CA2

Rosyth School
Second Continual Assessment for 2005
SCIENCE
Primary 4

Total Marks: ____/50

Name: _____

Class: Pr 4____ Register No. _____ Duration: 1 h

Date: 25th August 2005 Parent's Signature: _____

Instructions to Pupils:

1. Do not open the booklet until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 parts, Sections A and B.
4. For questions 1 to 15 in Section A, shade the correct ovals on the Optical Answer Sheet (OAS).
5. For questions 16 to 23, give your answers in the spaces provided in the paper.

	Maximum	Marks Obtained
Section A	30 marks	
Section B	20 marks	
Total	50 marks	

* This booklet consists of 12 pages .

Section A (30 Marks)

For each question from 1 to 15, 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 one of the following is/are carried by blood?

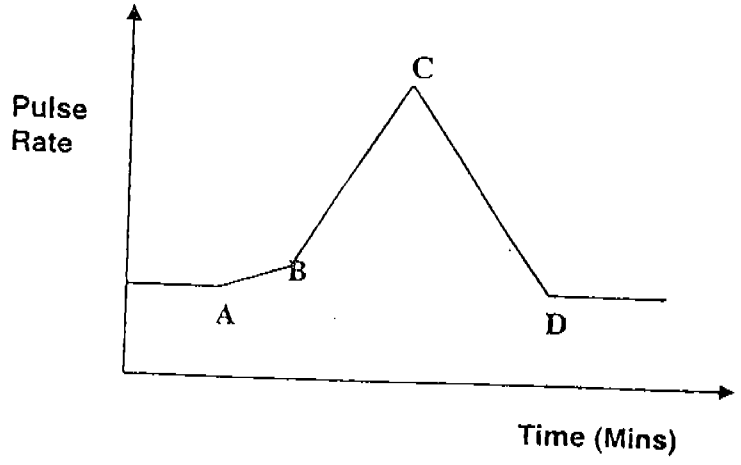
A: Water
B: Oxygen
C: Digested Food
D: Carbon Dioxide
E: Waste Substances

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

2. Which one of the following makes up the circulatory system?

(1) Nose, windpipe and lungs
(2) Heart, blood and blood vessels
(3) Heart, lungs, blood and blood vessels
(4) Nose, windpipe, blood and blood vessels

3. The graph below shows Caleb's pulse rates taken while he was sitting, walking and running. Refer to the graph and answer questions 3 and 4.



At which point of the graph did he start walking?

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

Go on to the next page

4. What happened to Caleb's pulse rate when he was running?

(1) His pulse rate increased.
(2) His pulse rate decreased.
(3) His pulse rate remained the same.
(4) His pulse rate decreased and then increased.

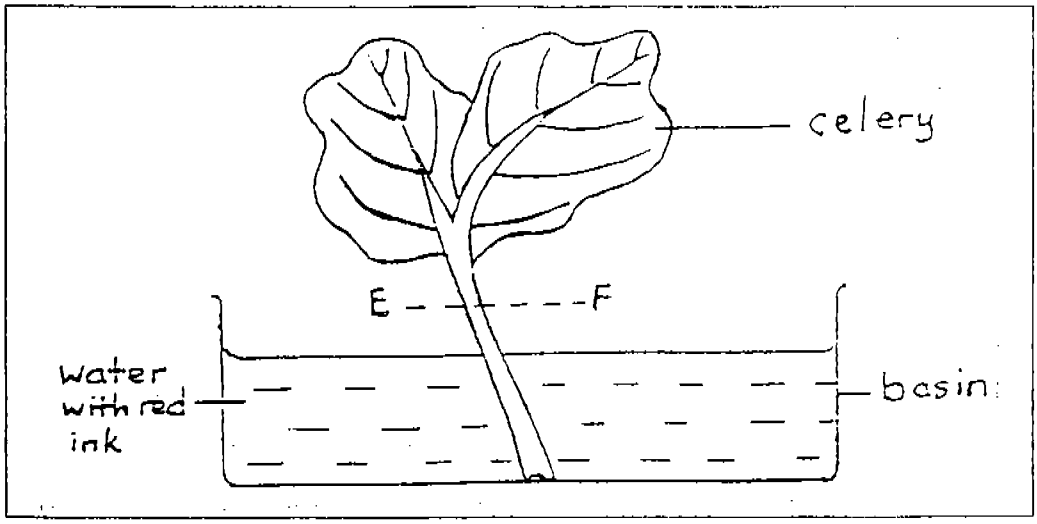
5. Look at the pictures below.

