2024 PRIMARY 3 END-OF-YEAR EXAMINATION

Name : _____ ( )

Class : Primary 3 ( )

Date: 24 October 2024

Time: 8.00 a.m. - 9.15 a.m.

Duration: 1 hour 15 minutes

SCIENCE

BOOKLET A

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.

Booklet A (17 x 2 marks)

For each question from 1 to 17, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet.

(34 marks)

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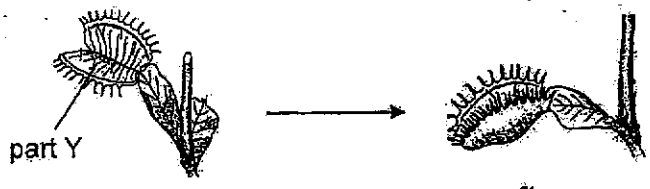
1. Sally observed a plant in her school garden.



When a fly landed on the plant, part Y closed up. What can Sally conclude about living things from her observation above?

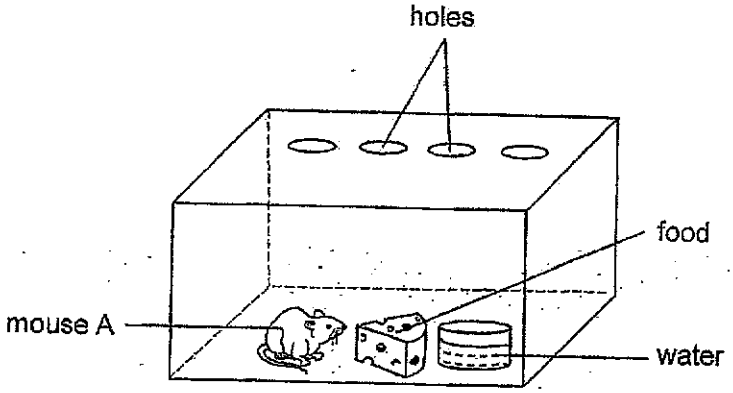
(1) Living things grow.

(2) Living things reproduce.

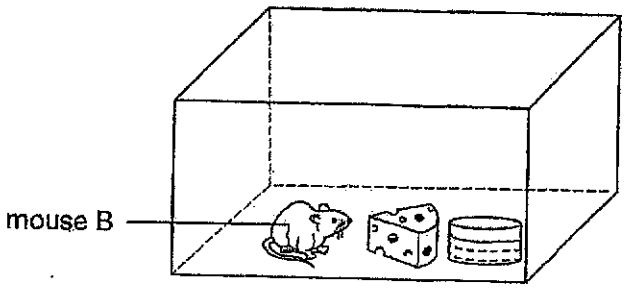
(3) Living things respond to changes.

(4) Living things need air, food and water to survive.

2. Sarah placed two mice in two glass containers as shown in the diagrams below.



container A

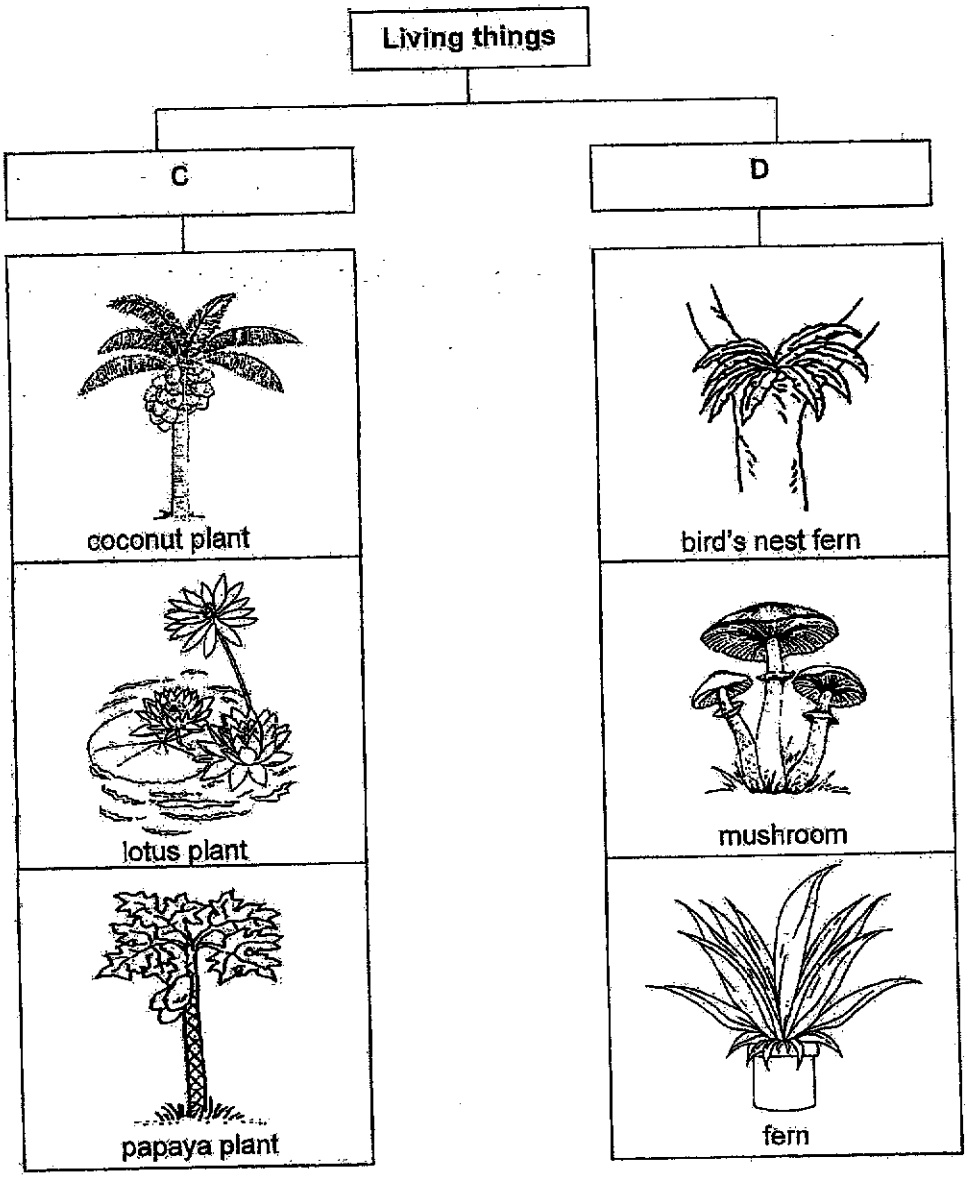


container B

Which mouse would most probably live longer? Why?

