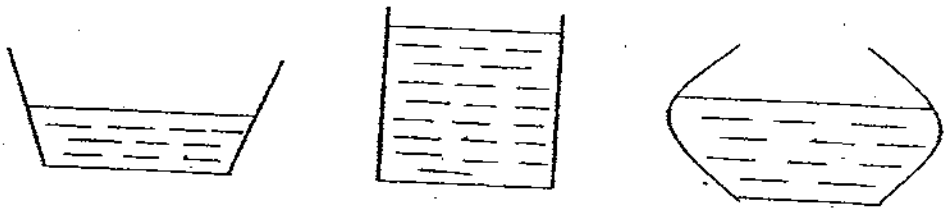
(1) 3500 cm^3

(2) 4000 cm^3

(3) 4500 cm^3

(4) 5000 cm^3

17. Agnes poured equal amount of water into the 3 containers as shown below.

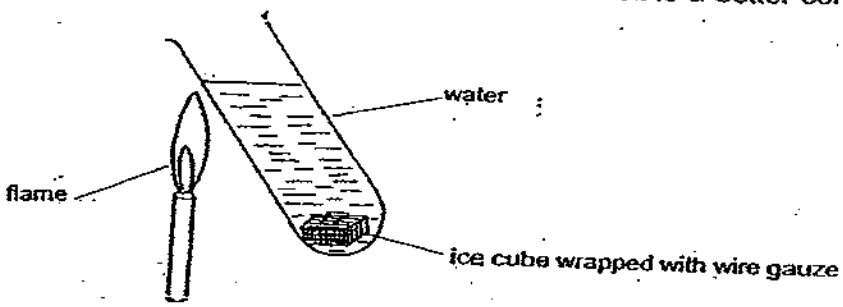


Which of the following conclusions can she make about water based on the above diagram?

(A) water has an indefinite shape
(B) water level depends on the shape of the container
(C) water level is always horizontal

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

18. Martha conducted an experiment to find out if water or oil is a better conductor of heat.

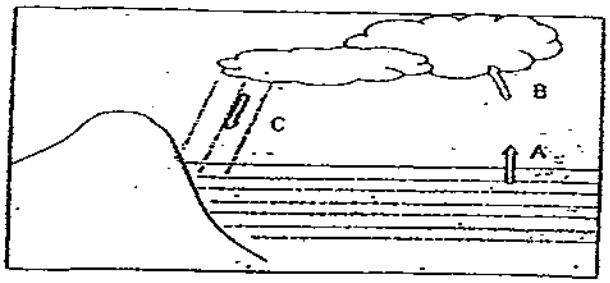


A piece of ice cube is wrapped in wire gauze and placed at the bottom of the test-tube. Next she put a flame at the top of the test-tube filled with water. She then recorded the time taken for the ice cube to melt completely. The experiment was repeated using oil.

Which of the following variables must be kept the same for a fair test?
(A) the size of the ice cube
(B) the position of the flame applied
(C) the amount of liquid in the test tube
(D) the time the flame was on until the ice melted

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

19. Study the diagram below carefully.



In which of the processes (A, B or C) will an increase in humidity of the air cause a decrease in its rate directly?

(1) A only

(2) C only

(3) A and B only

(4) A, B and C

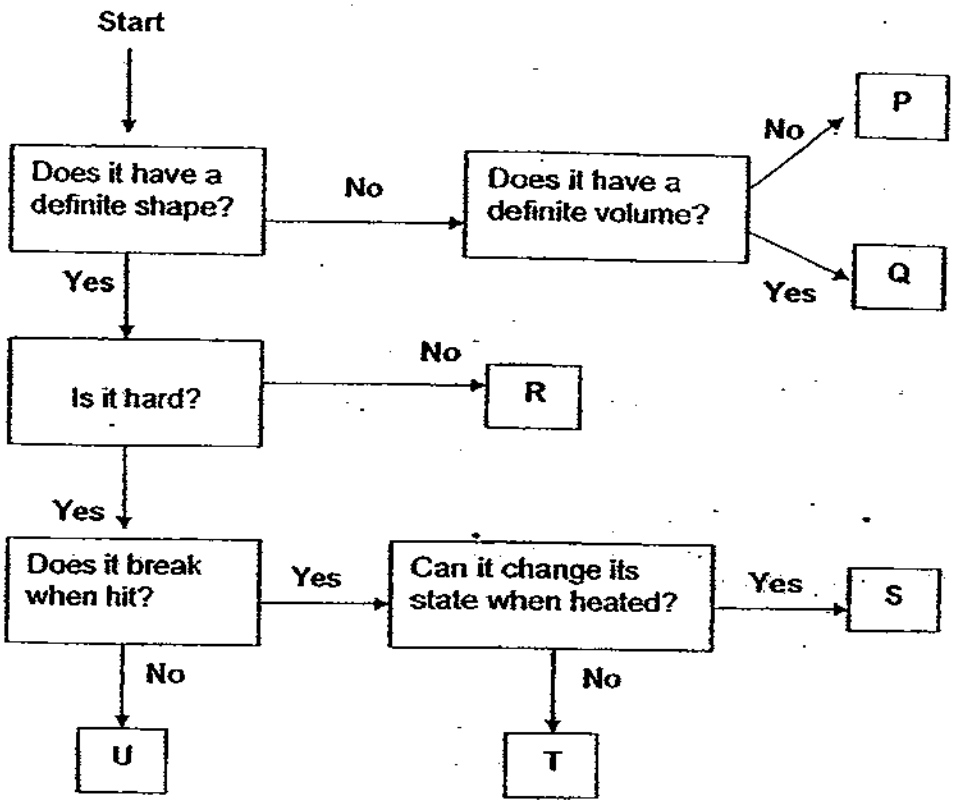
20. The table below shows the freezing point and boiling point for 4 different substances, E, F, G and H.

Substance	Freezing point (°C)	Boiling point (°C)
E	15	113
F	-7	35
G	40	180
H	-102	-35

Which one of the following represents correctly the states of each of the substances E, F, G and H respectively at the temperature of 28°C.

	States of substances at 28°C			
	E	F	G	H
(1)	Liquid	Liquid	Solid	Liquid
(2)	Solid	Gas	Liquid	Gas
(3)	Gas	Solid	Liquid	Solid
(4)	Liquid	Liquid	Solid	Gas

21. Study the flow chart below carefully.



Which letters in the flow chart above represent "Rock sugar" and "Milk" respectively?