A B C

Arrange the girls according to the amount of energy they need to perform the activities shown above, starting from the lowest.

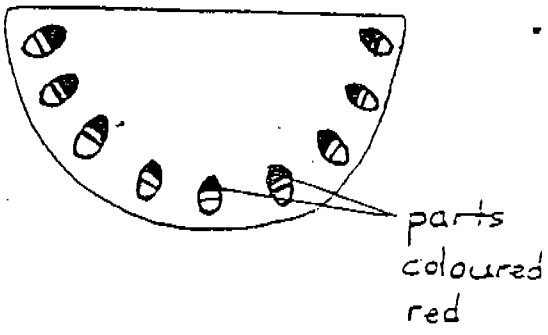
(1) A, C, B
(2) B, C, A
(3) C, A, B
(4) C, B, A

6. A stalk of celery was placed in water with red ink. The next day, the stalk was removed and it was cut across at EF as shown in the diagram below.

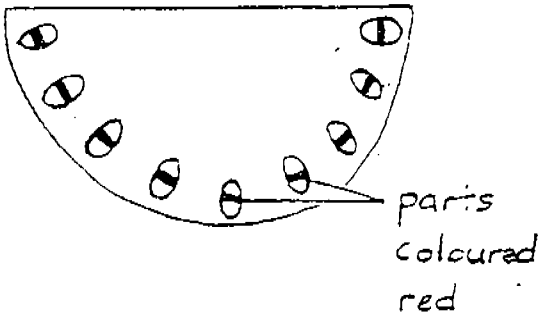


Which one of the diagrams below will show what is observed of the celery stalk when it is cut at EF?

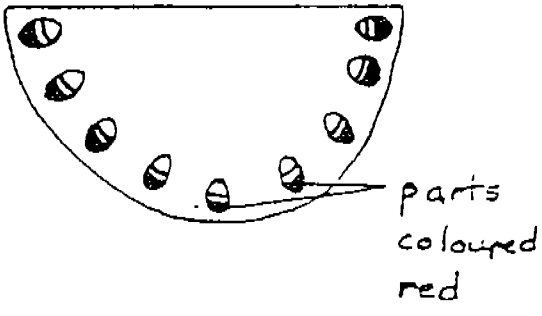
(1)



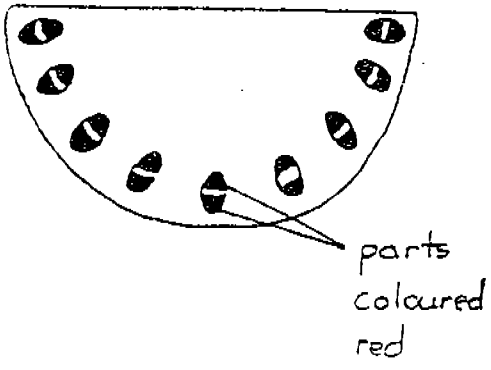
(2)



(3)



(4)

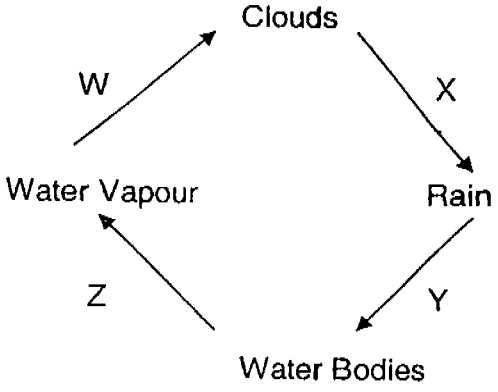


7. Which of the following are needed for plants to make food?

A: Water
B: Heat Energy
C: Light Energy
D: Carbon Dioxide

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

8. Study the diagram below carefully.



At which point (W, X, Y or Z) of the water cycle is energy needed?

(1) W
(2) X
(3) Y
(4) Z

9. Study the diagram below carefully.

Sun → Plants → Man

What does this diagram show?

(1) Plants get energy from man.
(2) Sun gets energy from plants.
(3) Man gets energy directly from the Sun.
(4) Man gets energy indirectly from the Sun.

