Nan Hua Primary School
Primary 6 Science
Term 1 Non-weighted Assessment 2024

Marks	
Section A:	/16
Section B:	/14
Total:	**/30**

Name: _____( )

Class: Primary 6S_____

Date: _____

Duration: 40 minutes

_____

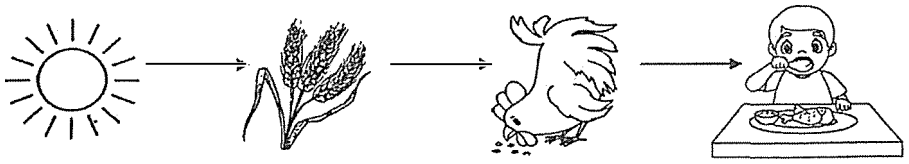
Parent's Signature

Answer all questions.

Section A: (8 x 2 marks = 16 marks)

For each question from 1 to 8, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write your answer in the bracket provided.

1 Study the energy chain below.



Based on the diagram above, which of the following statements is true?

(1) The chicken gets its energy directly from the Sun.

(2) The energy from the Sun is passed on to the wheat plant.

(3) The boy does not get his energy from the chicken he eats.

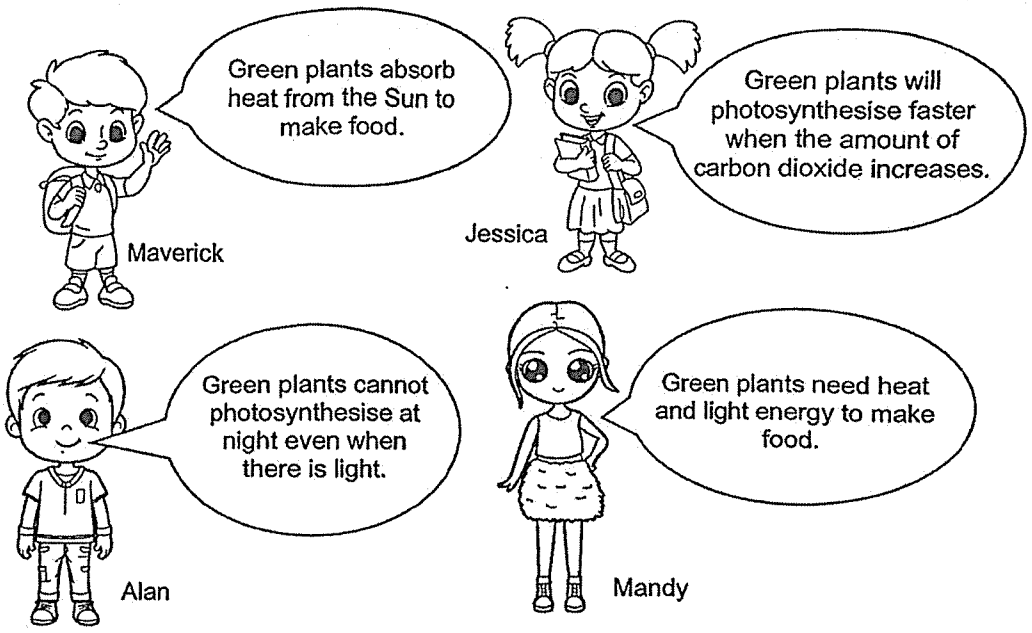
(4) The energy from the Sun is not passed on from one living thing to another.

( )

(Go on to the next page)

This booklet consists of **13** printed pages.

2 Four students made some statements about photosynthesis.

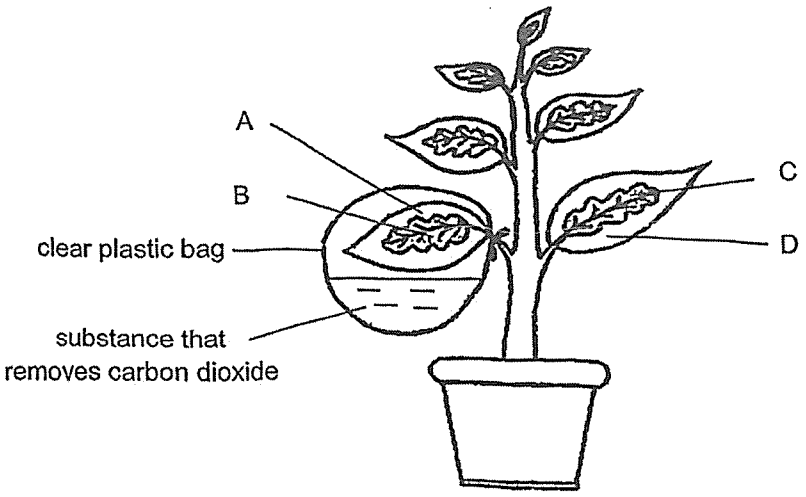


Which of the above pupil made the correct statement?