	Rock sugar	Milk
(1)	R	T
(2)	S	Q
(3)	T	P
(4)	U	R

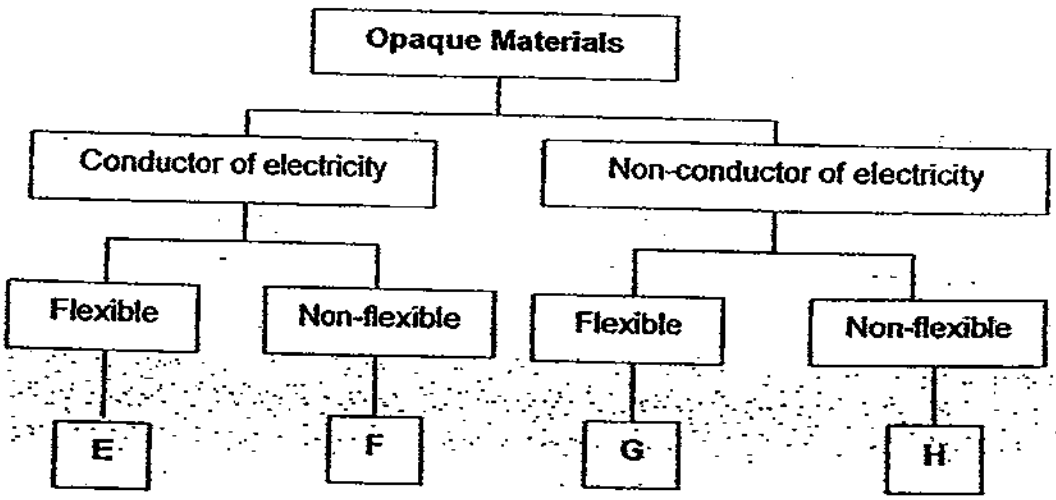
22. Owen coated different amount of wax on the ends of 4 similar rods (A, B, C, and D). She then heated the other ends of each rod over a candle flame and recorded the time taken for the wax to melt completely. Her results are shown in the table below.

Rods	Time taken for the wax to melt completely (minutes)
A	6
B	3
C	7
D	8

Which one of the following should be the aim of the above experiment?

(1) It is to find out if the size of the rods will affect the time taken for the wax to melt completely
(2) It is to find out if the amount of wax will affect the time taken for the wax to melt completely
(3) It is to find out if the intensity of flame will affect the time taken for the wax to melt completely
(4) It is to find out if the material of the rods will affect the time taken for the wax to melt completely

23. Study the classification table below.



Which of the following is a possible combination of objects E, F, G and H?

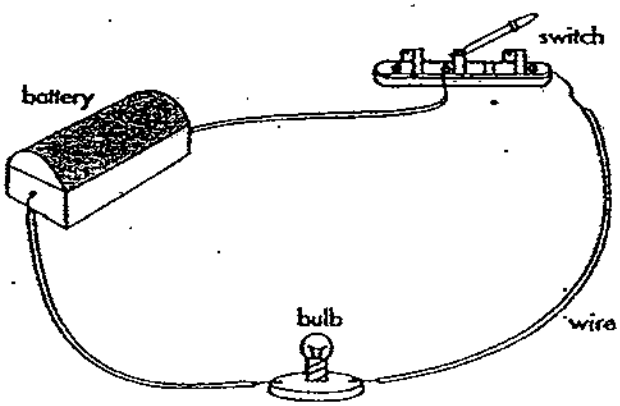
	E	F	G	H
(1)	Nylon	Iron nail	Spectacle lens	Ceramics mug
(2)	Nylon	Aluminium foil	Carpet	Rubber tube
(3)	Copper wire	Steel pipe	Rubber tube	Spectacle lens
(4)	Copper wire	Iron nail	Metal spring	Ceramics mug

24. Sofa is either made of cloth or leather. What would be the possible reasons for customers to prefer buying a leather sofa than one made of cloth?

A: Leather is more durable than cloth
B: Leather is waterproof but not cloth
C: Leather is more colourful than cloth
D: Leather is more resistant to heat and flame

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

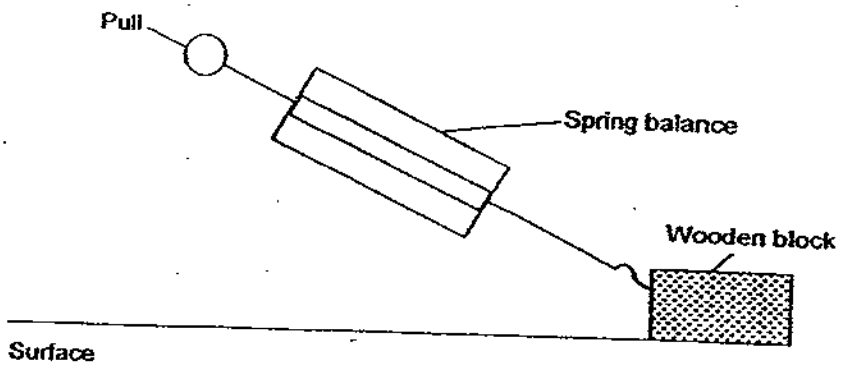
25. The diagram below shows a picture of a simple electric circuit.



When the switch was closed the bulb lit. What was the energy conversion that would take place?

(1) electrical energy → light energy
(2) potential energy → electrical energy → light energy
(3) chemical energy → kinetic energy → electrical energy → light energy
(4) potential energy → chemical energy → electrical energy → light energy

26. Study the diagram below.



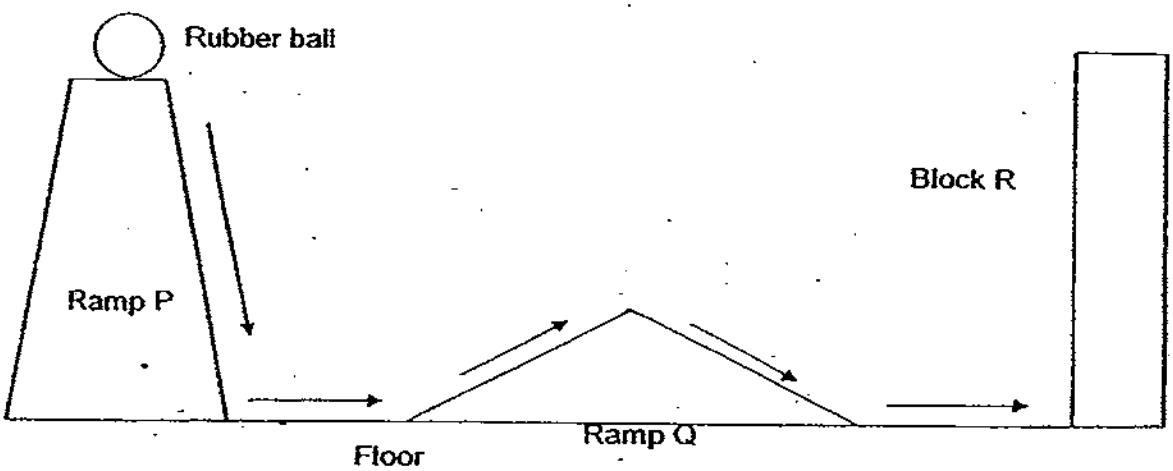
A spring balance is used to pull a wooden block over a surface. Which of the following will affect the amount of force needed to pull the object?