Go on to the next page

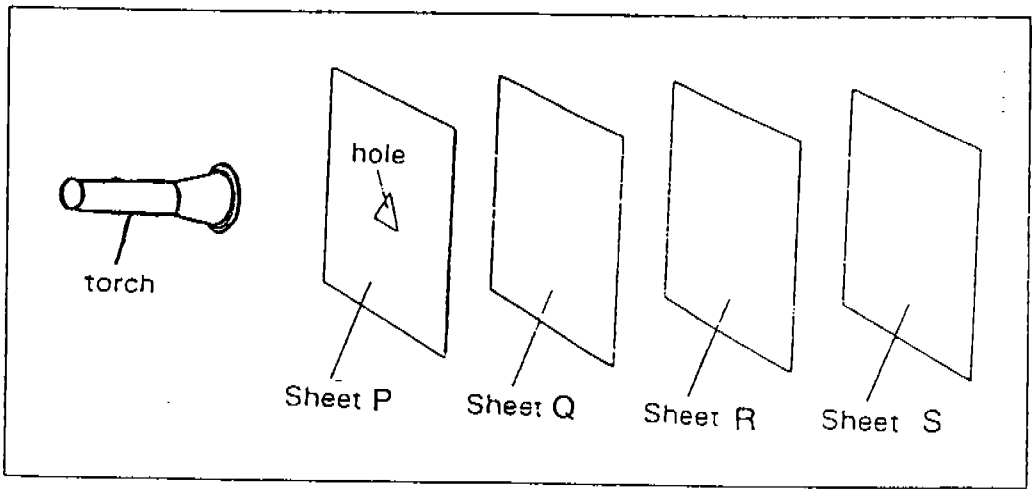
10. Which one of the following is not a light source?

(1) Sun
(2) Moon
(3) Stars
(4) Burning Candle

11. Which one of the following allows light to pass through?

(1) Milk
(2) Mirror
(3) Tap Water
(4) Cardboard

12. The experiment shown below was carried out in a dark room.

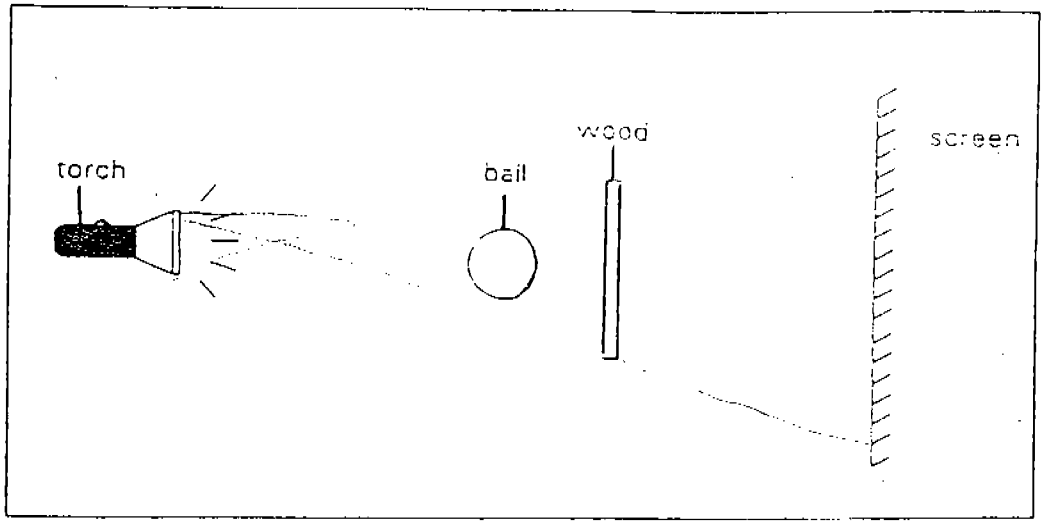


Sheets P, Q, R and S were arranged in a straight line. When the torch was switched on, a bright triangular patch of light was seen on Sheet R only.

Which one of the following correctly describes the properties of the materials that sheets P, Q, R and S are made of?

	Allows light to pass through	Does not allow light to pass through	Not possible to tell
(1)	Q	R	P and S
(2)	Q	P and R	S
(3)	P and Q	S	R
(4)	P and S	R	Q

13. The diagram below shows a torch shining on a ball and a square piece of wood.

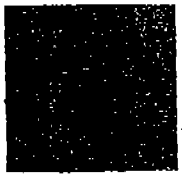


A shadow is cast on the screen.

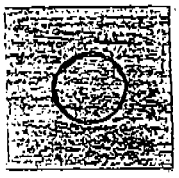
What will the shadow look like?

