



Cambridge International Schools (Sudan)
Associate School of
University of Cambridge (UK)



Cambridge Primary Checkpoint Science

Past Papers:

2005-2016

Specimen

2012-2014-2017

With CD



Cambridge
Primary
Checkpoint

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Content:

Primary Check Point Past Papers and Specimen Paper from 2006 – 2017.





UNIVERSITY *of* CAMBRIDGE
International Examinations

Cambridge International School

Check Point Exams

2005





Edexcel International Primary Curriculum Science

Year 6 Achievement Test
Sample Assessment Material
and Sample Mark Scheme

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Contents

Paper PLSC01

Sample Assessment Material
Sample Mark Scheme

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Write your name here

Surname

Other names

**Edexcel
International
Primary Curriculum**

Centre Number

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

Candidate Number

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

Science

Year 6

Achievement Test

Sample Assessment Material
Time: 1 hour 20 minutes

Paper Reference

PLSC01/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 60.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

S41745A

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S 4 1 7 4 5 A 0 1 2 8

PEARSON




SECTION A

Answer ALL questions




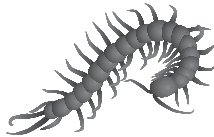
For questions 1 – 8 put a cross in one box to indicate your answer.

If you change your mind, put a line through the box and then put a cross in another box .
Each question is worth one mark.

1 This is part of a food chain.

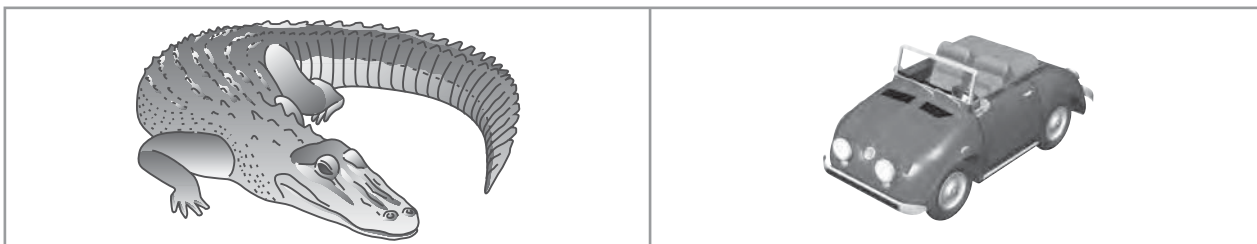
| Stage 1 | Stage 2 | Stage 3 | Stage 4 |
|---------|---|--|---|
| | →  | →  | →  |
| | snail | bird | fox |

Which living thing is missing from the first stage of the food chain?

| | |
|----------------------------|--|
| <input type="checkbox"/> A |  ant |
| <input type="checkbox"/> B |  grasshopper |
| <input type="checkbox"/> C |  grass |
| <input type="checkbox"/> D |  centipede |

(Total for Question 1 = 1 mark)

2 The drawings show a crocodile and a remote controlled car.



What can both the crocodile and the remote controlled car do?

- A breathe
- B feed
- C grow
- D move

(Total for Question 2 = 1 mark)

3 The photograph shows an ivy plant growing up a pole.



Why does the ivy grow high up the pole?

- A to reach light
- B to reach minerals
- C to reach oxygen
- D to reach water

(Total for Question 3 = 1 mark)

4 This woodlouse lives under stones and leaves.



What is the name for this area?

- A forest
- B garden
- C habitat
- D home

(Total for Question 4 = 1 mark)

5 The drawing shows a flower.



What is the name of part X?

- A stigma
- B stamen
- C petal
- D ovule

(Total for Question 5 = 1 mark)

6 People visiting hospitals have to rub a disinfectant solution onto their hands.

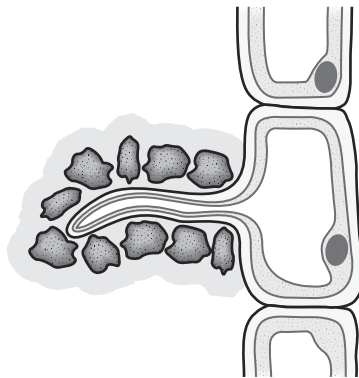


This disinfectant solution prevents disease by helping to stop:

- A dirt clinging on to the hands
- B the production of sweat
- C the skin flaking off
- D the spread of micro-organisms

(Total for Question 6 = 1 mark)

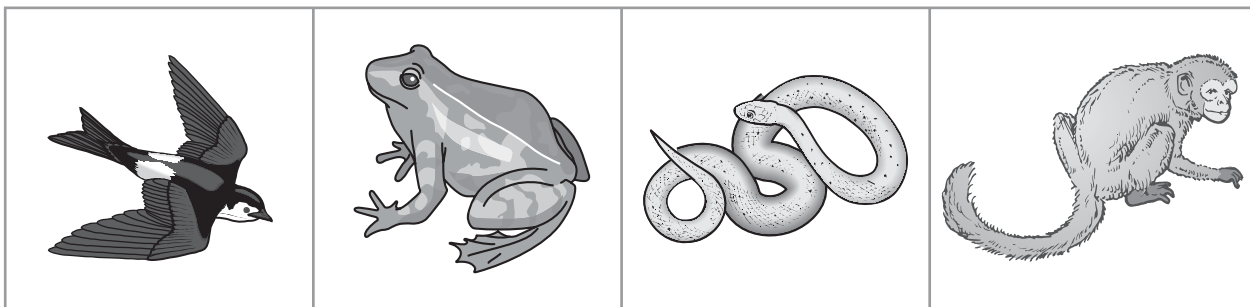
7 What is the function of this cell?



- A It absorbs carbon dioxide
- B It fertilises an ovule
- C It takes in water
- D It traps light

(Total for Question 7 = 1 mark)

8 What group do all these living things belong to?



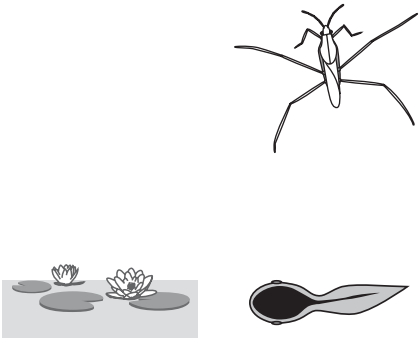

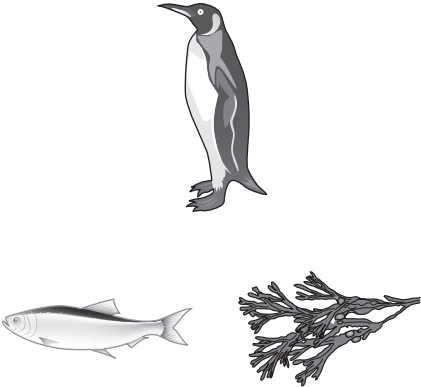
- A amphibians
- B mammals
- C reptiles
- D vertebrates

(Total for Question 8 = 1 mark)

9 (a) Look at the three sets of living things.

Write **sea** or **pond** or **garden** under each set of pictures to show where these plants and animals live.

(1)

| Set 1 | Set 2 | Set 3 |
|---|--|---|
|  |  |  |
| <p>.....</p> | <p>.....</p> | <p>.....</p> |

(b) This bird is a curlew. It feeds on worms that burrow deep into sand on the sea shore.



How is the curlew able to feed on worms deep in the sand?

(1)

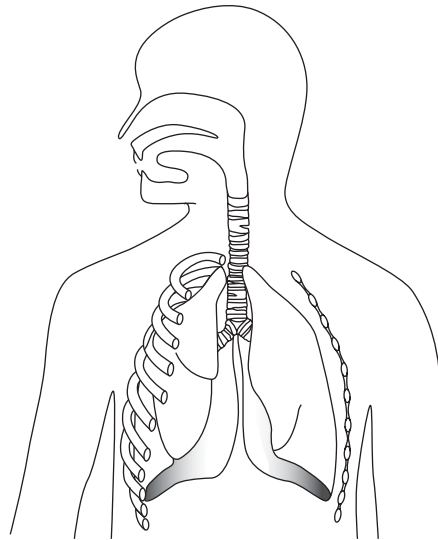
.....

(Total for Question 9 = 2 marks)

10 (a) The diagram shows some of the organs in the chest.

Write the letter H to show where the heart should be.

(1)



(b) Len is running to keep fit.



Len's heart beats faster when he starts to run.

What is the function of the heart?

(1)

(c) Len also breathes more quickly as he starts to run.