A: type of surface
B: the length of spring in the balance
C: mass of the wooden block
D: angle at which the force is applied

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

27. Study the diagram below.

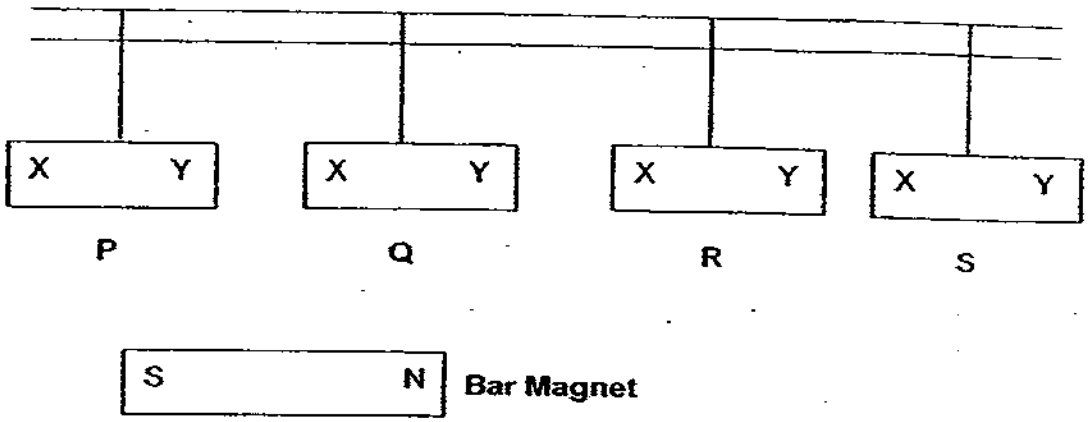
A rubber ball was released from the highest point of Ramp P. It rolled downwards and along the floor. Next, it travelled up Ramp Q and down before it was stopped by Block R.



Based on the path traveled by the rubber ball, which one of the following statements is true?

(1) All the kinetic energy would be used up when the rubber ball hit block R.
(2) When the rubber ball was released from Ramp P, it gained potential energy.
(3) The rubber ball had the most kinetic energy when it is at the highest point of Ramp P.
(4) Kinetic energy was converted to potential energy when the rubber ball travelled up Ramp Q

28. Four metal bars P, Q, R and S are hung from a rod as shown in the diagram below. The two ends of each metal bar are marked X and Y respectively. The north pole of a bar magnet is brought near X and then Y of each metal bar.



The observations made during the experiment are recorded in the table below.

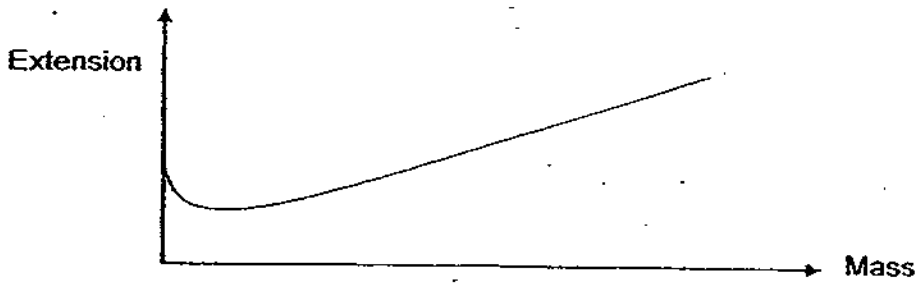
Metal Bar	Observations	
	North pole & End X	North pole & End Y
P	Repelled	Attracted
Q	Attracted	Attracted
R	No reaction	No reaction
S	Repelled	Attracted

Which one of the following statements about the experiment is correct?

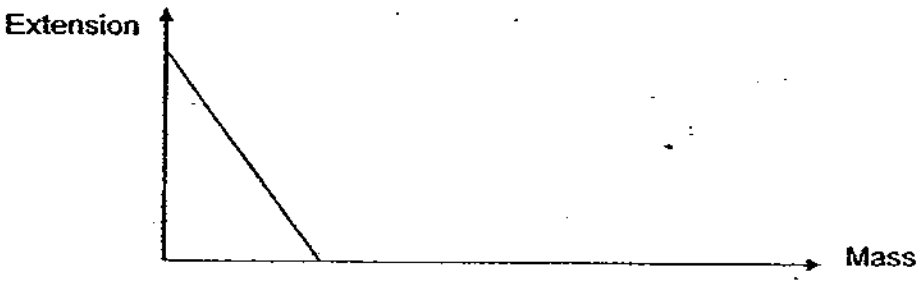
(1) Bar R is a weak magnet.
(2) Bar Q is definitely made of iron.
(3) Two of the metal bars are magnets.
(4) None of the metal bars are magnets.

29. Which of the following graphs correctly represents the relationship between the mass of the object and the extension of the spring?

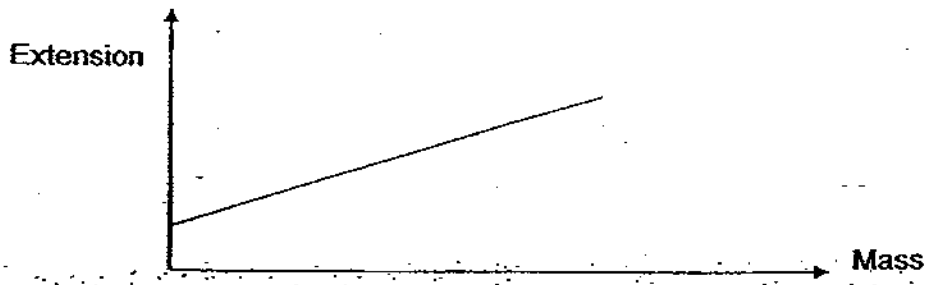
(1)



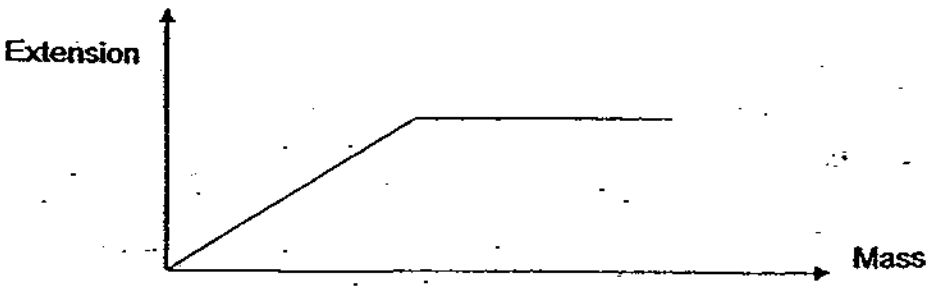
(2)



(3)

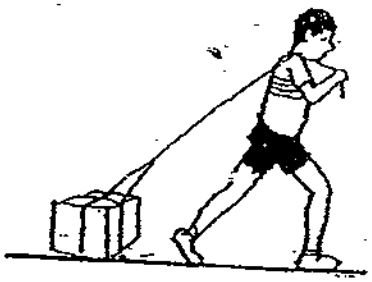


(4)



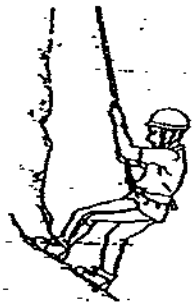
30. The four activities (A, B, C and D) below show forces at work.