	Mouse	Reason
(1)	A	It has food and water.
(2)	A	It has air, food and water.
(3)	B	It has food and water.
(4)	B	It has air, food and water.

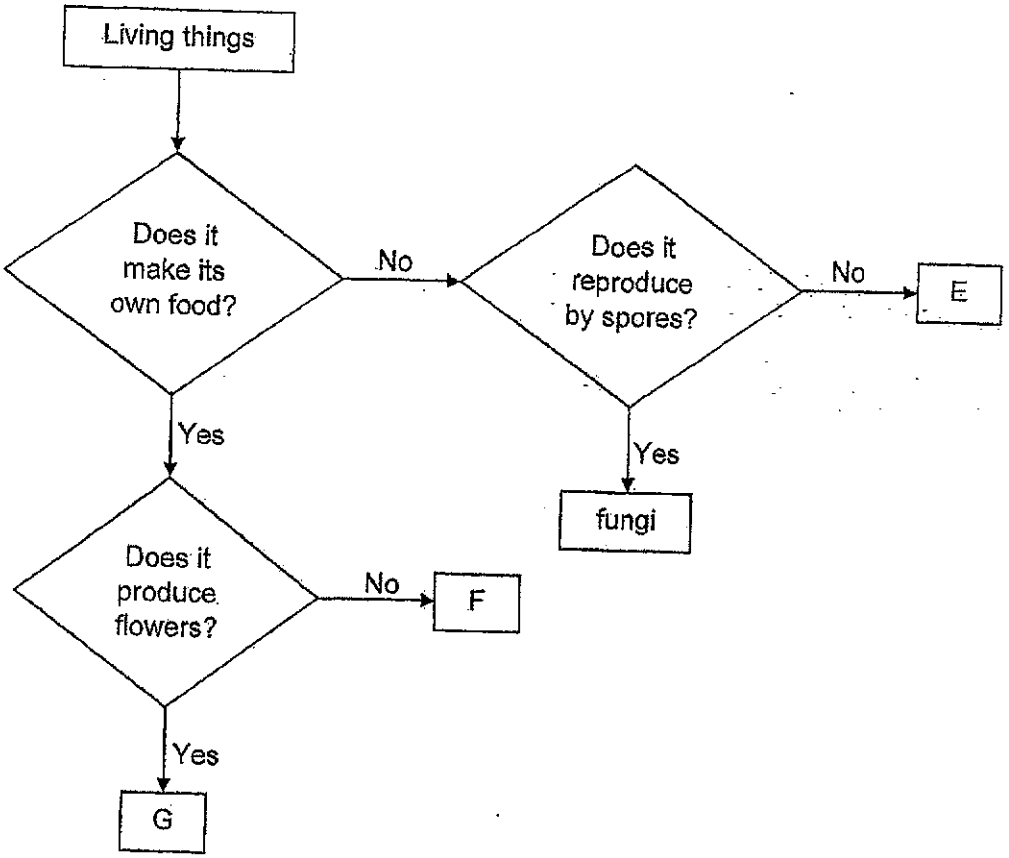
3. The diagram below shows the classification of living things.



Which of the following correctly describes C and D?

	C	D
(1)	has leaves	does not have leaves
(2)	can reproduce	cannot reproduce
(3)	can make its own food	cannot make its own food
(4)	reproduces by seeds	reproduces by spores

4. Study the flow chart below.



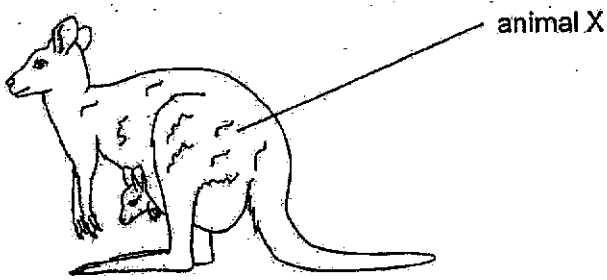
Which of the following could E, F and G be?

	E	F	G
(1)	bacteria	animal	flowering plant
(2)	animal	non-flowering plant	bacteria
(3)	animal	non-flowering plant	flowering plant
(4)	bacteria	flowering plant	non-flowering plant

5. The table below shows how animals can be grouped.

	Gives birth	Lays eggs
Has a tail	H	J
Does not have a tail	K	L

The diagram below shows animal X.



Which group does animal X belong to?

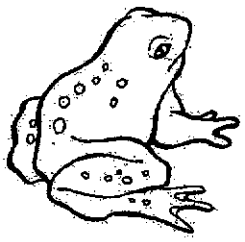
(1) H

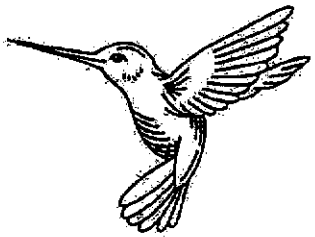
(2) J

(3) K

(4) L

6. The diagrams show two animals.





How are the animals similar?

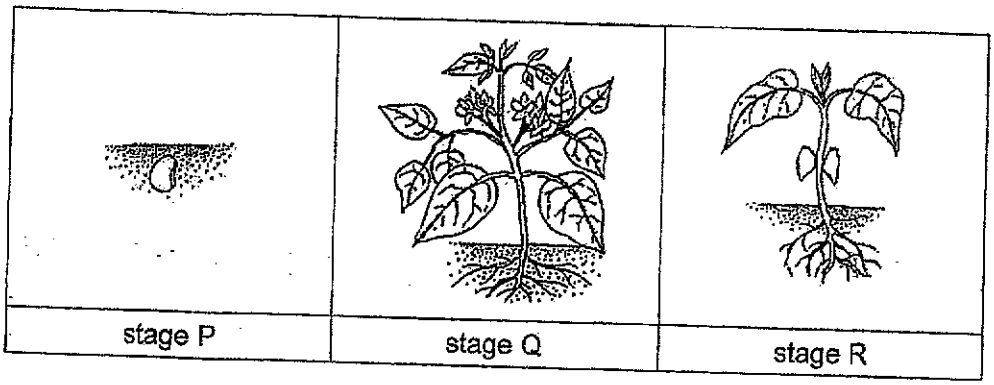
(1) They have a beak.