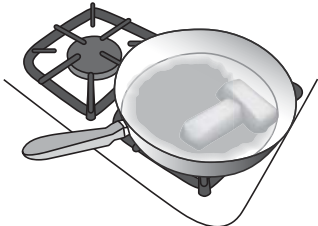


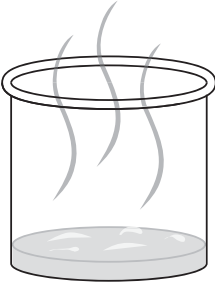
Why does he need to breathe more quickly?

(1)

(Total for Question 10 = 3 marks)

For questions 11 – 16 put a cross in one box to indicate your answer.
 If you change your mind, put a line through the box and then put a cross in another box .
 Each question is worth one mark.

11 Which change is called melting?

| | |
|--|---|
|  |  |
| <input type="checkbox"/> A solid to liquid | <input type="checkbox"/> B gas to liquid |
|  |  |
| <input type="checkbox"/> C liquid to solid | <input type="checkbox"/> D liquid to gas |

(Total for Question 11 = 1 mark)

12 Which of these **cannot** be changed back?

- A freezing orange juice
- B boiling water
- C frying an egg
- D dissolving salt in water

(Total for Question 12 = 1 mark)

13 What are the best conditions for drying clothes?

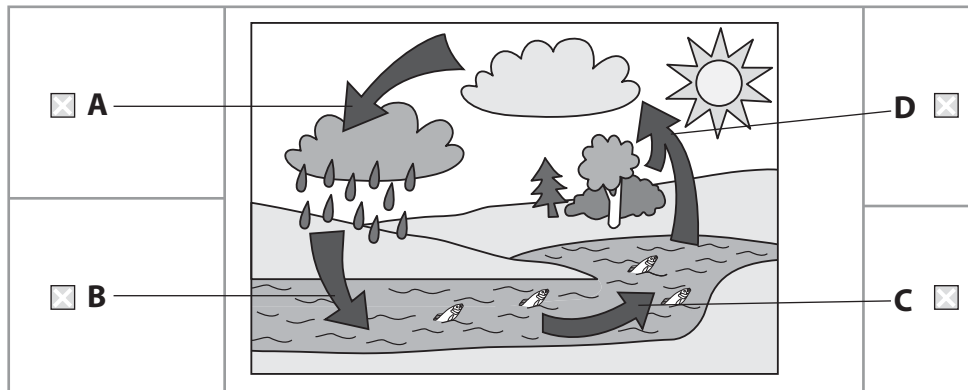


- A damp and cold
- B damp and warm
- C dry and cold
- D dry and warm

(Total for Question 13 = 1 mark)

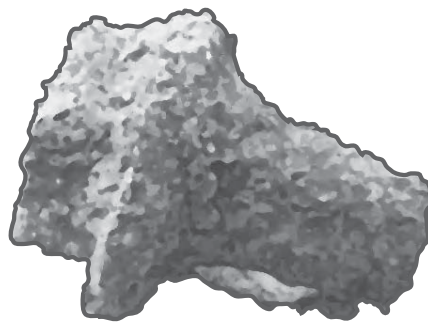
14 The drawing shows the water cycle.

Which arrow shows water evaporating?



(Total for Question 14 = 1 mark)

15 The picture shows a rusty bolt. The surface of the bolt has been changed.



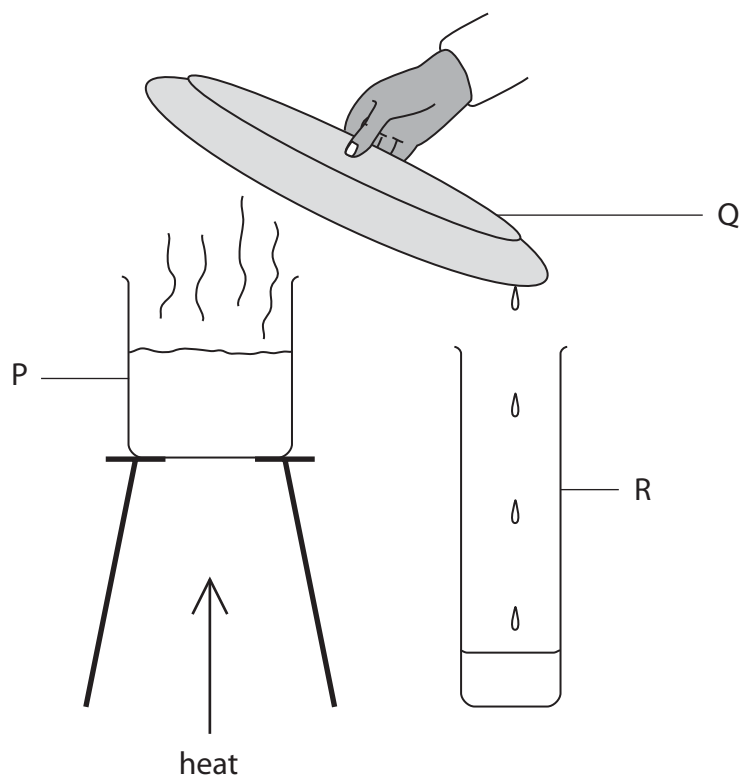
Why can it not be changed back?

- A** Rust does not dissolve in water
- B** Rust forms at any temperature
- C** Rust happens quickly
- D** Rust is a different substance

(Total for Question 15 = 1 mark)

16 A solution of sugar is heated in P. Water vapour is cooled in Q.

Drops of pure water are collected in R.

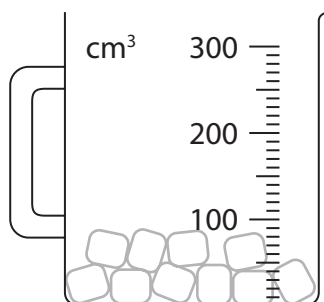


What is this process called?

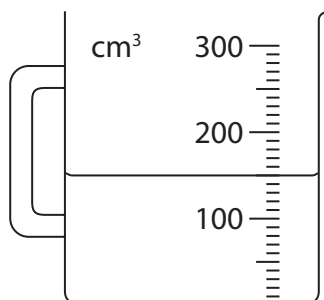
- A** cooling
- B** distillation
- C** heating
- D** separation

(Total for Question 16 = 1 mark)

17 (a) Kate put 10 ice cubes into a jug.



She left the jug in a warm place. It took four hours for the ice cubes to melt.

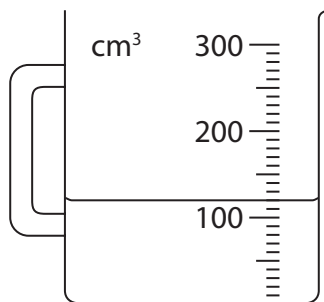


What change had taken place? Complete the sentence.

The ice had changed from a solid into a

(1)

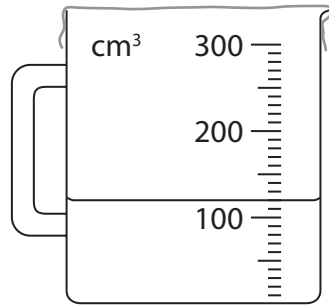
(b) Kate left the jug in a warm place for 24 hours. She noticed that the volume of water in the jug had decreased.



Why was there less water in the jug 24 hours later?

(1)

(c) Kate covered the jug with plastic film and left it in a warm place for another 24 hours.



24 hours later the volume had not changed. Give the reason for this.

(1)

.....

.....

(d) Kate put 10 ice cubes in a jug in the fridge. It took 16 hours for the ice cubes to melt.

Why did it take longer for the ice cubes to melt in the fridge than in the warm room?

(1)

.....

.....

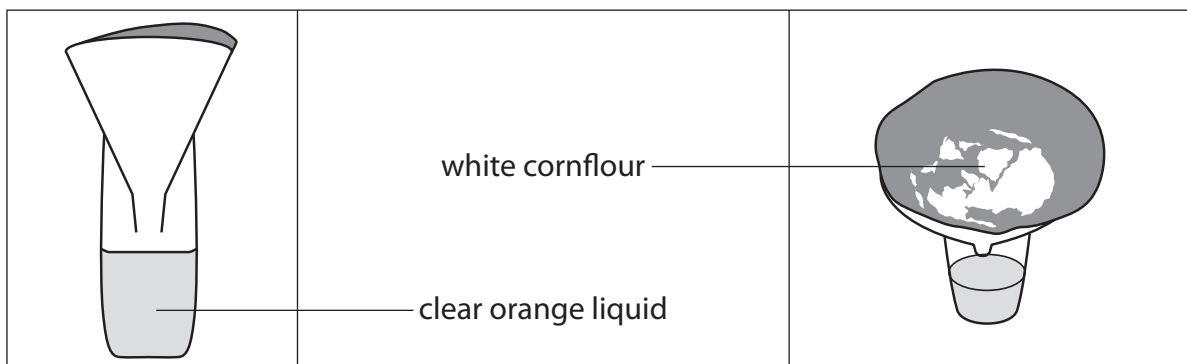
(Total for Question 17 = 4 marks)

18 This is a label from a packet of instant pudding mix.

INGREDIENTS
white cornflour
orange colouring
sugar

Lisa wanted to separate the white cornflour from the other ingredients.