Activity A



Ron Dragging a parcel

Activity B

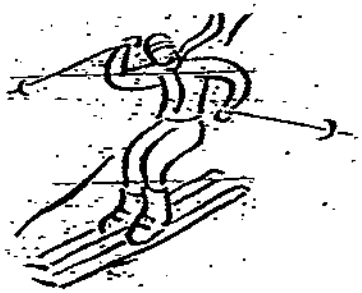


Peter climbing a cliff

Activity C

Leo tightening a bottle cap

Activity D



Ben skiing down a mountain

Which of the following activities require the presence of frictional force to carry out?

(1) A and B only

(2) A, C and D only

(3) A, B and C only

(4) A, B, C and D

End of Booklet A

Rosyth School
First Semestral Assessment for 2009
STANDARD SCIENCE
Primary 6

Name: _____ Total Marks: /40

Class: Pr_____ Register No._____ Duration: 1 h 45 min

Date: 14th May 2009 Parent's Signature: _____

Booklet B

Instructions to Pupils:

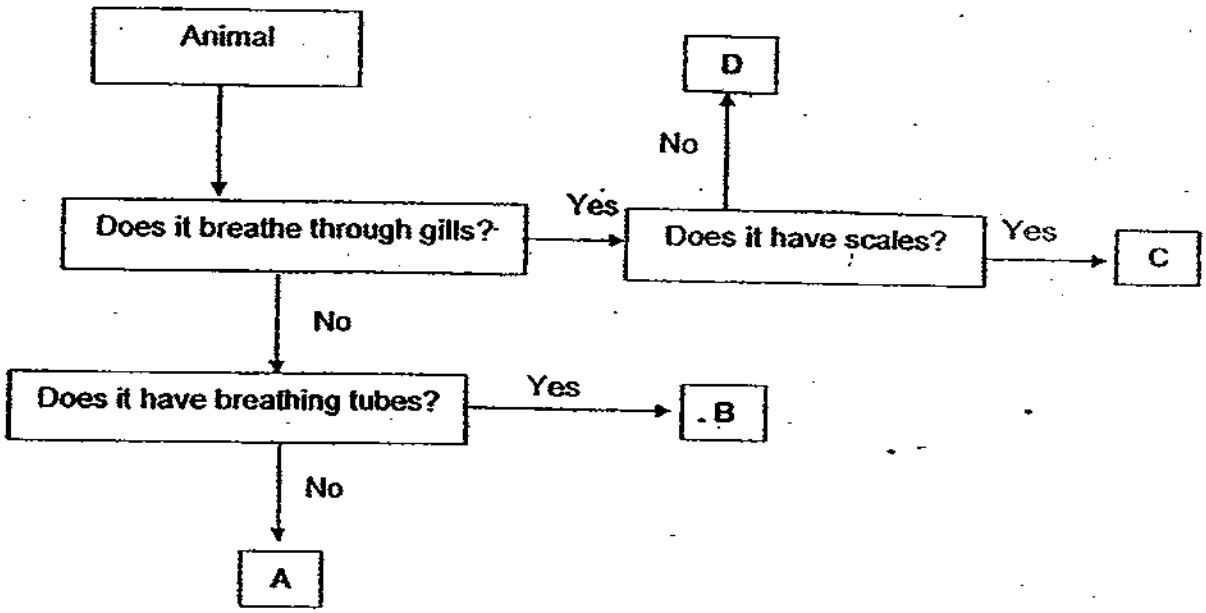
1. For questions 31 to 46, give your answers in the spaces given in this Booklet B.

* This booklet consists of _15_ pages. (Pg. 20 to 34)

Booklet B (40 marks)

For questions 31 to 46, write your answers in this booklet.

31. Look at the flowchart and answer the questions that follow.



(a) Write down one similarity between animals C and D. (1 m)

_____

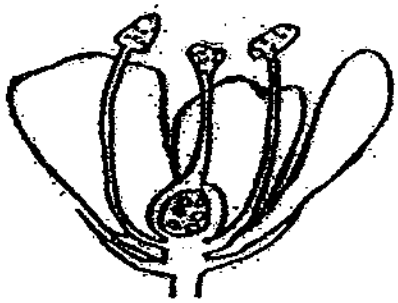
_____

(b) Name a possible habitat the animals A, B, C and D can live together in. (1 m)

_____

32. The pictures below show two flowers from plants A and B.

Plant A



Plant B

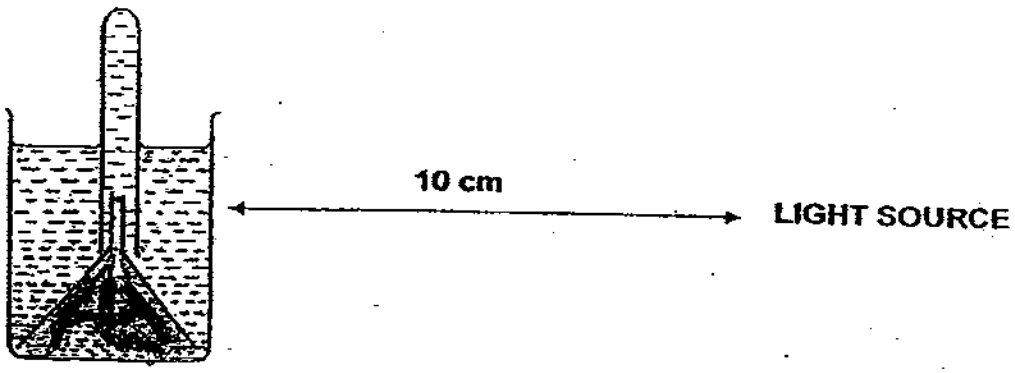
(a) Draw an arrow in the diagram to show the movement of pollen grains during cross-pollination. (1 m)

(b) Describe how self-pollination in flowers takes place. (1 m)

_____

_____

33. David placed an inverted test-tube containing some water and hydrilla inside a beaker of water as shown in the diagram below.