(2) They have feathers.

(3) They have moist skin.

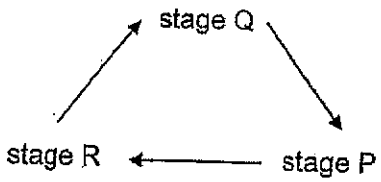
(4) They reproduce by laying eggs.

7. The diagram shows different stages in the life cycle of a plant.

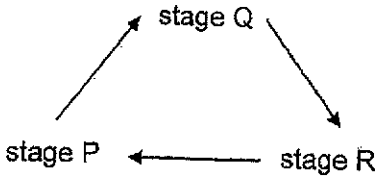


Which of the following shows the correct order of its life cycle?

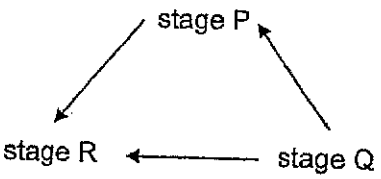
(1)



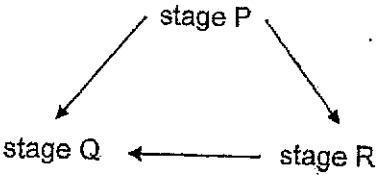
(2)



(3)



(4)



8. Jake made some observations about the parts present in plant S.

Part of plant	Plant S
leaf	✓
stem	✓
flower	×
fruit	✓

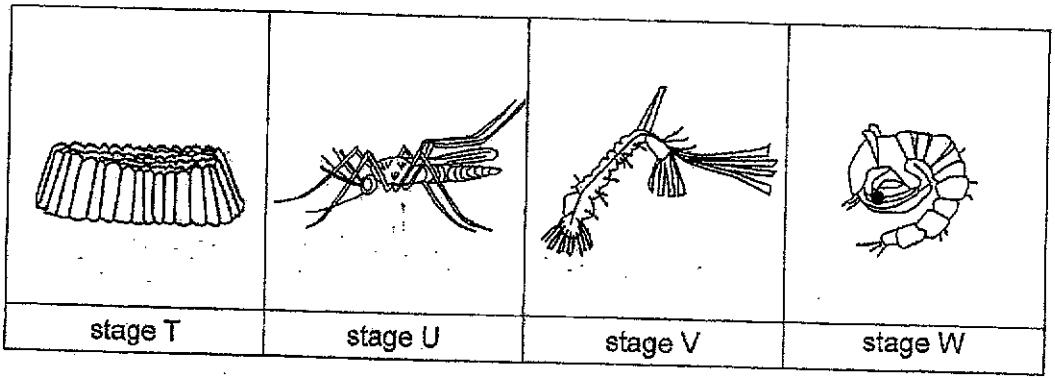
Key

✓ : present
× : absent

Using only the information in the table above, identify the stage plant S is in and explain why.

	Stage	Explanation
(1)	young plant	Plant S has leaves.
(2)	young plant	Plant S does not have flowers.
(3)	adult plant	Plant S has fruits.
(4)	adult plant	Plant S has flowers.

The diagram shows different stages in the life cycle of a mosquito. Use it to answer questions 9 and 10.



9. At which stage(s) does the mosquito live in water?

(1) V only

(2) W and V only

(3) T, V and W only

(4) U, V and W only

10. Which of the following statements is true?

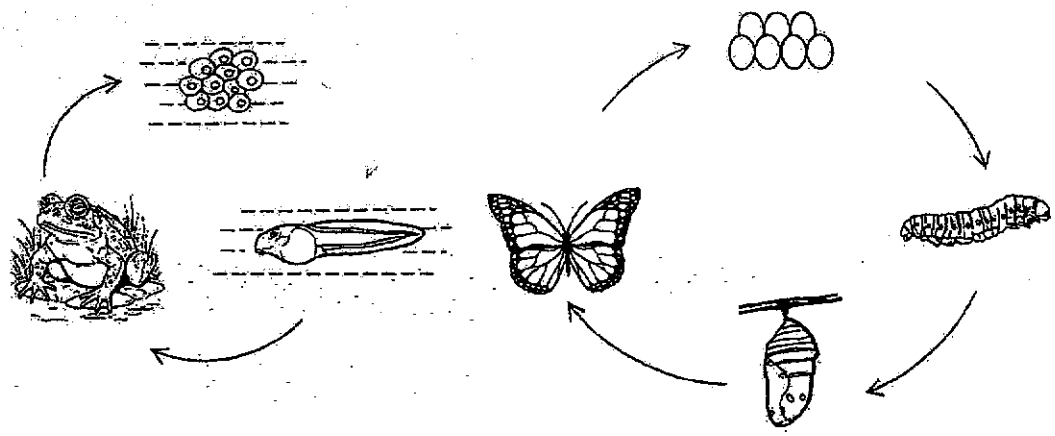
(1) The mosquito moults only in stage V.

(2) The mosquito eats a lot only in stage W.

(3) The mosquito moults in both stages V and W.

(4) The mosquito eats a lot in both stages V and W.

11. Study the life cycles of animals, W and X, below.



life cycle of animal W

life cycle of animal X

Based on the life cycles shown above, which of the following statements is **false**?

(1) Both their young live on land.

(2) Both animals have an egg stage.

(3) Both their young do not resemble the adult.

(4) Animal X has a pupal stage while animal W does not.

12. Ali, Betty, Chandra and De Hua recorded their observations of an animal below.

Ali : The animal has a 4-stage life cycle.

Betty : The young of the animal resembles its adult.

Chandra : The animal lives on land throughout its life cycle.

De Hua : The animal stops eating when it is in the pupal stage.

Which of the students made the correct observations of a mealworm beetle?

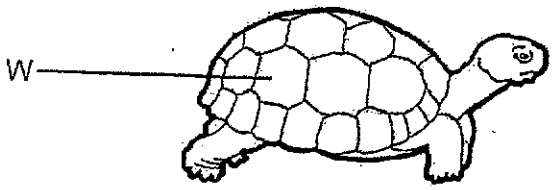
(1) Ali and Betty

(2) Betty and De Hua

(3) Ali, Betty and Chandra

(4) Ali, Chandra and De Hua

13. A turtle is covered in a shell made of material W. The shell supports the body and protects the internal organs of the turtle.



Which property of material W does the shell have?