(1) Alan
(2) Mandy
(3) Jessica
(4) Maverick

( )

3 Lilian set up an experiment to find out whether carbon dioxide is necessary for photosynthesis. She used a plant which had leaves with green areas in the middle, labelled B and C, and white areas around the edges, labelled A and D, as shown below.

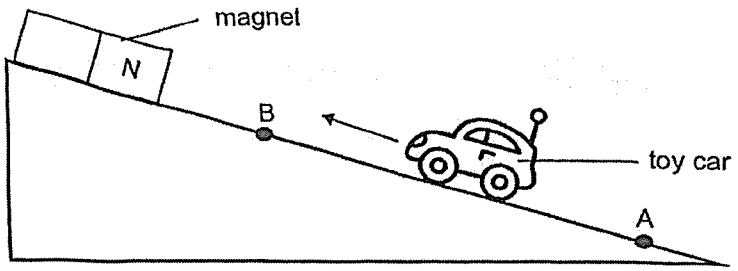


Which of the following two areas should Lilian compare to show that carbon dioxide is needed for photosynthesis?

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

(Go on to the next page)

4 A toy car made of iron was moving up a slope due to the attraction of a magnet placed at the top of the slope.

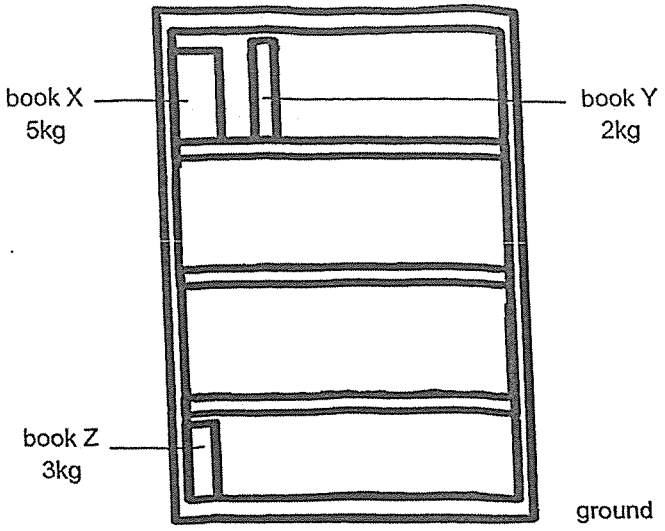


Which of the following shows the change in kinetic energy and gravitational potential energy of the toy car as it moved from point A to point B?

	kinetic energy	gravitational potential energy
(1)	increase	increase
(2)	increase	decrease
(3)	decrease	increase
(4)	decrease	decrease

( )

5 Three books, X, Y and Z are placed on a bookshelf. The diagram below shows the mass of each book and its distance above the ground.



Which of the following statement(s) is/are true of books X, Y and Z?

A Book X has less potential energy than book Y.

B Book Y has more potential energy than book Z.

C Book X possesses the most amount of potential energy.

(1) B only

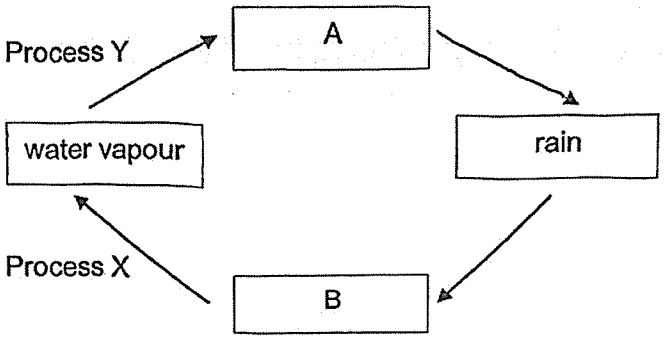
(2) C only

(3) A and B only

(4) B and C only ( )

(Go on to the next page)

6 The diagram shows the water cycle.

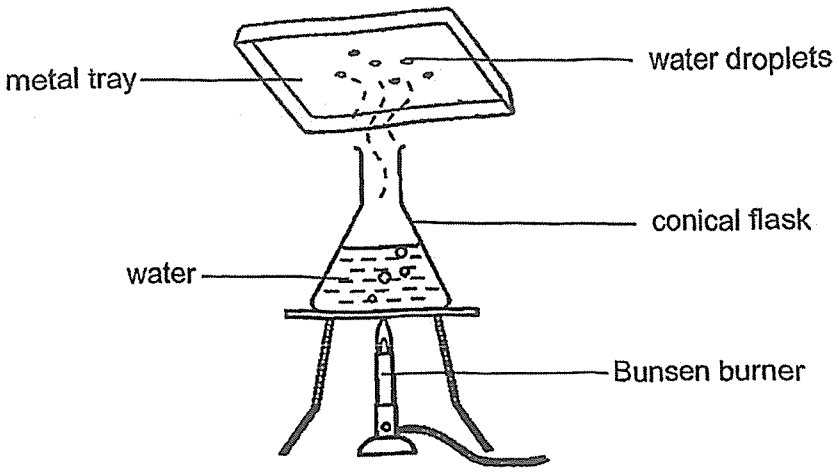


Which of the following is correct?