After ten minutes, he counted the number of bubbles produced by the water plants over 1 minute. He repeated the procedure 5 more times, increasing the distance between the light source and the beaker. He recorded his observations in the table shown below.

Distance of light source from beaker (cm)	Number of bubbles produced in 1 minute
30	60
40	50
50	40
60	30
70	20

(a) Write down one conclusion David can make from the above experiment. (1 m)

_____

_____

(b) Explain why the amount of hydrilla must be kept the same for the experiment (1 m)

_____

_____

34. Serene did an experiment using pots of the same size, labelled X and Y. The table below shows some of the conditions in her experiment.

Pot	Number of seedlings	Amount of soil used (g)	Amount of water used (ml)	Height of plant after 2 weeks (cm)
X	5	700	35	8
Y	25	700	35	3

(a) State the aim of Serene's experiment. (1 m)

_____

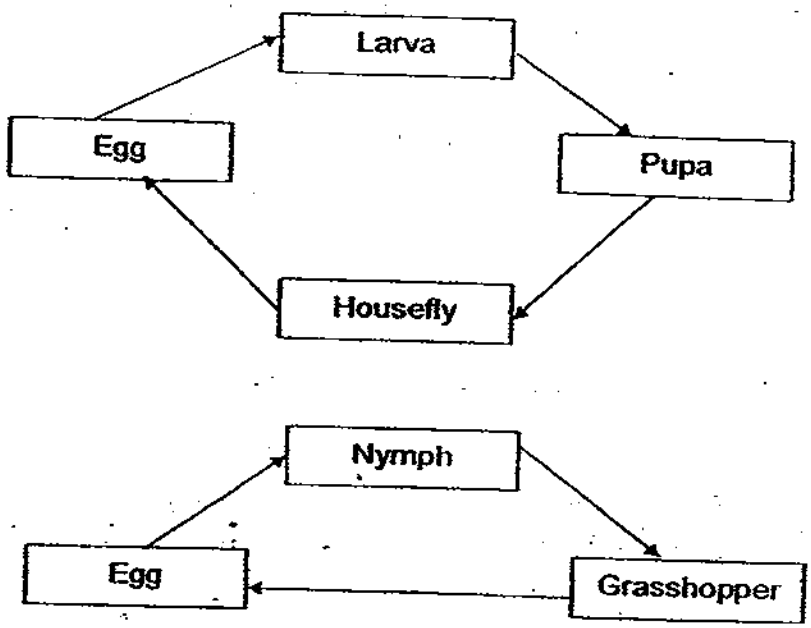
_____

(b) State 2 other variables that Serene needs to keep constant other than the ones stated above, in order for her to conduct a fair test. (1 m)

_____

_____

35. Look at the life cycles of the insects shown below.



State one similarity and one difference between the life cycles of these insects. (2 m)

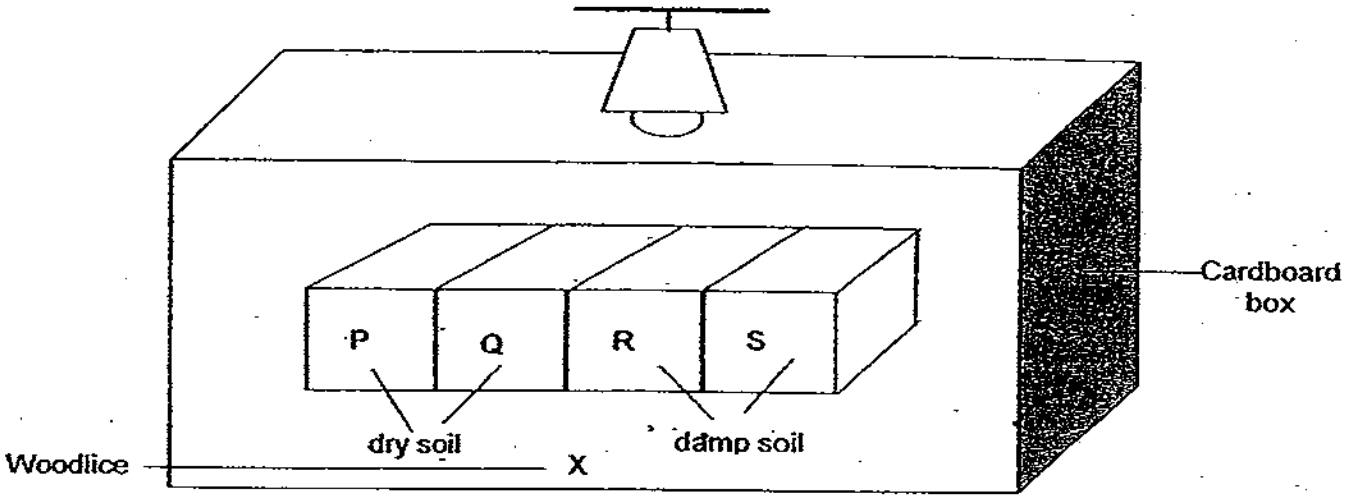
Similarity: _____

_____

Difference: _____

_____

36. Anthony carried out an experiment with 30 woodlice. He divided a cardboard box into 4 equal sections P, Q, R and S as shown below. He created an opening in the middle of the cardboard box for a light source to shine through.
He poured an equal amount of soil into each section.



Anthony then released the woodlice at point X as shown above. He counted the number of woodlice in each section after an hour. He repeated his steps three times. He recorded his results in the table as shown below.

Number of times expriment carried out	Number of woodlice in each section			
	P	Q	R	S
1	2	0	4	24
2	2	1	5	22
3	3	0	4	23

(a) Based on the results in the table, which condition does the woodlice prefer most? (1 m)

_____

_____

(b) Give a reason why there were more woodlice in S than in R? (1 m)