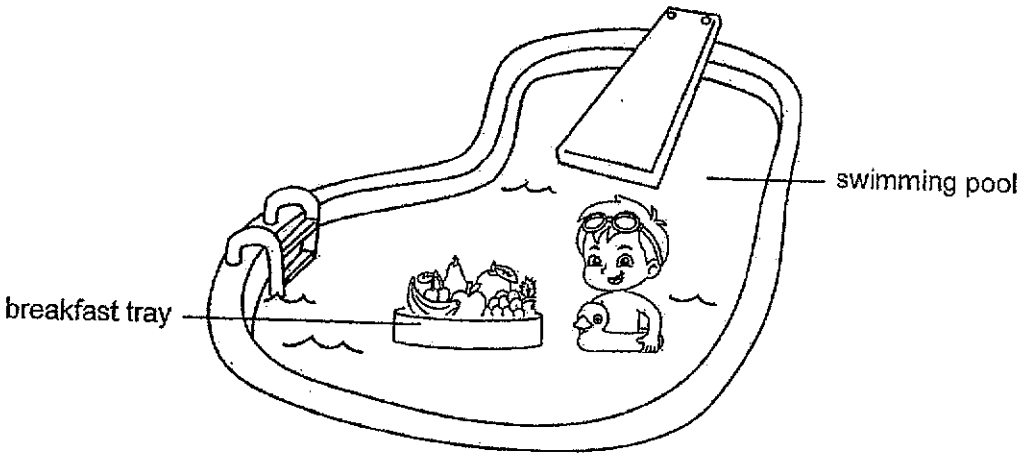
(1) strength

(2) flexibility

(3) waterproof

(4) ability to float on water

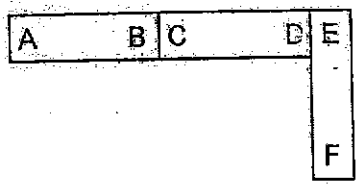
14. Max used a breakfast tray to put some fruits so that he could enjoy his breakfast in the swimming pool.



Which material, A, B, C or D, could the breakfast tray be made of?

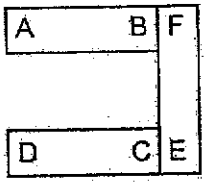
		Property of Materials		
	Material	**Is it flexible?**	**Is it waterproof?**	**Does it float on water?**
(1)	A	yes	no	no
(2)	B	no	yes	no
(3)	C	yes	yes	yes
(4)	D	no	yes	yes

15. Study the arrangement of the magnets as shown.

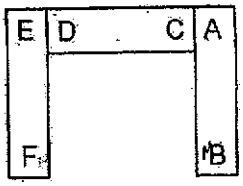


Which of the following arrangements is possible?

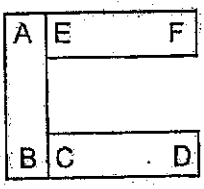
(1)



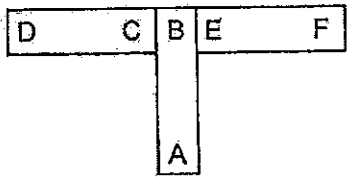
(2)



(3)

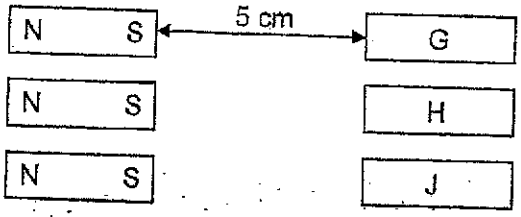


(4)



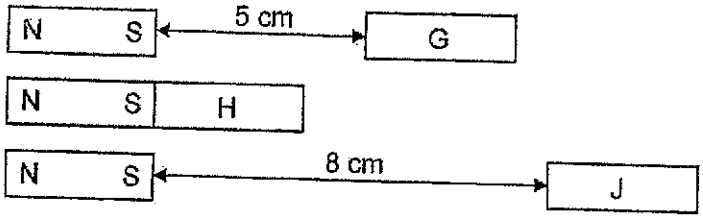
16. Mr Lim tested the properties of three unknown objects, G, H and J. He used three identical magnets that are fixed to a position 5 cm away from the objects.

before



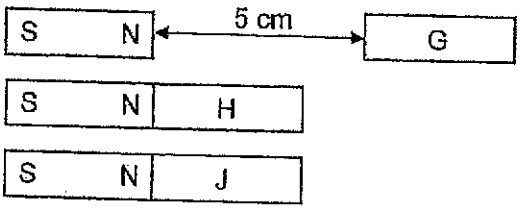
When he released the objects, the following changes in their positions were observed.

after



Mr Lim rotated the magnets and repeated the test. The following changes in their positions were observed when he released the objects.

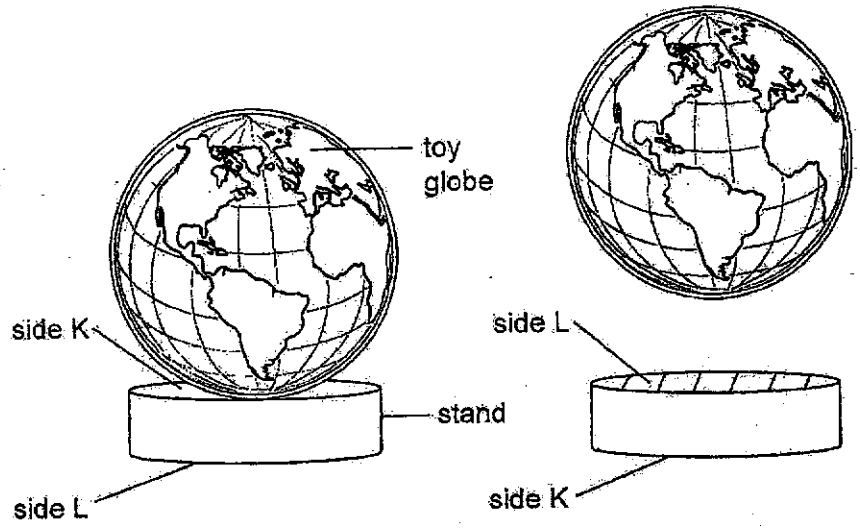
after



Based on the results above, what can objects, G, H and J, be?

	Non-Magnetic Object	Magnet	Magnetic Object
(1)	G	J	H
(2)	H	J	G
(3)	J	H	G
(4)	H	G	J

17. Ms Tan purchased a toy globe which was resting on a stand as shown below. She noticed that the stand was made of a single material. When she flipped the stand upside down, the toy globe floated above the stand.