(1)

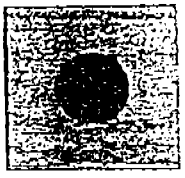
(2)



(3)



(4)

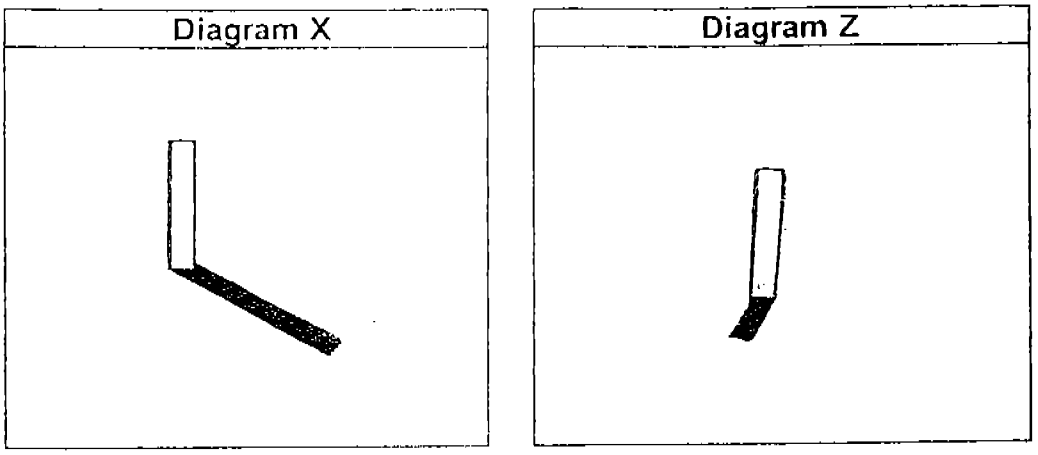


14. What happens when light falls on a wooden chair?

A: Some of the light is reflected.
B: Some of the light passes through the chair.
C: Some of the light is blocked by the wooden chair.

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

15. The diagrams below show a pole and its shadow at different times in a sunny place.



If the shadow cast by the pole in Diagram X is at 3pm, what time was the shadow cast in Diagram Z?

(1) 8am
(2) 11am
(3) 1pm
(4) 4pm

Section B (20 Marks)

For questions 16 to 23, write your answers in this booklet.

16. A plant's circulatory system is made up of 2 separate sets of fine tubes that run through the leaves, stems and roots.

(a) Name the set of tubes that transport food made in the leaves to all other parts of the plants. [1m]

_____

(b) Name the set of tubes that transport water and mineral salts from the roots to the other parts of the plants. [1m]

_____

17. Both plants and animals have circulatory systems. The transport systems in plants and animals are similar in some ways.

(a) Write one similarity and one difference between the two transport systems. [2m]

Similarity: _____

_____

_____

Difference: _____

_____

_____

(b) Name the part of the circulatory system that pumps blood to all parts of the body. [1m]

_____

Go on to the next page

18. **Fill in the blanks below with the helping words provided in the box. Use each word only ONCE. [2m]**

sun	sugar	energy	food

All living things need food to stay alive. Grass makes food using energy from the _____. Plant-eaters such as zebras feed on the grass. The zebra is in turn hunted and fed on by meat-eaters such as tigers. In this way, the _____ from the Sun is passed on from the grass to the zebras and finally to the tiger.

19. The equation below shows the process of photosynthesis.

$$\text{Water} + \textbf{Gas P} \xrightarrow{\text{light energy}} \textbf{Substance A} + \textbf{Gas Q}$$

Based on the equation above, what do Gas P, Gas Q and Substance A represent? [3m]

(i) **Gas P**: _____.

(ii) **Gas Q**: _____.

(iii) **Substance A**: _____.

20. Joseph wanted to find out how well light can pass through different kinds of materials. Put a tick against each material to show how well he can see through them. [2m]

	Materials	Clearly	Partially	Not at all
a)	Rubber boots			
b)	Frosted glass			
c)	Lenses Dark sunglasses			
d)	Tracing paper			

21. Read the four statements Esther made about light carefully.

A: Light travels in straight lines.

B: Light can pass through some objects.

C: We can see an object when light is reflected from our eyes to the object.

D: We can see objects behind clear plastic sheets because most light can pass through the clear plastic sheets.