_____

_____

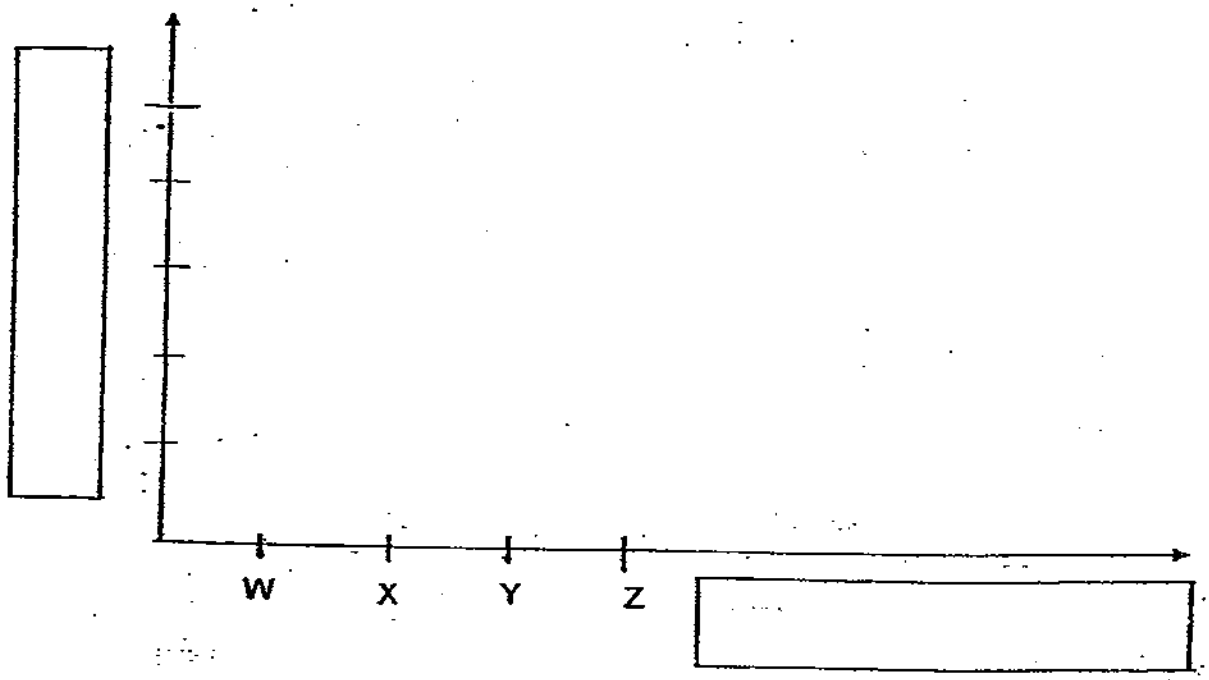
(c) Why did Anthony count the woodlice after an hour? (1 m)

_____

37. Mark planted an identical seedling each of similar height (2 cm) in 4 similar pots. Each pot contained the same amount and type of soil. He watered each seedling with different amounts of water daily. Then he measured the height of each seedling at the end of 10 days and recorded his observations in the table below.

Pot	Daily amount of water (ml)	Height of seedling after 10 days (cm)
W	10	5
X	15	15
Y	20	20
Z	25	25

(a) Draw a graph in the space below to show the height of the seedling after 10 days. Label the X and Y axes. (2 m)



(b) He wants to ensure that his results are reliable, but he does not want to repeat his experiment. What do you think he should do? (1 m)

38. The table shows some populations of animals on a lime plant and what they feed on.

Animals	Food
Beetle larva	Roots
Caterpillars	Leaves
Mealy bugs and aphids	Plant sap
Lady bugs	Aphids
Stink bugs	Seeds inside the fruit
Butterfly	Nectar of flowers

(a) How many populations of plant eaters are there on the lime plant? (1 m)

_____

(b) From the information given, name one animal which is useful to the plant. (1 m)

_____

(c) Explain why it is useful. (1 m)

_____

39. 500 ml of air is pumped into each of 4 deflated balls of different sizes as shown in the table below.

Ball	Capacity of ball
A	350 ml
B	400 ml
C	500 ml
D	600 ml

(a) Which of the balls (A, B, C or D) can hold all the 500 ml of air? (1m)

_____

(b) Explain your reason for your answer in (a). (1m)

_____

_____

40. Three containers were filled with Substances A, B and C respectively. They were then left out in the sun for the some time and put back in the classroom with a room temperature of 30°C. The temperature of the three substances were taken at a three-minute interval and recorded in the table below.

Time (minutes)	Temperature of Substances (°C)		
	Substance A	Substance B	Substance C
3	41.7	42.5	40.3
6	41.0	42.0	39.5
9	40.7	39.1	38.2
12	39.2	36.4	37.0
15	36.6	34.2	36.1
18	34.0	32.6	34.0

(a) What would the temperature of substance B be after leaving it for an hour in the classroom? (1m)

_____

_____

(b) Explain why there is a difference in temperatures of the three substances after being left in the sun for the same period of time? (1m)

_____

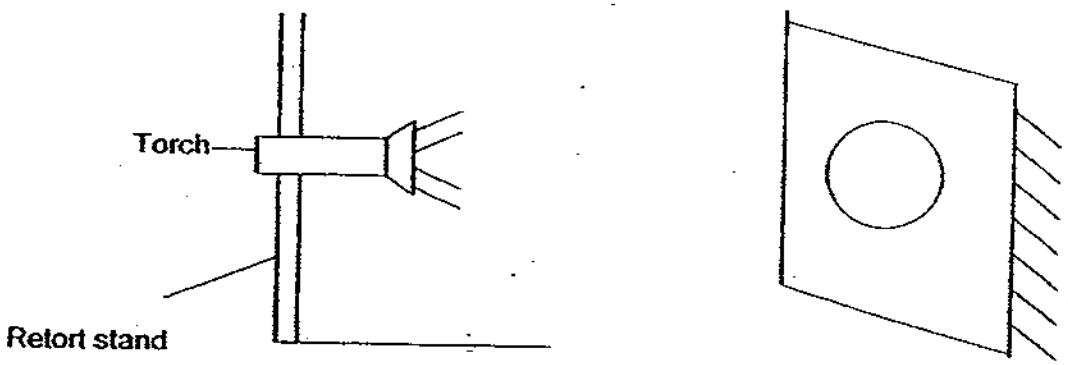
_____

(c) Name two other variables that must be kept constant to ensure that the investigation is a fair one. (1m)

_____

_____

41. Dan set up the experiment as shown below.



He carried out the following steps

(1) He mounted a torch on a retort stand in front of a wall.
(2) He measured the distance between the torch and the wall.
(3) He switched on the torch and measured the diameter of the circular light patch on the wall.
(4) He placed the torch at different distances from the wall and repeated steps (2) to (4) each time.

The measurements were recorded in the table below.