She mixed some of the instant pudding mix with cold water and poured it through paper in a funnel.



The clear orange liquid passed through the paper but the white cornflour stayed in the paper.

(a) Give the name of this method of separation.

(1)

(b) Write YES or NO in the correct column for each ingredient.

(1)

| Ingredient | Did it dissolve in the water? YES or NO |
|-------------------|--|
| orange colouring | |
| white cornflour | |

(c) (i) Would you expect the sugar to stay in the paper with the cornflour or pass through it with the colouring and water?

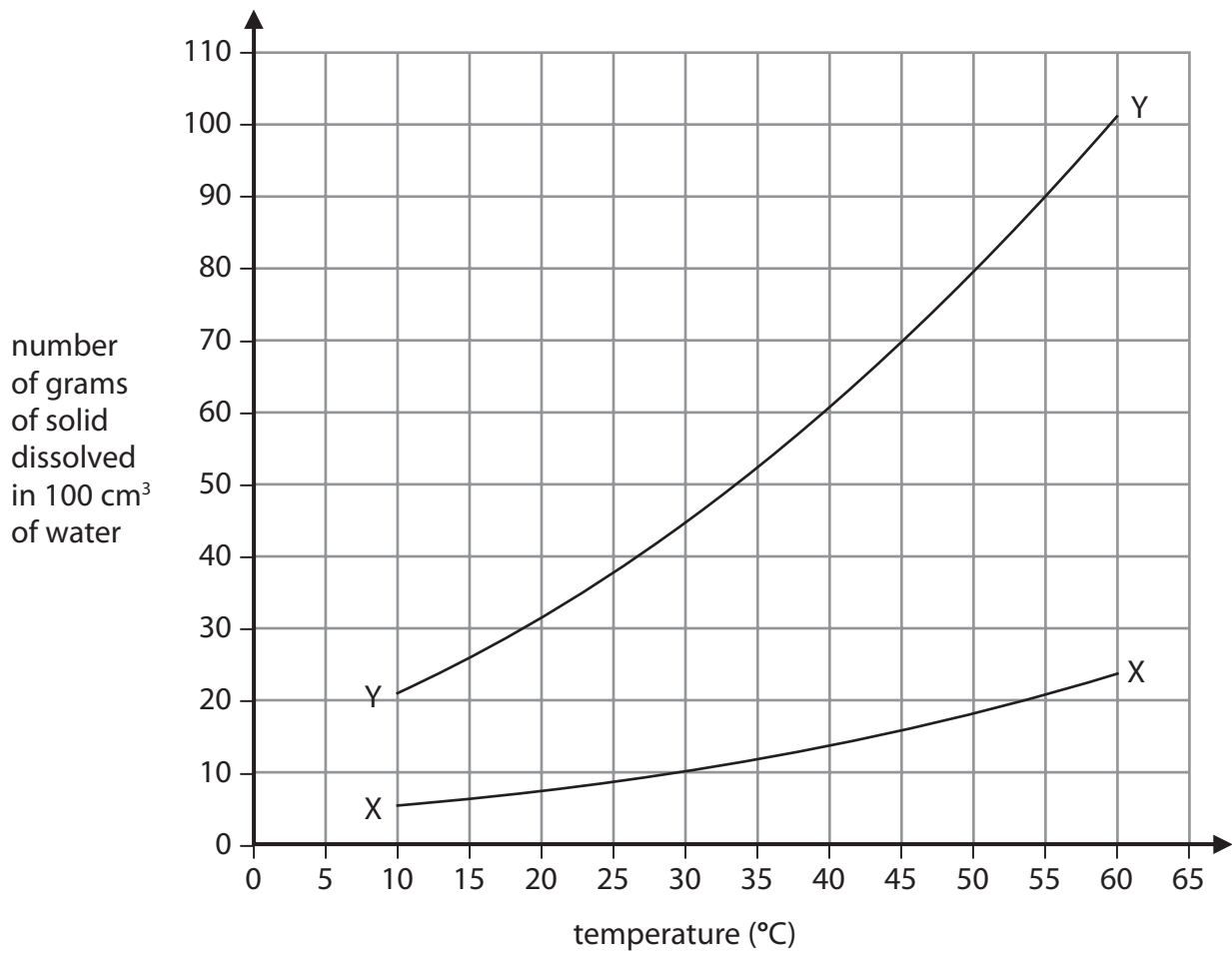
(1)

.....
(ii) Explain your answer.

(1)

.....
(Total for Question 18 = 4 marks)

19 Jane plotted a graph to show two solids, X and Y, dissolved in 100 cm³ of water at different temperatures.



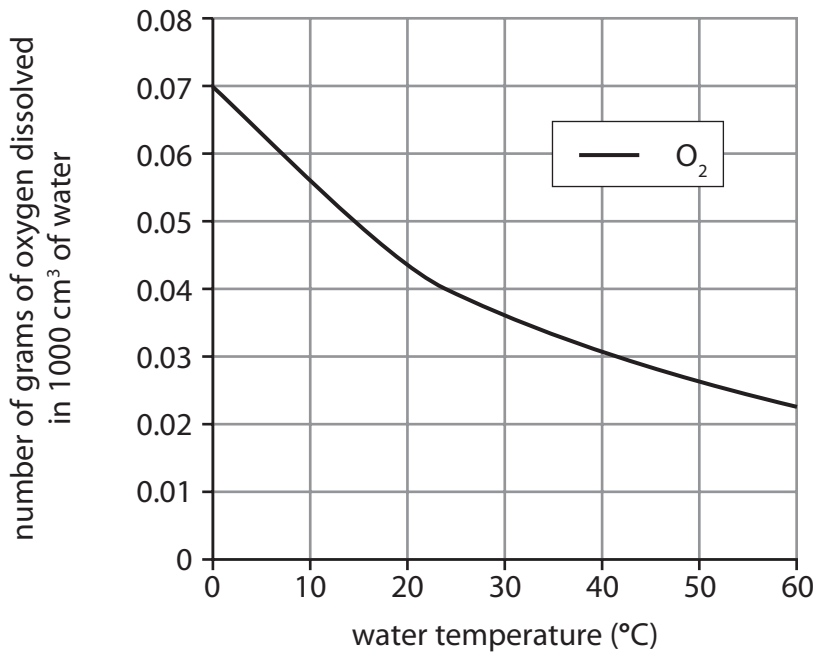
(a) At what temperature does 10 g of solid X dissolve in 100 cm³ of water? (1)

.....

(b) How can you tell that increasing the temperature affects solid Y more than solid X? (1)

.....

(c) Mike plotted another graph to show how many grams of oxygen dissolved in 1000 cm³ of water at different temperatures.



How is the shape of Jane's graph different from Mike's graph?

(1)

.....

.....

(Total for Question 19 = 3 marks)

For questions 20 – 21 put a cross in one box to indicate your answer.
If you change your mind, put a line through the box and then put a cross in another box .
Each question is worth one mark.

20 Give one property of the metal copper which makes it a good material for use in electrical wires.

conductor

insulator

shiny

solid

(Total for Question 20 = 1 mark)

21 Sophie enjoys surfing in the sea. What is the name of the force that keeps the surfboard up floating on the surface of the water?



a pull

a push

friction

upthrust

(Total for Question 21 = 1 mark)



- (a) Friction is a force that can slow a surf board down. Describe how this force can be reduced.

(1)

- (b) While Sophie is surfing, she notices that a ship going out to sea goes out of sight. Why does the ship go out of sight?

(1)

- (c) Describe how the Earth moves to cause day and night?

(1)

- (d) Sophie said that she would like to return to the beach next year. Why does a year have 365 days?



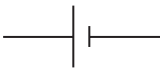
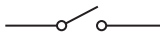
(1)

(Total for Question 22 = 4 marks)

23 Harvey needs to build an electric circuit with a bulb that can be switched on and off.

(a) Match the components with the correct symbols.

(3)

| Component | Symbol |
|-----------|---|
| Bulb |  |
| Wire |  |
| Cell |  |
| Switch |  |

(b) Draw a circuit diagram to show the electric circuit that Harvey could build.

(2)

(c) How could Harvey make the bulb light up brighter?