(a) Which one of the above statements made by Esther is false? [1m]

Statement _____ _____

(b) Rewrite the false statement in (a) so that it becomes true. [1m]

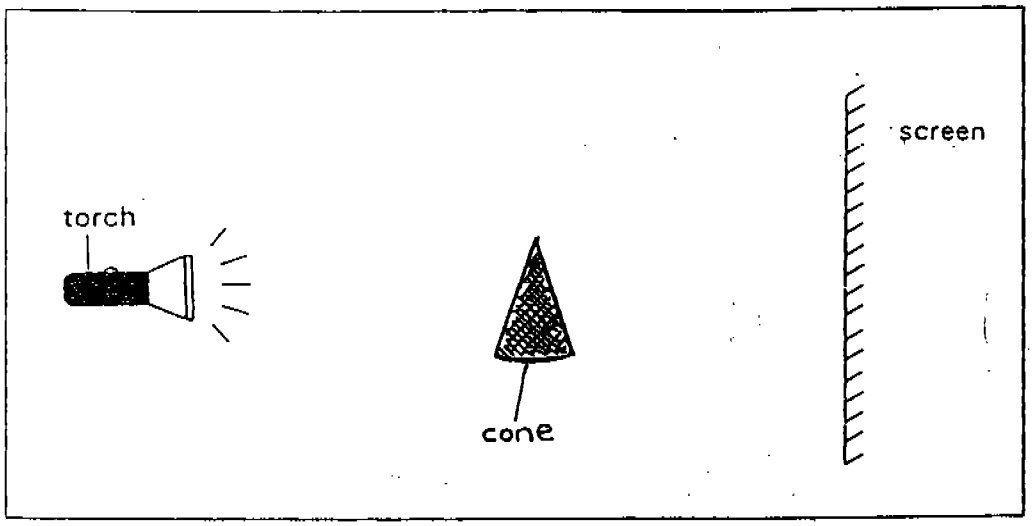
_____

_____

_____

Go on to the next page

22. used a torch to cast a shadow of an object on a screen.



(a) Draw the shadow of the object in the box below. [1m]

(b) State one thing Joseph can do to make the shadow on the screen bigger. [1m]

_____

_____

_____

(c) State one thing Joseph can do to change the shape of the cone that is cast on the screen. [1m]

_____

_____

_____

23. A group of pupils were having a toy car competition. Materials used were recycled materials and 2 rubber bands. No motor or engines were used.

(a)i) Name the source of energy for the toy cars to move. [1m]

_____

(a)ii) In order to have a fair competition, which 2 of the following variables must be kept the same? Put only 2 ticks in the table below. [1m]

Starting point of the toy car	
Ending point of the toy car	
Starting time of the toy car	
Number of rubber bands used	

(b) The table below shows the distance travelled by a toy car when the wheels of the toy car had made a number of turns.

Number of turns of the wheels	Distance travelled (in *m*)
5 turns	1.2*m*
10 turns	2.5*m*
15 turns	3.3*m*

Based on the results above, what is the relationship between the number of turns of the wheels and the distance travelled by the toy car? [1m]

_____

_____

_____

_____

End of Paper

CA2

ROSYTH SCHOOL
SECOND CONTINUAL ASSESSMENT FOR 2005
SCIENCE
PRIMARY 4

1) 1

2) 2

3) 1

4) 1

5) 2

6) 1

7) 3

8) 4

9) 4

10) 2

11) 3

12) 2

13) 2

14) 2

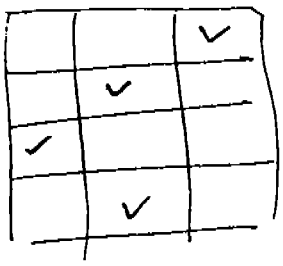
15) 2

20) a)

b)

c)

d)



21) a) C

b) We can see an object when light is reflected by the object into our eyes.

22) a)

b) He can move the torch nearer to the cone.

c) He can change the position of the cane.

23) a) i) The 2 rubber band

ii)

b) The more times the wheel turns, the further the distance travelled by the car.

16) a)The set of tubes are the phloem tubes.

b) The set of tubes are the xylem tubes.

17) They have tubes that transport food and water around the human and plant.

The human circulatory system has a heart the pump blood all around the body but the plant circulatory system does not have such an organ.

b) The heart

18) sun

energy

19) i) carbon dioxide

ii) Oxygen

iii) Glucose