Based on the observation, what could Ms Tan conclude?

(1) Only the stand is a magnet.

(2) Only the toy globe is made of a magnetic material.

(3) Both the stand and toy globe are made of magnetic materials.

(4) The stand is made of a non-magnetic material while the toy globe is a magnet.

End of Booklet A

2024 PRIMARY 3 END-OF-YEAR EXAMINATION

Name : _____ ( )

Class : Primary 3 ( )

Parent's Signature : _____

Date: 24 October 2024

Time: 8.00 a.m. – 9.15 a.m.

Duration: 1 hour 15 minutes

SCIENCE

BOOKLET B

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in the booklet.

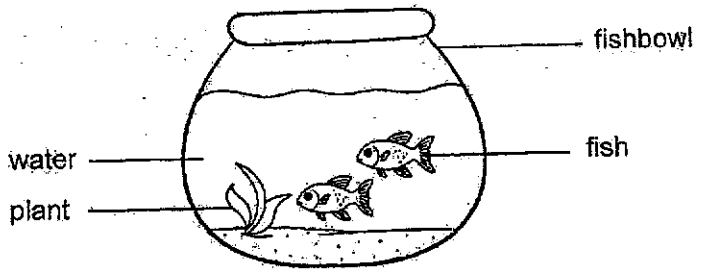
Booklet A	34
Booklet B	26
Total	60

Booklet B (26 marks)
For questions 18 to 26, write your answers clearly in this booklet.

The number of marks available is shown in brackets [ ] at the end of each question or part question.

(26 marks)

18. The diagram below shows a fishbowl.

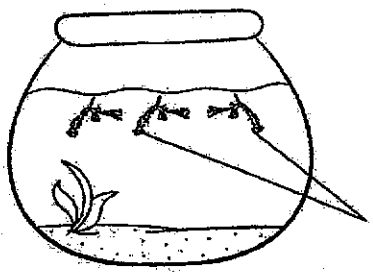


(a) Classify the 4 things above under the correct heading in the table below. [1]

Can grow	Cannot grow

(b) After a few weeks, some fish eggs were found in the fishbowl. What characteristic of living things does this show? [1]

Siti removed the fish from the fishbowl and found mosquito larvae in the water after some time.



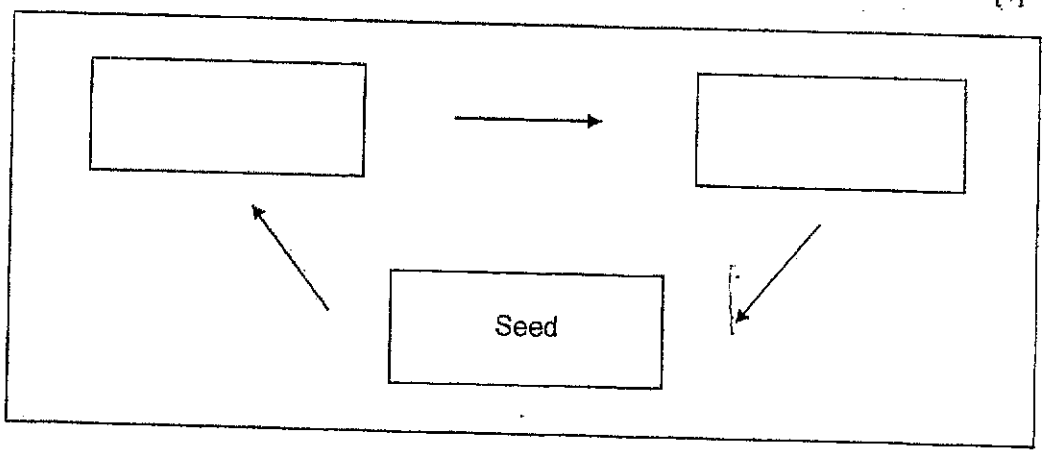
(c) Suggest why the adult mosquito might prefer to lay eggs in the fishbowl without fish. [1]

Score 3

19. Henry observed the growth of plant J from a seed. He noted down the following observations in his Science journal below.

Day	Observation
2	The roots appeared.
8	The first pair of leaves appeared.
13	More leaves appeared.
42	The flowers appeared.
57	The fruits appeared.

(a) Complete the life cycle of plant J in the box below. [1]



(b) Based on the information above, on which day did plant J become an adult plant? [1]

Day _____

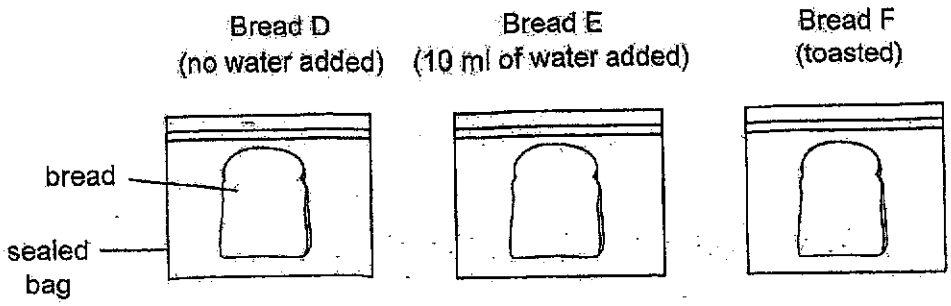
(c) Some insects ate all the flowers of plant J. Explain how the life cycle of plant J is affected. [1]

_____

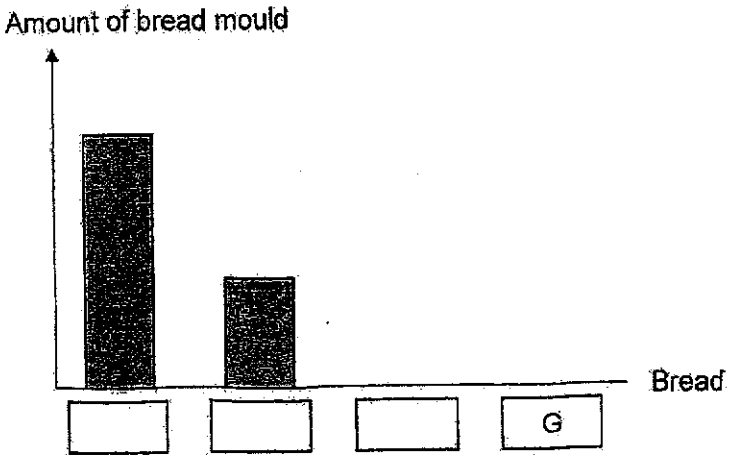
_____

Score 3

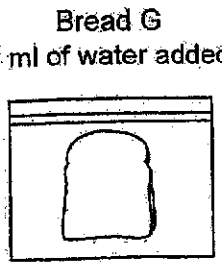
20. Sam carried out an experiment using three identical slices of bread, D, E and F, as shown below. He placed the three sealed bags on the kitchen table at room temperature.