(1)

(Total for Question 23 = 6 marks)

24 Brian plays a guitar by plucking the strings to make a sound.



(a) Describe what happens to the strings of the guitar when they are plucked so that they make a sound?

(1)

(b) Brian plucks the strings harder, what will happen to the sound?

(1)

(c) Brian is in his room. The doors and windows are closed. But he can still hear the music from a party in the room next door.

Brian would like to increase the pitch of the sound. Describe how the guitar strings can produce a sound of a higher pitch?

(1)

(Total for Question 24 = 3 marks)

TOTAL FOR SECTION A = 45 MARKS

SECTION B

Answer ALL questions.

25 Louise bakes a cake.



Cake before baking



Cake after baking

(a) Tick one box after each sentence to show if it is true or false.

(2)

As the cake bakes, it...

| | True | False |
|----------------|------|-------|
| gets bigger | | |
| gets heavier | | |
| changes shape | | |
| changes colour | | |

(b) Louise would like to measure the mass of a cake. What should she use to do this?
Louise should use a: (tick one box)

(1)

measuring cylinder

thermometer

spring balance

stop watch

(c) Name one thing Louise should do to stay safe when baking a cake.

(1)

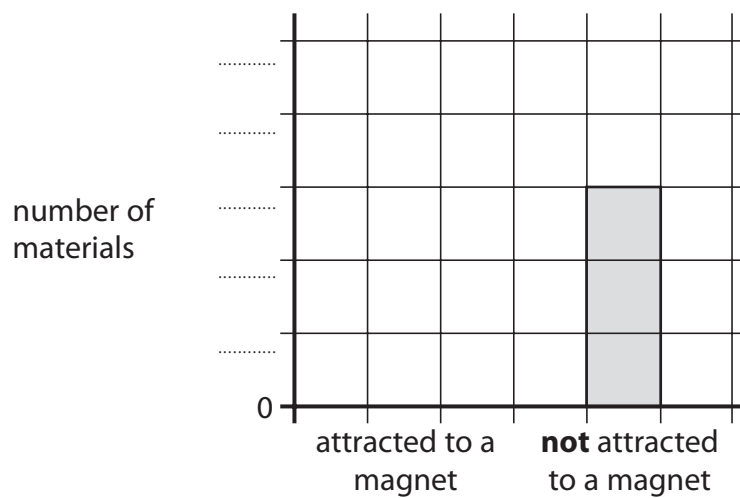
(Total for Question 25 = 4 marks)

26 (a) Pupils tested some objects to see if they were attracted to a magnet. They made some notes of their results.

| Objects attracted to a magnet | Objects not attracted to a magnet |
|-------------------------------|-----------------------------------|
| iron nail | brass key |
| steel can | wooden peg |
| | plastic toy |

(i) Fill in the missing spaces on the y-axis to complete the scale. The first number has been done for you.

(1)



(ii) Draw a bar on the chart to show the number of objects attracted to the magnet.

(1)

(b) Jack wrote 'this test worked' as his conclusion for his test. Why is this not a useful scientific conclusion?

(1)

.....

.....

(c) Tom and David describe their ideas about metals.

All metals are magnetic

Tom

Only some metals are magnetic

David

They recorded some observations from their test in a table.

Does each observation support their ideas?

Tick one box on each row of the table.

(2)

| Observation | Supports Tom's idea | Supports David's idea | Does not support either idea |
|--|---------------------|-----------------------|------------------------------|
| The iron nail is attracted to the magnet | | | |
| The steel can is attracted to the magnet | | | |
| The brass key is not attracted to the magnet. | | | |
| The plastic toy is not attracted to the magnet | | | |
| The wooden peg is not attracted to the magnet | | | |

(d) Tom said 'To improve our test we should have measured how far each material moved when it was attracted to the magnet.'

David said 'This would not improve our test'

Why was David right to think this would not improve their test?

(1)

(Total for Question 26 = 6 marks)

27 Kim has three different types of onion seed.

She wants to find out which onion seed germinates most quickly.



Kim: 'to make my investigation fair, I will use the same type of soil, and watering cans of the same colour.'

(a) Why does using the same type of soil for each onion seed help to make Kim's test fair? Give a reason for your answer.

(1)

(b) Using watering cans of the same colour for each bean seed does not help to make Kim's test fair. Give a reason for your answer.

(1)

(c) The table shows some of the factors in Kim's investigation.

Complete the table to show how Kim should carry out her investigation. Tick one box in each row.

(2)

| Factor | What is to be changed | What is to be kept the same | Factors to be measured |
|--|-----------------------|-----------------------------|------------------------|
| The type of onion seed | | | |
| The time taken for the onion seed to germinate | | | |
| The place where the onion seeds are left | | | |
| The type of pot the onion seed is grown in | | | |

(d) Jane thought it would be better if Kim used more than one of each type of onion seed.

How could using more than one of each type of onion seed improve Kim's investigation?

(1)

.....

.....

(Total for Question 27 = 5 marks)

TOTAL FOR SECTION B = 15 MARKS
TOTAL FOR PAPER = 60 MARKS

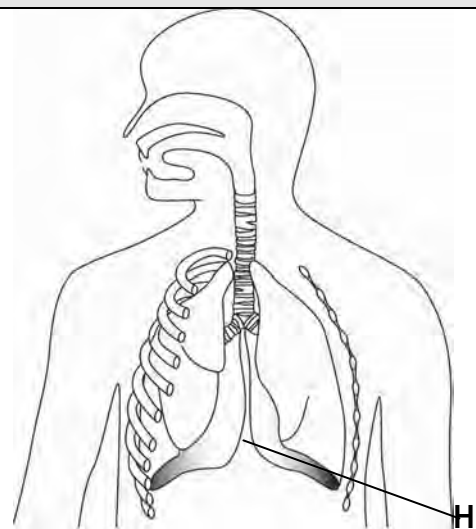
Mark Scheme for paper PLSC01

Section A

| Question Number | Answer | Mark |
|-----------------|--------|------|
| 1 | Key C | 1 |
| 2 | Key D | 1 |
| 3 | Key A | 1 |
| 4 | Key C | 1 |
| 5 | Key B | 1 |
| 6 | Key D | 1 |
| 7 | Key C | 1 |
| 8 | Key D | 1 |

| Question Number | Answer | Mark |
|-----------------|---|------|
| 9 (a) | Set 1 - pond Set 2 - garden Set 3 - sea | 1 |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 9 (b) | It has a long pointed beak OR It can reach them with its beak. OR It is adapted for feeding. <i>Allow sensible descriptions</i> | 1 |

| Question Number | Answer | Accept | Mark |
|-----------------|---|--------|------|
| 10 (a) |  | | 1 |

| Question Number | Answer | Accept | Mark |
|-----------------|---------------------------------------|---|------|
| 10 (b) | Pumps blood/Maintains the circulation | Accept Transports oxygen/carbon dioxide/food/waste etc | 1 |

| Question Number | Answer | Accept | Mark |
|-----------------|---|--------|------|
| 10 (c) | To take in more air/oxygen OR To take in air/oxygen faster OR For increased respiration | | 1 |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| 11 | Key A | 1 |
| 12 | Key C | 1 |
| 13 | Key D | 1 |
| 14 | Key D | 1 |
| 15 | Key D | 1 |
| 16 | Key B | 1 |

| Question Number | Answer | Reject | Mark |
|-----------------|--------|--------|------|
| 17(a) | Liquid | | 1 |

| Question Number | Answer | Reject | Mark |
|-----------------|---|--------|------|
| 17 (b) | Water had evaporated/gone into the air/changed into a vapour or gas | | 1 |

| Question Number | Answer | Reject | Mark |
|-----------------|---|---|------|
| 17 (c) | The plastic film prevented water evaporating/vapour could not pass through the plastic film/water could not evaporate through the plastic fil | it was covered with plastic film/it had a lid | 1 |

| Question Number | Answer | Accept | Mark |
|-----------------|--|--|------|
| 17(d) | Ice gained heat more slowly/ice needs heat to melt | the fridge was colder than the room /the fridge was too cold | 1 |

| Question Number | Answer | Reject | Mark |
|-----------------|------------|--------|------|
| 18 (a) | Filtration | | 1 |

| Question Number | Answer | Reject | Mark |
|-----------------|--|--------|------|
| 18 (b) | Orange colouring - YES white cornflour - NO (both required for the mark) | | 1 |

| Question Number | Answer | Reject | Mark |
|-----------------|---|--------|------|
| 18 (c)(i) | Pass through with the colouring and water | | 1 |

| Question Number | Answer | Reject | Mark |
|-----------------|--|--------|------|
| 18 (c)(ii) | Because sugar dissolves in water/sugar is soluble in water/sugar solution can pass through the paper or filter paper | | 1 |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| 19(a) | 30° | 1 |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 19(b) | The line or it goes up the most or more than the others/the curve for X is steeper than the others | 1 |