Distance of the torch from the wall (cm)	Diameter of the light patch on the wall (cm)
12	6.2
14	8.5
16	9.6
18	11

(a) What was Dan trying to find out from this experiment? (1m)

_____

_____

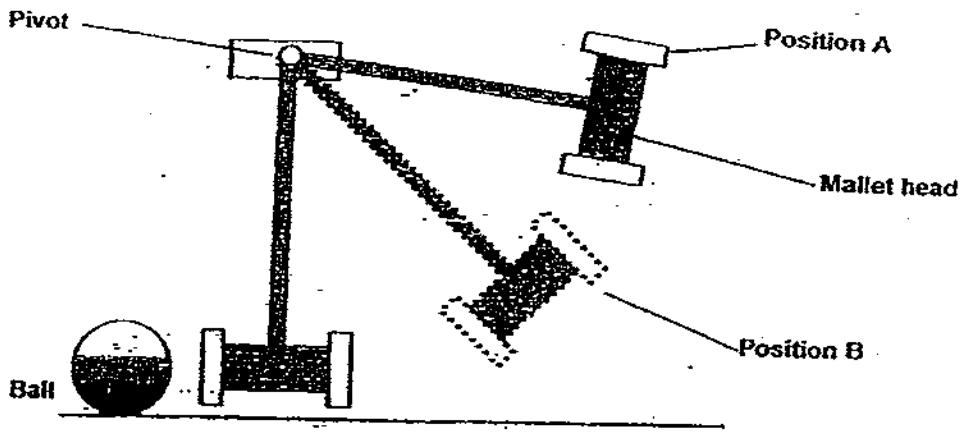
(b) What is the relationship between the distance of the torch from the wall and the diameter of light patch on the wall? (1m)

_____

(c) State the energy conversion when the torch was switched on. (1m)

_____

42. The diagram below shows a mallet pivoted at one end. It was allowed to swing freely and hit a ball upon release from positions A and B.



(a) Compare the speeds of the ball when the mallet head is raised to position A and position B upon release. (1m)

_____

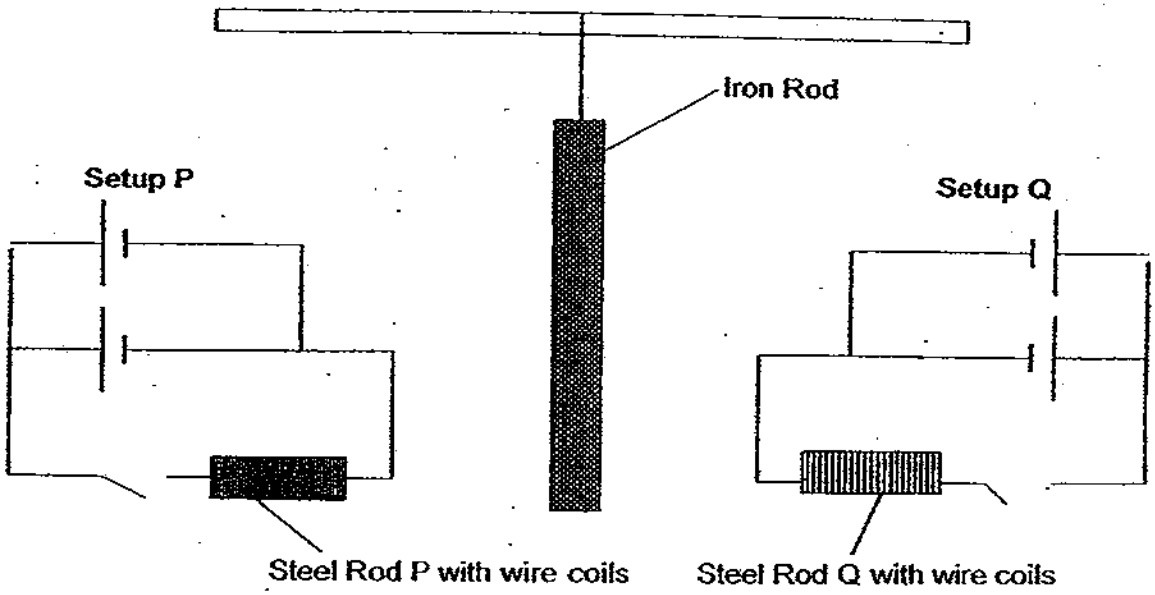
_____

(b) What will happen to the speed of the ball when it is being changed to a heavier one? Explain why. (2m)

_____

_____

43. Study the diagram below.
An iron rod is suspended at an equal distance between 2 electromagnet setups P and Q. The size of the steel rods, P and Q, the number of batteries used and the switches are identical. The steel rod in setup P has more wire coils than steel rod in setup Q.



(a) What will happen to the iron rod when both switches are closed at the same time? (1m)

_____

_____

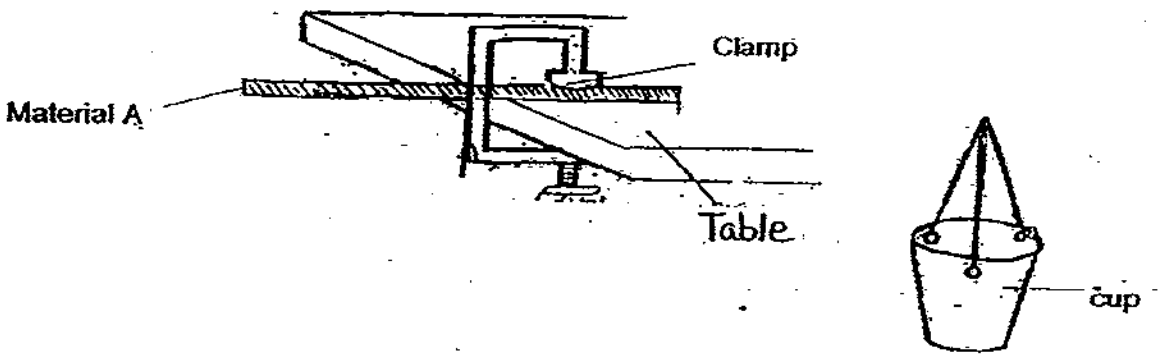
(b) Explain your answer in (a). (1m)

_____

_____

44. Study the setup below carefully.

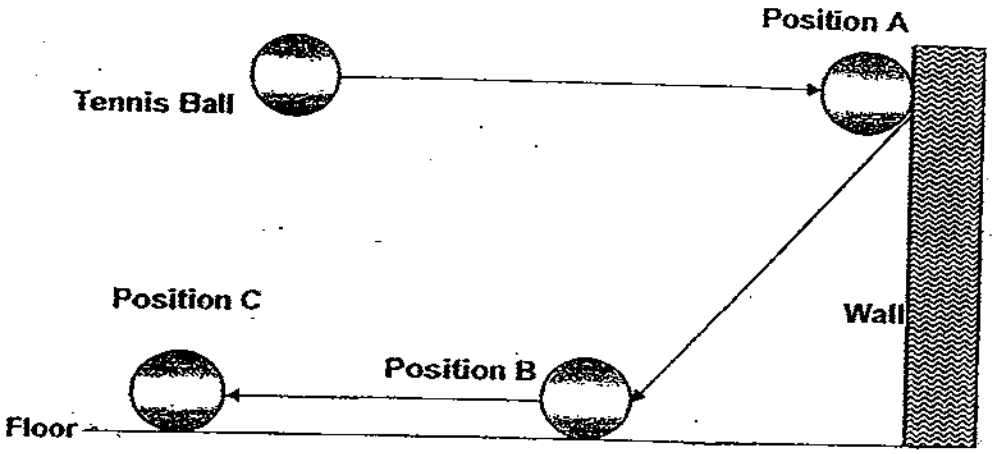
Anne wants to find out which one of the three materials, A, B and C of similar size and shape is suitable for making the support of a book self. It was found that a strong material must be able to support at least a weight of 12kg. Weights are provided to test the strength of each material using the setup below.