	A	B	Process X	Process Y
(1)	rivers	clouds	evaporation	condensation
(2)	clouds	rivers	evaporation	condensation
(3)	rivers	clouds	condensation	evaporation
(4)	clouds	rivers	condensation	evaporation

( )

7 Study the diagram below.



Water droplets are observed forming on the surface of the metal tray.
Which of the following best explains this observation?

(1) Water from the surroundings comes into contact with the cooler metal tray and condenses into water droplets.

(2) Water vapour from the surroundings comes into contact with the warmer metal tray and condenses into water droplets.

(3) Water boils and changes into steam which comes into contact with the cooler metal tray, loses heat and condenses into water droplets.

(4) Water boils and changes into steam which comes into contact with the warmer metal tray, gains heat and condenses into water droplets.

( )

(Go on to the next page)

8 Water is a limited natural resource and there is a need for water conservation. Which of the following are ways to conserve water?

A use a running hose to wash cars

B turn off the tap while brushing teeth

C take a bath in the bathtub instead of short showers

D use the water from washing vegetables to water the plants

(1) A and B

(2) B and D

(3) B and C

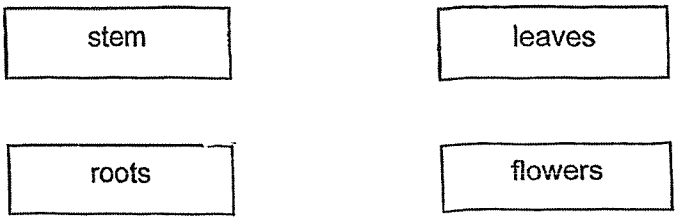
(4) C and D

( )

Section B: Structured questions (14m)

For questions 9 to 12, write your answers in the space provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

9 Four parts of a plant are shown below.



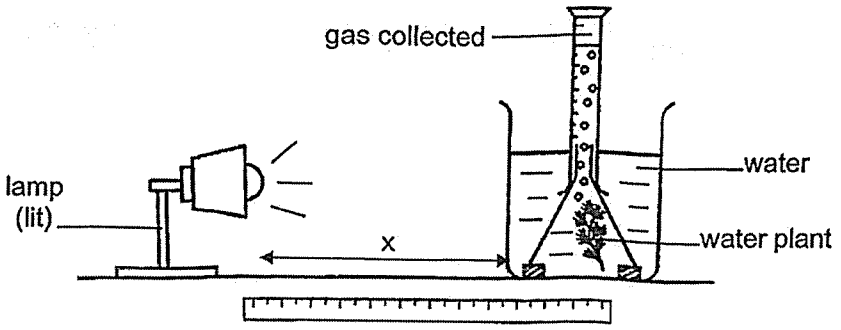
(a) Draw arrows (→) in the diagram above to show how food is transported to the different parts of a plant. [1]

(b) Define photosynthesis. [1]

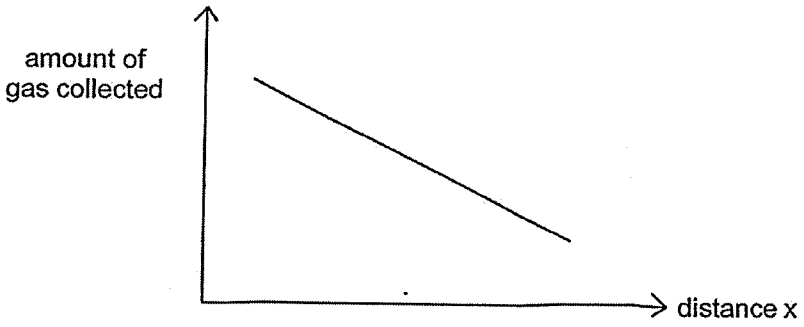
(Go on to the next page)

Score 2

10 David conducted an experiment on photosynthesis in a dark room using the set-up below. He measured the amount of gas collected in the measuring cylinder after some time.



David repeated his experiment by increasing distance x. He kept all other variables constant. His results are shown below.