| Question Number | Answer | Mark |
|-----------------|---|------|
| 19(c) | In Mike' graph, the line goes down as the temperature goes up. In Jane's graph, the line goes up as the temperature goes down <i>Looking for a comparison</i> | 1 |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| 20 | Key A | 1 |
| 21 | Key D | 1 |

| Question Number | Answer | Accept | Mark |
|-----------------|---|--|------|
| 22(a) | Streamlining Making the board smooth | Rounder edges on the board Get rid of any roughness on the board Wax the surfboard | 1 |

| Question Number | Answer | Mark |
|-----------------|---|------|
| 22 (b) | The Earth is a sphere (Light travels in straight lines) | 1 |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 22(c) | The Earth rotates or spins on its axis | 1 |

| Question Number | Answer | Accept | Mark |
|-----------------|--|---------------------------|------|
| 22(d) | The time taken for the Earth to orbit the Sun once | 365 days [this is length] | 1 |

| Question Number | Correct Answer | Mark |
|-----------------|---|------|
| 23 (a) | All four components correctly labelled 3 (for all four components correctly labelled) 2 (for 2 or 3 correct) 1 (for one correct) | 3 |

| Question Number | Correct Answer | Mark |
|-----------------|--|------|
| 23 (b) | Correctly drawn circuit diagram 2 (circuit with all three components correctly drawn) 1 (circuit with one or two components correctly drawn) | 2 |

| Question Number | Correct Answer | Accept | Mark |
|-----------------|----------------|---|------|
| 23 (c) | Add more cells | Add more batteries Add more a powerful battery/ batteries | 1 |

| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|--------------------------------|------------------------------|--|------|
| 24 (a) | They vibrate Vibrations | It moves up and down quickly | They move up and down They wobble/shake | 1 |

| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|---|---|--|------|
| 24 (b) | It will produce a louder sound/It will go on for longer | The volume is higher It made a loud/long sound | The pitchers is higher It vibrates more | 1 |

| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|--|-------------------------|--------|------|
| 24 (c) | Vibrate more quickly Vibrate faster | Vibrate more frequently | | 1 |

Section B:

| Question Number | Answer | Mark |
|-----------------|--|------|
| 25 (a) | Gets Bigger - True Gets Heavier - False Changes Shape - True Changes Colour - True 2 (marks for all four statements answered correctly) 1 (mark for any two or three statements correctly answered) | 2 |

| Question Number | Answer | Mark |
|-----------------|-------------------------------------|------|
| 25 (b) | C Louise could use a Spring Balance | 1 |

| Question Number | Answer | Mark |
|-----------------|---|------|
| 25 (c) | Any one from; Wear Oven Gloves to protect hands Keep water away from electricity Keep knives and sharp utensils in a safe place Wash hands to avoid food poisoning <i>Allow for sensible relevant answer</i> | 1 |

| Question Number | Answer | Mark |
|-----------------|--------------------------------|------|
| 26 (a i) | 1 to 5 marked on vertical axis | 1 |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 26 (a ii) | <i>Ft on 26 (ai)</i> Bar drawn to '2' on the chart above 'attracted to a magnet' Allow for a bar drawn to '2' on an incorrect scale (or two boxes highlighted) | 1 |

| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|--|---|--|------|
| 26 (b) | <p>Response must recognise that results are not referred to or interpreted</p> <p>He has not talked about what he has found out/what happened/his results</p> <p>It does not give reasons/an explanation</p> | <p>It does not tell you anything</p> <p>It needs to say more about the results</p> <p>It doesn't have enough detail</p> <p>We need more information</p> <p>It does not tell us why it was 'good'</p> <p>He needs to explain 'good'.</p> | Reject a response which refers to a prediction or method, or which presents a conclusion | 1 |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 26 (c) | <p>The iron nail is attracted to the magnet - Supports Tom's and David's ideas</p> <p>The steel clip is attracted to the magnet - Supports Toms and David's ideas</p> <p>The metal key is not attracted to the magnet - Supports only David's ideas</p> <p>The plastic toy is not attracted to the magnet - Does not support either idea</p> <p>The wooden peg is not attracted to the magnet - Does not support either idea</p> <p>2 (marks for all five statements answered correctly)</p> <p>1 (mark for any three or four statements correctly answered)</p> | 2 |

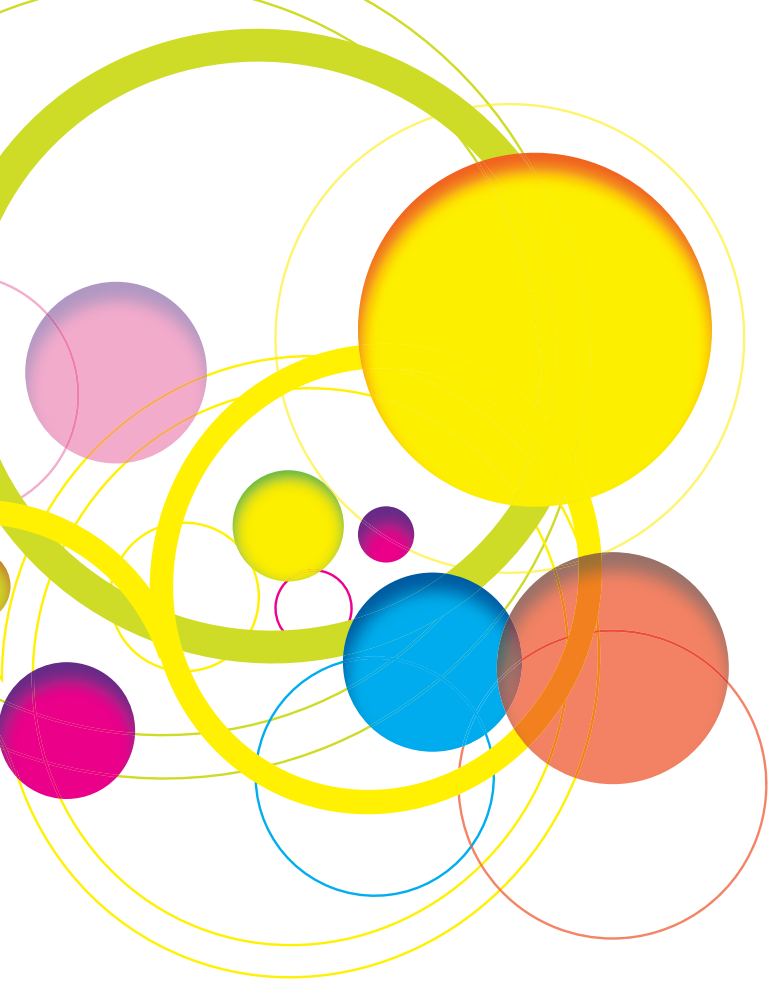
| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|--|--|--|------|
| 26 (d) | <p>Response should give an indication that the suggested change would give a different investigation</p> <p>They only wanted to know if the material is attracted or not</p> <p>They were not testing the strength of the magnets</p> <p>It was not what they were testing</p> | <p>How far it moves does not matter</p> <p>It would not make any difference</p> <p>It has nothing to do with the test</p> <p>Only steel/iron will attract the magnet</p> <p>Not all materials are magnetic</p> | Reject a response that included incorrect science which is not supported by the results of the investigation | 1 |

| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|---|---|--|------|
| 27 (a) | An indication that the soil would have an effect on the investigation or that only one variable is changed in a fair test | <p>Chalk may be dry, clay may be wet</p> <p>One soil may have more nutrients or moisture than others</p> <p>One soil might be better than another</p> <p>One soil might be richer/finer/rougher</p> | <p>Do not give credit for an insufficient response e.g. Keep everything the same</p> <p>If you have different soils it may be unfair</p> <p>It may be a different type of soil</p> | 1 |

| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|--|---|---|------|
| 27 (b) | An indication that the results will not be affected if the colour of the can is changed or that there are other control variables which have a greater effect. | <p>The colour makes no difference</p> <p>It has no effect</p> <p>The amount of / type of water is the same</p> <p>The colour will not change the test</p> <p>The water makes a difference</p> | <p>The size/shape of the watering can affect the plants</p> <p>It would not be fair if she uses the same coloured watering can [restates information given]</p> | 1 |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 27(c) | <p>The type of onion seed - Factor to be changed</p> <p>The time taken for the seed to germinate - Factor to be measured</p> <p>The place where the seeds are left - Factor to be kept the same</p> <p>The type of pot the seed is grown in - Factor to be kept the same</p> <p>2 marks for all four factors correctly classified</p> <p>1 mark for any three factors correctly classified</p> | 2 |

| Question Number | Correct Answer | Acceptable Answers | Reject | Mark |
|-----------------|---|--|--|------|
| 27 (d) | A response indicating that reliability is increased | <p>To make the results more reliable</p> <p>To get an average</p> <p>To see if the same type of seed always germinates more quickly</p> <p>To see if they germinate at the same rate</p> <p>She can compare her results.</p> | <p>To get the correct results</p> <p>So she can see which is best</p> <p>To see which type of seed germinates quickest</p> <p>So that the test is fair</p> | 1 |



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SCIENCE

0843/01

Paper 1

May/June 2007

45 minutes

Candidates answer on the Question Paper.