(a) Match the above pieces of bread to the amount of bread mould found on the bread after a week by writing D, E and F, in the boxes below. [1]



Sam added an identical slice of bread, G, to the experiment as shown below.

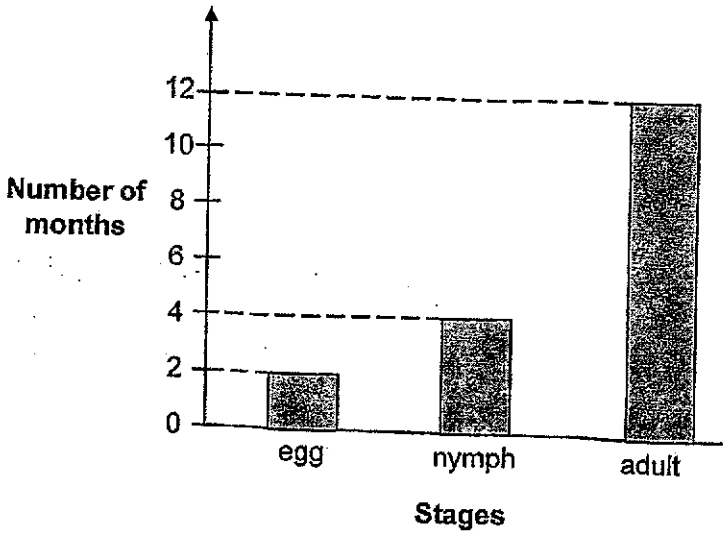


(b) Complete the bar graph above to show the possible amount of bread mould that grew on Bread G. [1]

(c) State all the conditions required for the bread mould to grow. [1]

Score 3

21. Jia Le observed the life cycle of a cockroach. He recorded the number of months the cockroach spends in each stage of its life cycle in the graph below.



(a) State the number of months a cockroach will take to enter the adult stage after the egg hatches. [1]

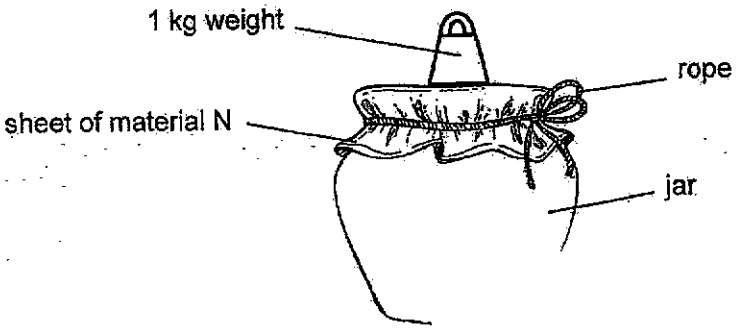
(b) Why do cockroaches need to reproduce? [1]

(c) Cockroaches are pests as they spread diseases. At which stage of their life cycle is it the easiest to get rid of them? Explain why. [1]

Score	3

22. Ahmad wanted to find out which material, N, P, Q or R, is the strongest. They have the same thickness and size.

He covered the brim of a jar using a sheet of material N and tied it with a rope. He added 1 kg weights on the sheet of material N until it started to tear.



He repeated the experiment above using the materials, P, Q and R. The table below shows the greatest mass each material could hold before it tore.

Material	Greatest mass each material could hold before it tore (kg)
N	7
P	5
Q	9
R	3

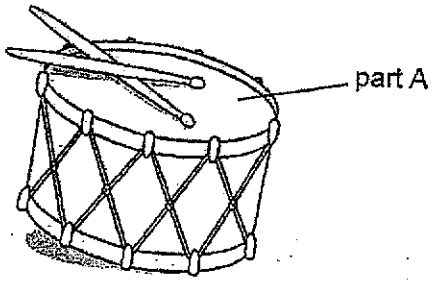
(a) Arrange the 4 materials, N, P, Q and R, in order of its strength, from the weakest to the strongest. [1]

_____ , _____ , _____ , _____

weakest strongest

Score	/ 1

The diagram below shows a drum.

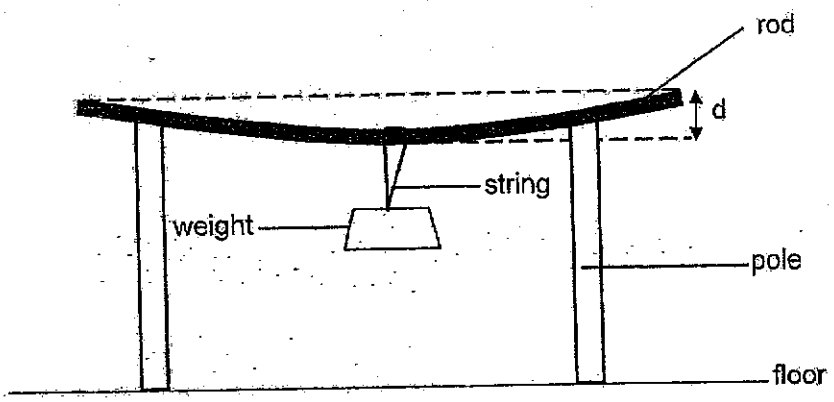


(b) Which of the materials, N, P, Q or R, is the most suitable for making part A? Explain why.

[1]

Score 1

23. Kelly set up an experiment using four rods made of different materials, S, T, U and V. She attached a weight to each rod and measured the distance, d, bent by each rod as shown below.



The table below shows her results.