(a) State the gas that was collected in the measuring cylinder. [1]

_____

(b) Based on his results above, what could David conclude from his experiment? Explain your answer. [2]

_____

_____

_____

(c) David conducted the experiment in a dark room. Give a reason why this helped to make the experiment a fair one. [1]

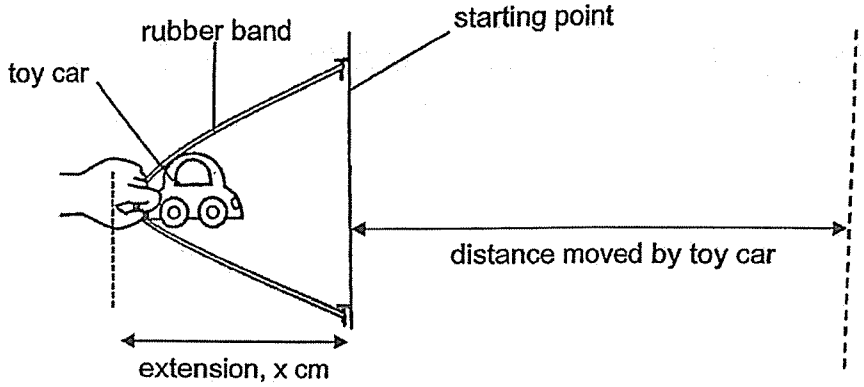
_____ _____

_____ _____

(Go on to the next page)

Score	
	4

11 Joshua placed a toy car in the middle of a rubber band and used it to pull the rubber band backwards as shown in the diagram below. He then released the rubber band and measured the distance moved by the toy car.



He repeated the experiment with different extension lengths and recorded his results in the table as shown below.

Extension, x (cm)	4	6	8
Distance moved (cm)	10	14	20

(a) State the energy possessed by the stretched rubber band. [1]

_____

(b) What is the relationship between the extension of the rubber band and the distance moved by the toy car? [1]

_____

_____

(c) Name one variable that should be kept constant in this experiment. [1]

_____

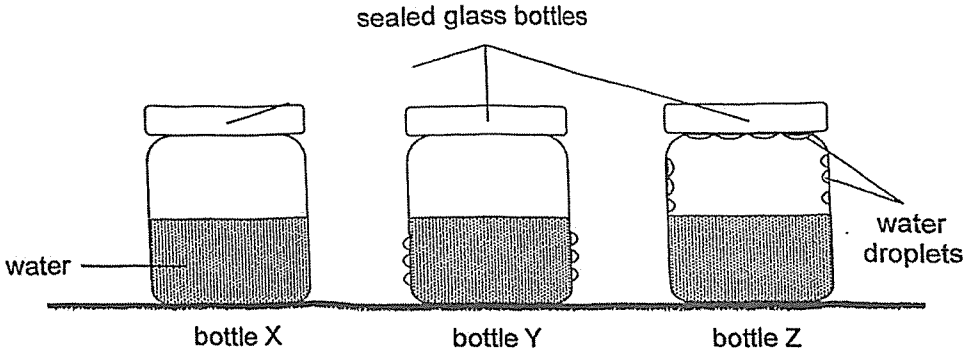
(d) What could Joshua do to obtain more reliable results? [1]

_____

_____

Score	
	4

12 Jaden filled 3 identical glass bottles, X, Y and Z, with water of different temperatures to the same level in each bottle. He left them sealed on the table. He observed water droplets form on the outer surface of bottle Y and the inner surface of bottle Z. For bottle X, no water droplets were formed.



(a) Fill in the boxes below with X, Y or Z, starting from the bottle containing water with the lowest temperature. [1]

Bottle containing water with the lowest temperature → **Bottle containing water with the highest temperature**

(b) Explain how water droplets were formed on the inner surface of bottle Z. [2]

(c) The water droplets formed on the outer surface of bottle Y cannot be seen after a while. Explain why. [1]

End of Paper

Score 4

SCHOOL : NAN HUA PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : SCIENCE
TERM : 2024 WA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
2	3	3	1	2	2	3	2

9)	a)stem ← leaves ↓ roots ↘ flowers b)photosynthesis is the process where plants take in carbon dioxide and water in the presence of light trapped by chlorophyll to produce sugar and oxygen.
10)	a)Oxygen. b)David can conclude that increasing the distance between the lamp and the measuring cylinder, the amount of gas would decrease. When distance X increase, the leaves of the water plant trap less light to photosynthesis. The rate of photosynthesis decreases and the water plant would produce less oxygen. c)This ensure that the water plant received light only from the lamp and not from the photosynthesis.
11)	a)Elastic potential energy. b)As the extension of the rubber band increased, the distance moved by the toy car increased. c)The type of toy car.

	d)He could ask his friends to repeal a few more time the experiment and take the average of all the results.
12)	a)Bottle Y , Bottle X , Bottle Z b)Water in bottle Z evaporated to form water vapour. The water vapour came into contact with the cooler inner surface of the bottle lost heat and condensed into water droplets. c)The water droplets gained heat from the surrounding and evaporated to water vapour.