Additional Materials: Pen Calculator
 Pencil
 Ruler

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

You should show all your working in the booklet.

| For Examiner's Use | |
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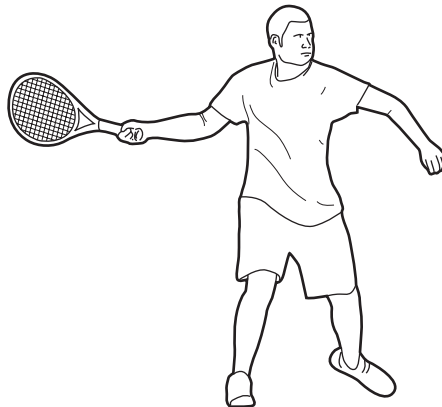


1 (a) Blood is very important.

Use these words to explain how blood reaches all parts of the body.

arteries heart lungs stomach veins

Oxygen enters the blood in the From here it passes to the which pumps it through blood vessels called to the whole body. [2]



To play sport well we need strong muscles and lots of energy.

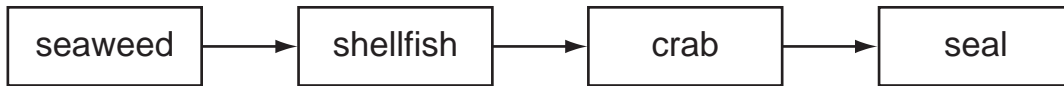
(b) Are the following statements about exercise true or false?

- | | true | false |
|--|--------------------------|--------------------------|
| The harder you work the more energy your muscles need. | <input type="checkbox"/> | <input type="checkbox"/> |
| Both food and oxygen are needed to make energy. | <input type="checkbox"/> | <input type="checkbox"/> |
| Muscles push on bones to move your joints. | <input type="checkbox"/> | <input type="checkbox"/> |

[2]

Page Total

2 Look at the food chain below.



(a) What does it tell you about the diet of shellfish?

..... [1]

(b) Name a consumer that eats another consumer in this food chain.

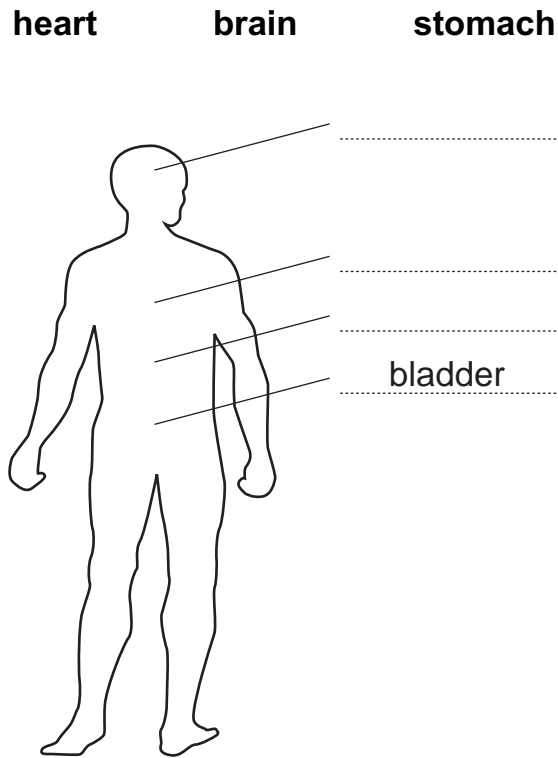
..... [1]

(c) Circle the word that describes an animal that is eaten by another animal?

predator **prey** **producer** **provider**

[1]

3 (a) Label these organs.



[1]

(b) To keep healthy we need to eat a mixture of all the different food types. What is this called? Tick (✓) **one** box.

- balanced diet
- good bacteria diet
- low fat diet
- slimming diet

[1]

Page Total

(c) We need teeth to eat our food.

Different teeth have different jobs. Draw lines to match each **tooth diagram** to **tooth type** and its **job**.

tooth diagram

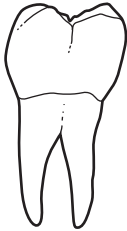
tooth type

job



canine

crunch and grind



incisor

grip and stab



molar

snip and cut

[2]

Page Total

4 The table shows the habits of 4 people.

| | Person | | | |
|---------------------------|--------|---|---|---|
| | A | B | C | D |
| Smokes regularly | ✓ | x | x | x |
| Exercises regularly | x | ✓ | ✓ | ✓ |
| Cleans teeth regularly | ✓ | x | x | ✓ |
| Eats lots of fatty foods | x | ✓ | x | x |
| Eats lots of sugary foods | ✓ | ✓ | x | x |

(a) Who will have the most healthy teeth?

Person [1]

(b) Which **two** are likely to have the healthiest heart?

Person and Person [1]

Page Total

5 There is smoke coming from the bonfire.



(a) What is smoke? Tick (✓) **one** box.

- Gases made by melting.
- Liquid from evaporation.
- New materials made by burning.
- Solids made from condensation.

[1]

(b) Complete the table to show if these changes are reversible or not.

| | Reversible | Irreversible |
|---|------------|--------------|
| Round rubber ball to squashed rubber ball | | |
| Ice to water | | |
| Raw egg to cooked egg | | |

[2]

(c) Explain what is meant by a change that can be reversed?

.....

[1]

Page Total

6 The students are putting different materials into water.

They used one spoonful of each substance and stirred it well. Then they left the mixtures for 2 minutes.

This is what they observed.

| | |
|--|---|
| | |
| | <i>Material A - a white powder</i> |
| | <i>It disappeared as we stirred it. There was nothing there when we checked it.</i> |
| | |
| | <i>Material B - brown crystals</i> |
| | <i>It moved about as we stirred it but sank to the bottom when we left it.</i> |
| | |
| | <i>Material C - a white powder</i> |
| | <i>It fizzed and bubbled when we first put it in and then disappeared.</i> |
| | |
| | <i>Material D - blue crystals</i> |
| | <i>The solid disappeared as we stirred but then the water turned blue.</i> |
| | |

(a) (i) Write down the letters of the materials which did not dissolve.

..... [1]

(ii) Underline the word below that describes how a material like this can be separated from the water.

filtration

floatation

magnetism

solutions

[1]

Page Total

(b) Which material cannot be got back?

Tick (✓) **one** box.

Material A

Material B

Material C

Material D

[1]

(c) What happens to the solid when a soluble material is added to water?

Tick (✓) **one** box.

The material is still there but cannot be seen.

The water soaks up the solid.

The solid disappears into the air.

The solid melts in the water.

[1]

Page Total

- 7 Rock salt is a mixture of salt and sand that is used on the roads in cold countries to melt the ice.

Pure salt and sand can be obtained from this mixture in three stages.

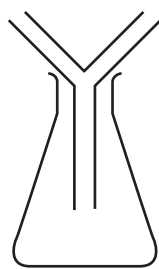
Complete the sentences to explain each stage.

1. Put the mixture into warm water and stir.

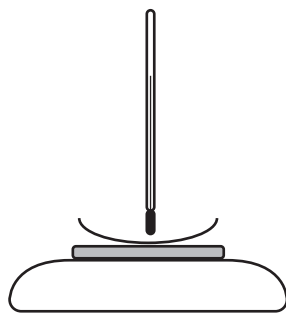
(a) The will dissolve but the will not dissolve.

[1]

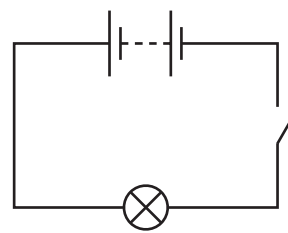
2. Separate the solid from the solution.



X



Y



Z

(b) Use equipment The solid will be in the
and the solution will be in the

[1]

3. Leave the solution in a warm place for 2 days.

(c) The water will and leave the behind.