Material	Distance bent, d (cm)
S	19
T	0
U	4
V	13

(a) Which property of the materials was tested in the above experiment? [1]

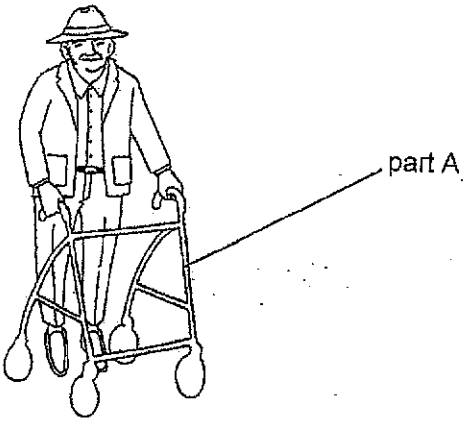
_____

(b) Tick (✓) the variable(s) that must be kept the same to make the experiment a fair test. [1]

Variable	Variable(s) that must be kept the same
mass of weight	
type of material	
thickness of material	

Score	/2

The diagram below shows a walker that Kelly's grandfather uses.



(c) Explain why it is not safe for part A to be made from material S? [1]

(d) Choose the most suitable material that part A should be made of. Put a tick (✓) in the correct box below. [1]

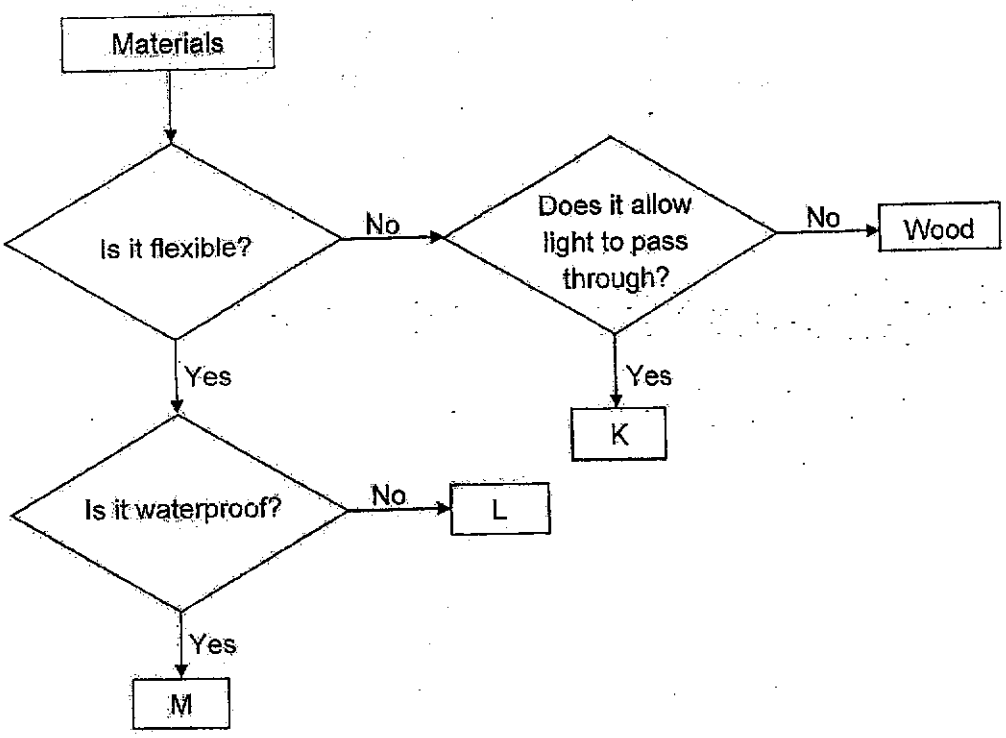
Rubber ☐

Glass ☐

Metal ☐

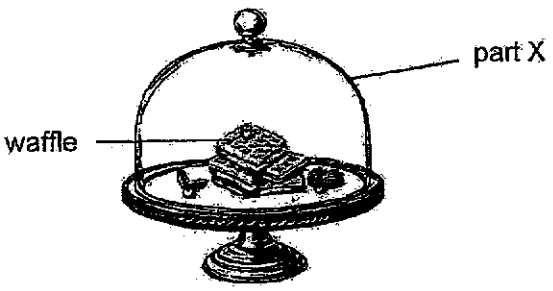
Score 2

24. Study the flowchart below.



(a) Based on the flowchart above, state all the characteristics of Material L. [1]

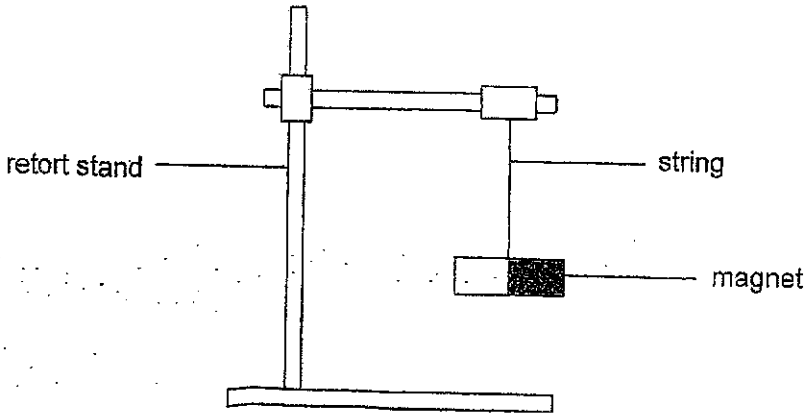
Mrs Tan wants to purchase a waffle stand for her bakery. Part X of the stand should allow customers to see the waffles.



(b) Which material, K, L or M, could part X be made of? Explain why. [1]

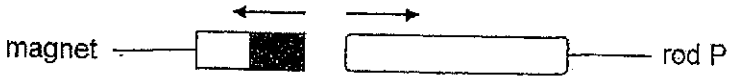
Score 2

25. Amirah hung a freely suspended magnet on a retort stand. She noticed that it always comes to rest in the same direction after spinning it a few times.



(a) Which direction did the magnet come to rest? [1]

Amirah placed the same bar magnet close to rod P. She noticed that the two objects moved away from each other as shown by the arrows below.