Using the setup above and the items provided, list the steps that Anne must take to test the strength of each of the Materials, A, B and C. Step 1 has been done for you. (2m)

Step 1: Clamp Material A to the table top

45. Study the diagram below.



When Doreen threw a tennis ball against the wall, it hit the wall at position A and bounced off and landed on the floor at position B. It then rolled along the floor and finally stopped at position C

(a) What were the forces acting on the tennis ball when it moved from Position A to Position B? (1m)

_____

_____

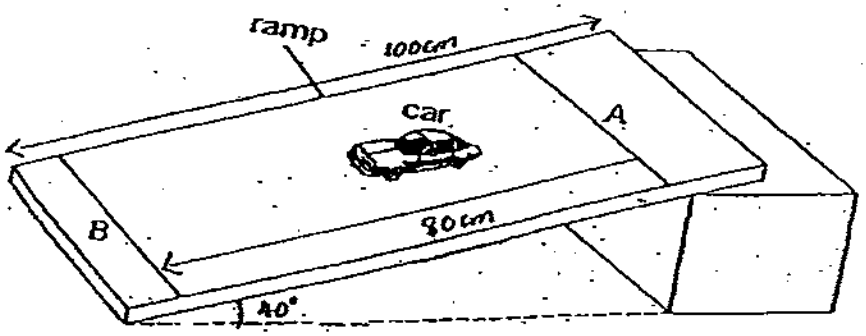
(b) Mark an 'X' on the floor in the above diagram to show where the ball might land if Doreen had thrown the ball with a smaller force. (1m)

(c) Why did the tennis ball come to a stop eventually at position C? (1m)

_____

_____

46. Carina carried out an experiment using the set up as shown below. The experiment was repeated using two different surfaces of ramp. For each experiment, the time was measured for the toy car to travel the distance from A to B.



The details of the two experiments were recorded in the table below.

	1st Experiment	2nd Experiment
Surface of ramp	Plastic A	Plastic B
Mass of toy car (g)	35	35
Time taken to travel from A to B (cm)	5.2	7.1

(a) Explain why the toy car took a longer time to move from A to B in the 2nd experiment? (1m)

_____

_____

(b) The angle of the ramp was increased to 60°. What would happen to the results obtained? Explain why. (2m)

_____

_____

End of Booklet B

ANSWER SHEET

EXAM PAPER 2009

SCHOOL : ROSYTH PRIMARY
SUBJECT : PRIMARY 6 SCIENCE

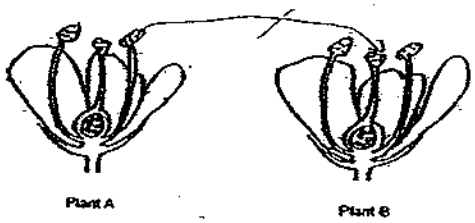
TERM : SA1

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

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

31)a)Both C and D breath through gills.
b)Pond habitat.

32)a)



b)The pollen grains from the anther is transferred to the stigma.

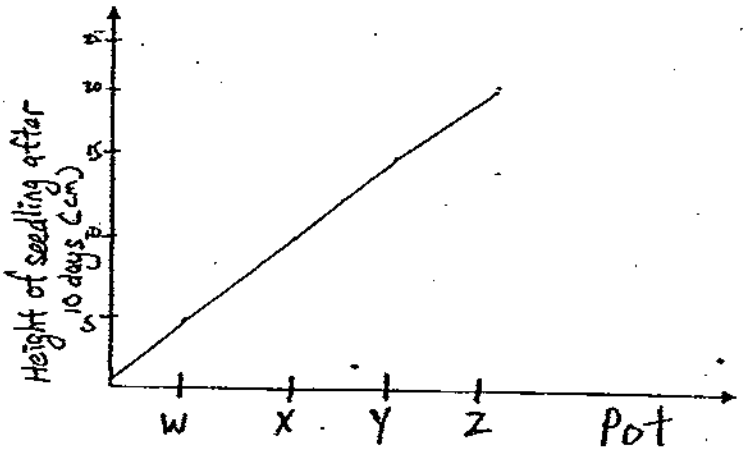
33)a)The further the distance of light source from beaker the lesser number of bubbles produced in 1 minute.
b)The amount of hydrilla must be kept the same in order not to affect the result of the experiment and to make the experiment a fair one.

34)a)To find out if the number of seedlings could affect the height of plant after 2 weeks.
b)Type of soil/amount of light/type of seedling.

35)Similarity: Both cycle begin with an egg.
Difference: The housefly has 4 life cycle while Grasshopper has 3 life cycle.

36)a)The woodlice prefer a dark and damp place.
b)S is darker than R.
c)It is to allow them time to move to their preferred condition.

37)a)



b)He should grow more plants in each pot and take the average height.

38)a)5
b)Lady bugs.
c)It helps to eat up the Aphids that eat the plant sap.

39)a)A,B,C,D
b)Air can be compressed.

40)a)It would be 30℃.
b)The substances of different conductor of heat.
c) The type of containers. The amount of substances.

41)a)Dan is trying to find out if the distance of the torch from the wall could affect the diameter of the light patch on the wall.
b)The further the distance of the torch the wall, the bigger the diameter of the light patch on the wall.
c)Chemical energy→Electrical energy→Light energy + Heat energy.

42)a)When the mallet head is raised at position A the ball will travel faster than position B.

b)The ball will travel slower because the heavier ball has more friction to overcome.

43)a)The iron rod will attract the steel Rod P.

b)There is more wired coiled around Rod P so it more magnetic.

44)Step 2: Hang the cup at certain point.

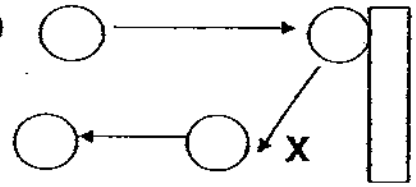
Step 3: Add a weight of 12kg into the cup.

Step 4: Observe if the material will snap/break.

Step 5: Repeat steps 1—4 for materials B and C.

45)a)Gravitational and Frictional Forces.

b)



c)The kinetic energy is converted to other forms of energy.

46)a)Plastic B has a rougher surface the surface so there is more frictional force between of the ramp and the types the toys car.

b)Decrease the greater the angle of the ramp, the car would have more potential energy which would be converted to more kinetic energy and the car will move faster.