[1]

Page Total

8 (a) Fill in the table below to show the properties of the different materials. The first one has been done for you.

| | Transparent | Magnetic | Conducts electricity | Waterproof |
|--------------|-------------|----------|----------------------|------------|
| Copper wire | no | no | yes | yes |
| Newspaper | | | | |
| Glass bottle | | | | |
| Steel nail | | | | |

[3]

(b) Soani has chosen to use a wooden spoon to stir the hot soup.



Choose **one** reason why wood is a good material to use. Tick (✓) **one** box.

heavy

opaque

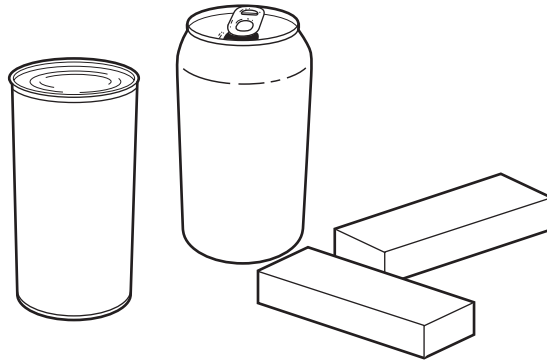
conducts electricity

insulator of heat

[1]

Page Total

9 Cecilia is testing cans and magnets.



Fill in the table to show her results.

N = North

S = South

| | Repel | Attract | No force |
|----------------------------|-------|---------|----------|
| Steel can and S magnet | | | |
| Steel can and N magnet | | | |
| S magnet and N magnet | | | |
| S magnet and S magnet | | | |
| Aluminium can and S magnet | | | |
| Aluminium can and N magnet | | | |

[3]



Page Total



10 Look at this safety sign.



(a) Why is this?

.....
 [1]

(b) Electrical circuits can be drawn using symbols.

Use the symbols below to draw a circuit to light **two** bulbs. They must both turn on and off using the same switch.

- | | | | |
|----------------|--|--------|--|
| cell (battery) | | motor | |
| bulb | | buzzer | |
| switch | | | |

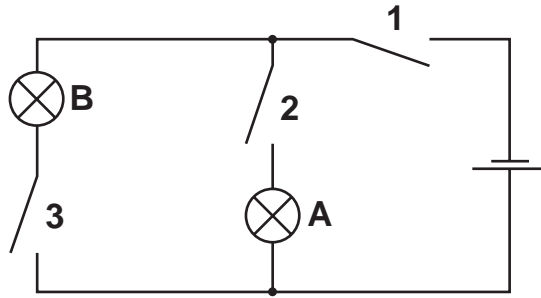
[3]

(c) Name **one** material that conducts electricity that could be used for the wires.

..... [1]

Page Total

11 Look at this circuit diagram.



(a) Switch 1 and 2 are closed. Switch 3 is open.

What will happen? Tick (✓) **one** box.

- A and B both light up.
- Only A will light up.
- Only B will light up.
- Neither bulb will light up.

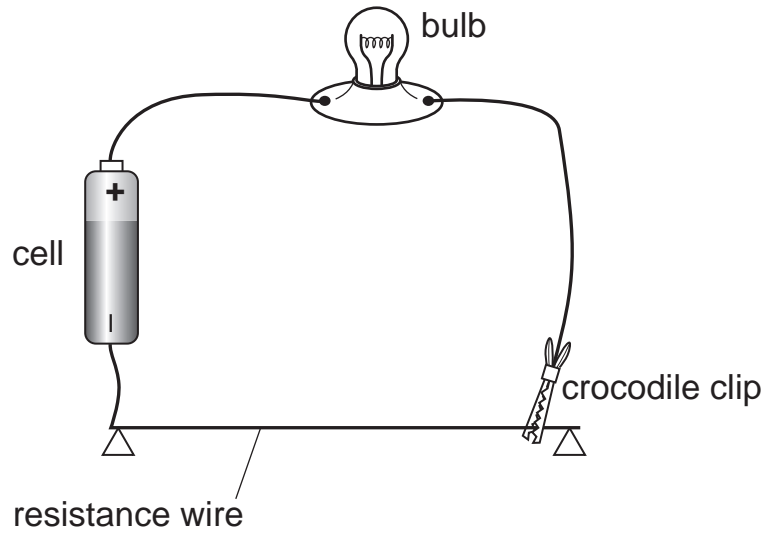
[1]

(b) What will happen if Switch 1 is opened?

..... [1]

Page Total

The diagram shows a circuit.



The resistance wire in the circuit can be made longer or shorter. Wire of different thicknesses can be used.

All types of resistance wire let electricity pass through them.

(c) What happens to the brightness of the bulb if the resistance wire is:

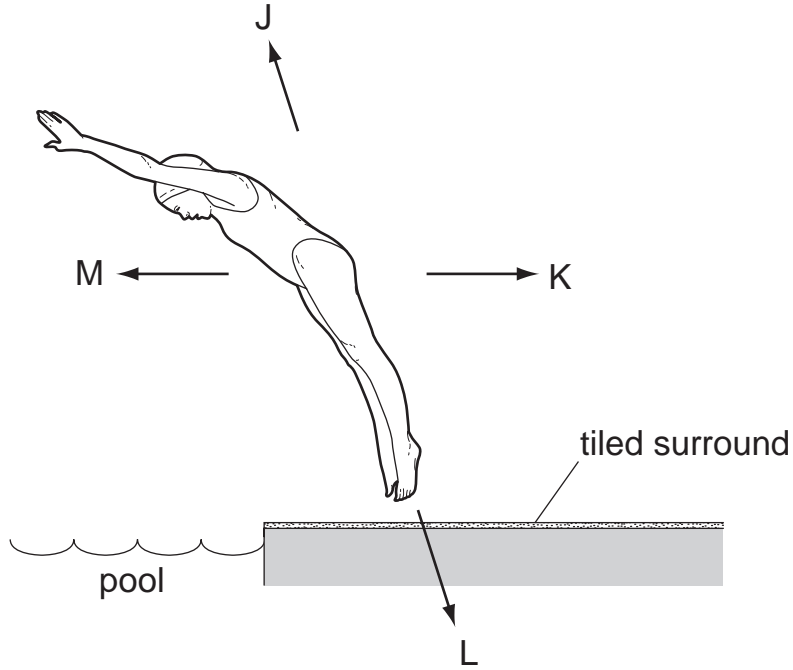
(i) made longer?

..... [1]

(ii) made thinner?

..... [1]

Page Total



(a) Why is it safer to have rough tiles around the edge of the swimming pool?

..... [1]

(b) Ashleigh dives into the water.

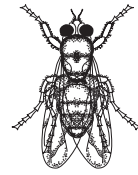
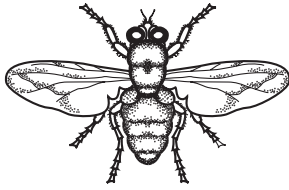
Which arrow shows the direction of the pushing force from her legs as she jumps in?

..... [1]

(c) What is the name of the force that pulls her down into the water?

..... [1]

13 Olivia wants to study how many insects land on different coloured paper in the garden.



She takes three pieces of paper.

Complete the table to show what she must change or keep the same about the paper to make it a fair test.

| | Shape of paper | Size of paper | Colour of paper |
|---------------|----------------|---------------|-----------------|
| Change | | | |
| Keep the same | | | |

[2]



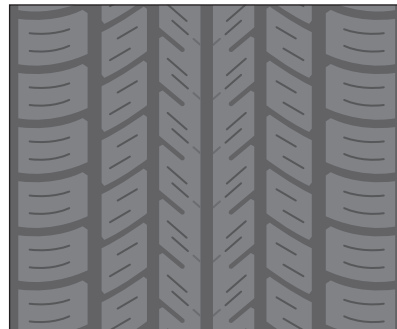
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14 Friction between a tyre and the road can wear down the tread to a dangerously low level.



8 mm tread



worn tread

The tables show the stopping distances in metres for a car travelling at 15 metres per second (about 33 miles per hour) on wet and dry roads.

Wet roads

| Surface | Stopping distance in metres | |
|-----------------|-----------------------------|-----------|
| | New tyres | Old tyres |
| rough tarmac | 18 | 23 |
| smooth concrete | 17 | 27 |
| smooth asphalt | 19 | 50 |

Dry roads

| Surface | Stopping distance in metres | |
|-----------------|-----------------------------|-----------|
| | New tyres | Old tyres |
| rough tarmac | 13 | 14 |
| smooth concrete | 12 | 13 |
| smooth asphalt | 18 | 20 |

(a) What is the difference in the stopping distance between a new tyre and an old tyre on dry smooth concrete?