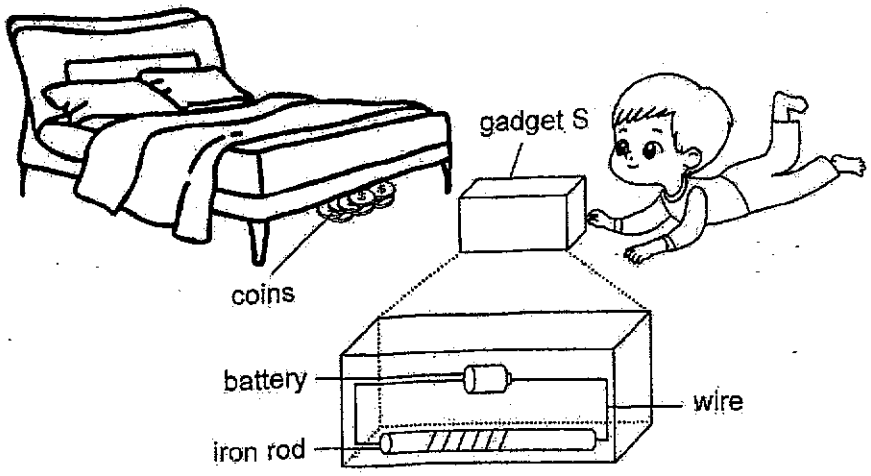


(b) Amirah said that rod P is a magnet. Do you agree with her? Explain why. [1]

(c) Amirah replaced rod P with a copper rod. What happened when Amirah placed the same bar magnet close to the copper rod? Explain why. [1]

Score 3

26. Rohan dropped ten identical coins on the floor which rolled under his bed. The bed frame was too low so he could not see where all his coins were.



inner view of gadget S

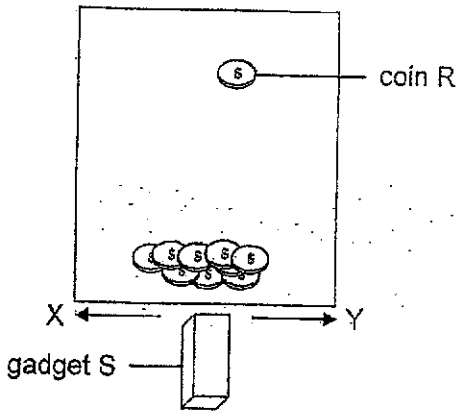
(a) Rohan used gadget S which contains an electromagnet to retrieve the coins and observed that nine of them moved towards it. Explain why the coins moved towards the gadget. [1]

_____

_____

Score	/ 1

The diagram below shows the position of the ten coins under Rohan's bed. Gadget S was too large to go under the bed so Rohan could only move it from X to Y. The arrows indicate the movement of the gadget.



(b) Coin R did not move towards gadget S. Give a reason why. [1]

(c) Suggest a change Rohan could make to the electromagnet in gadget S so that he could attract coin R while moving the gadget from point X to point Y. [1]

Score / 2

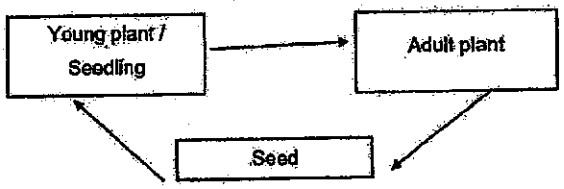
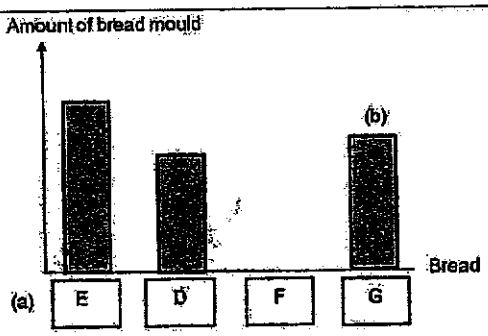
End of Booklet B

SCHOOL : TAO NAN PRIMARY SCHOOL
LEVEL : PRIMARY 3
SUBJECT : SCIENCE
TERM : 2024 SA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	4	3	1	4	1	3	3	1
Q11	Q12	Q13	Q14	Q15	Q16	Q17			
1	4	1	4	4	1	1			

TAO NAN SCHOOL
P3 SCIENCE END OF YEAR EXAM 2024
Simplified Answer Key (Booklet B)

This answer key only serves as a reference. Variations of students' answers have been accepted if they have shown conceptual understanding.

18 (a)	Can grow: fish, plant Cannot grow: water, fishbowl
18 (b)	Living things can reproduce.
18 (c)	The water was still/stagnant/not moving/not flowing. OR Mosquitoes breed in still/stagnant water. OR There will be no fish to eat the larvae/eggs.
19 (a)	
19 (b)	Day 42
19 (c)	Life cycle of plant J cannot continue. OR Plant J cannot produce seeds/ fruits. OR Plant J cannot reproduce.
20 (a) & (b)	
20 (c)	-Presence of warmth/right surrounding temperature -Moisture/water -air/oxygen
21 (a)	4
21 (b)	To ensure that the species does not become extinct. OR To ensure the continuity of their kind/continue the life cycle.

<table>
<tr><td>21 (c)</td><td>Egg stage. They cannot move.
OR
Young/Nymph stage. They cannot fly.</td></tr>
<tr><td>22 (a)</td><td>R, P, N, Q</td></tr>
<tr><td>22 (b)</td><td>Material Q. It is the strongest material/ it could hold the greatest weight/mass before it tore. Part A of the drum needs to be strong so that it does not break when someone plays it/hits hard.</td></tr>
<tr><td>23 (a)</td><td>Flexibility
OR
How flexible the material is</td></tr>
<tr><td>23 (b)</td><td><table><tr><th>Variable</th><th>Variable(s) that must be kept the same</th></tr><tr><td>mass of weight</td><td>✓</td></tr><tr><td>type of material</td><td></td></tr><tr><td>thickness of material</td><td>✓</td></tr></table></td></tr>
<tr><td>23 (c)</td><td>S is the most flexible/least stiff. The walker will bend or fold when Kelly's grandfather is using it and he will fall / injure himself.</td></tr>
<tr><td>23 (d)</td><td>Metal</td></tr>
<tr><td>24 (a)</td><td>L is flexible but not waterproof.</td></tr>
<tr><td>24 (b)</td><td>K. It is transparent / allows light to pass through.</td></tr>
<tr><td>25 (a)</td><td>North-South direction</td></tr>
<tr><td>25 (b)</td><td>Yes. Only magnets are able to repel one another.</td></tr>
<tr><td>25 (c)</td><td>The copper rod did not move/was not attracted and/or repelled by the magnet because it is a non-magnetic material.</td></tr>
<tr><td>26 (a)</td><td>The coins were made of a magnetic material/steel/iron so they were attracted by the electromagnet.</td></tr>
<tr><td>26 (b)</td><td>Coin R was too far away so the magnetic strength of the electromagnet was not strong enough to attract it.</td></tr>
<tr><td>26 (c)</td><td>Increase the number of coils of wire.
OR
Increase the number of batteries.</td></tr>
</table>