..... [1]

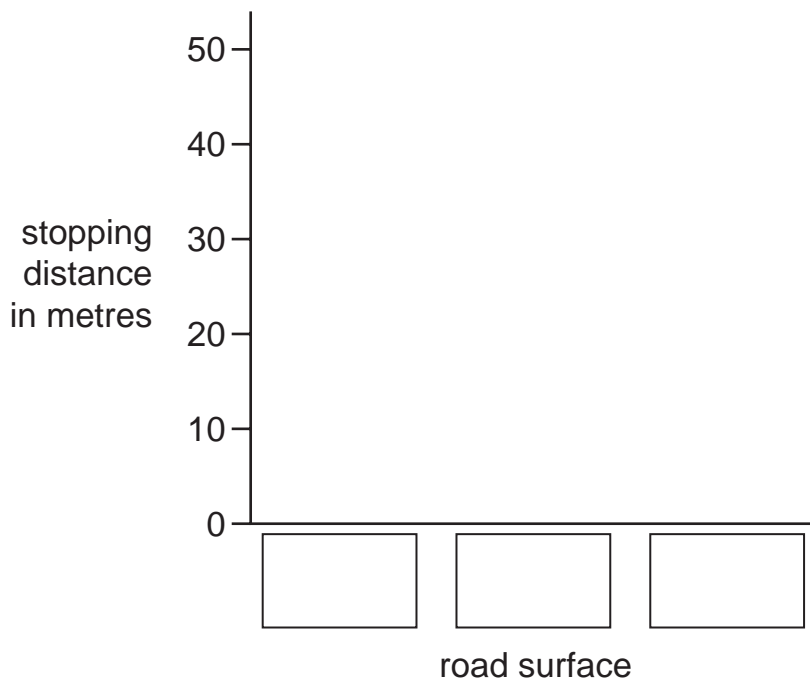
Page Total

It is against the law in many countries to drive with a car tread less than 2 mm deep.

(b) Explain whether the evidence in the tables supports this idea or not.

.....
..... [1]

(c) Draw a bar graph to show the stopping distance in metres for each **wet** road surface for old tyres.



[2]

(d) For new tyres, both in the wet and dry conditions, which type of road surface is the safest?

..... [1]

Page Total

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SCIENCE

0843/02

Paper 2

May/June 2007

45 minutes

Candidates answer on the Question Paper.

Additional Materials: Pen Calculator
 Pencil
 Ruler

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

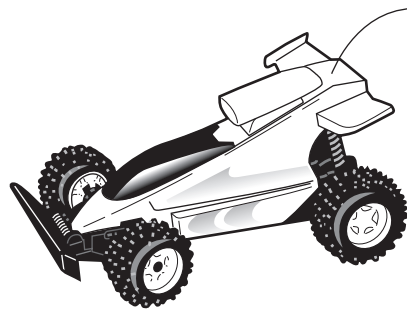
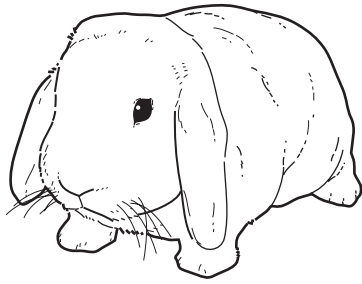
You should show all your working in the booklet.

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This document consists of **19** printed pages and **1** blank page.



1 Look at the two pictures below.



(a) What can the rabbit do that the car cannot do? Tick (✓) **one** box.

- fly
- grow
- move
- make a noise

[1]

(b) The rabbit needs nutrition.

What does this mean? Tick (✓) **one** box.

- It needs fresh air.
- It needs food.
- It needs a warm place to live.
- It needs care from its parents.

[1]

(c) Both plants and animals produce young. What is the name of this life process?

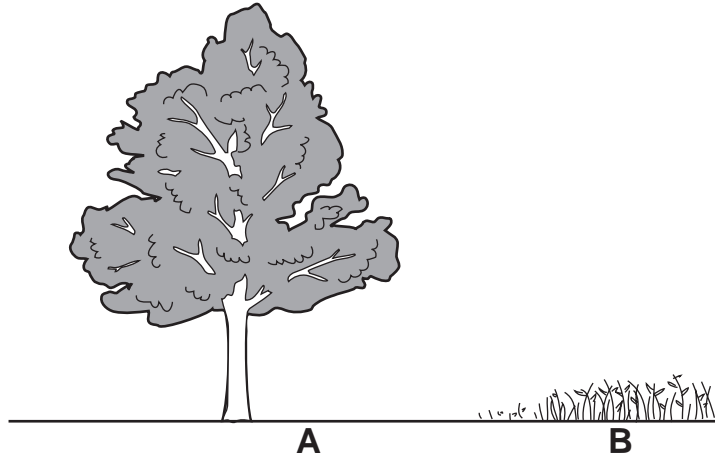
..... [1]

Page Total

2 (a) Water passes up the tree trunk to the leaves.

How does water get to the tree trunk?

..... [1]

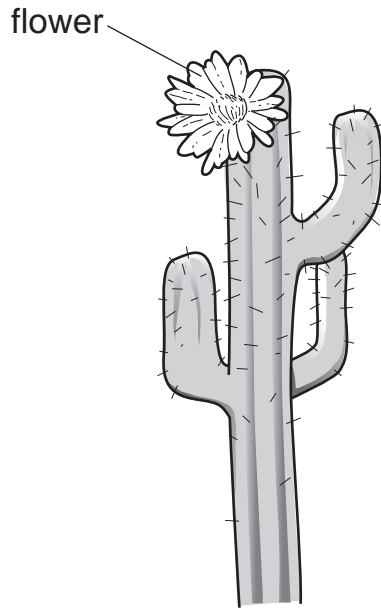


(b) Why are there more plants growing at B than at A?

.....
..... [1]

Page Total

3 The picture shows a cactus plant.



(a) What is the habitat of this cactus?
Tick (✓) **one** box.

- desert
- forest
- marsh
- seaside

[1]

(b) What stops the cactus blowing away in the wind?

..... [1]

Page Total

(c) The cactus is in flower.

Flowers contain organs.

Tick (✓) **one** box to show which words will complete this statement correctly.

male and female

only male

only female

[1]

(d) The flower has large and attractive petals.

How is this cactus pollinated?

..... [1]

Page Total

4 (a) Flowering plants have a life cycle.

Draw lines to match the stages of the plant life cycle to what happens.

dispersal

getting the pollen to the stigma

fertilisation

joining the pollen and the egg

pollination

spreading the seeds

[2]

A bean seed is placed in a jar.



(b) The seed will start to grow (germinate) in the right conditions.

Which part of the plant grows first when the seed germinates?

..... [1]

(c) Seeds do not need light to germinate. Why is this?

Tick (✓) **one** box.

They can grow without food.

They can make food without light.

They have their own store of food.

They receive food from their parents.

[1]

Page Total

5 Petrus takes a cold glass of cola from the fridge. He puts 3 cubes of ice into it.
He leaves the glass on a table in a warm room for 5 minutes.
He notices that the ice cubes have become smaller.

(a) What has happened to them?

..... [1]

(b) The outside of the glass is now wet.

What is the reason for this?

Tick (✓) **one** box.

Water vapour from the air has condensed on the outside of the glass.

Water has condensed from inside the glass and gone into the air.

Water vapour has evaporated from the air and turned into a liquid.

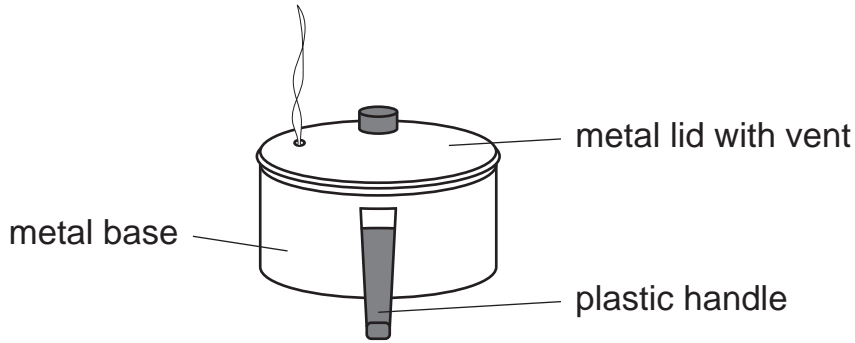
The cola has evaporated and left water outside the glass.

[1]

Page Total

6 The children are cooking rice in boiling water.

They choose this saucepan.



(a) Underline **two** properties of metal which make it a good material to use for the pan.

conducts heat flexible shiny waterproof

[1]

(b) Why is the handle made of plastic?

.....

[1]

(c) Lots of steam comes out from the lid as the rice cooks.

What change has taken place to make this steam?

Tick (✓) **one** box.

gas to solid

liquid to gas

solid to gas

solid to liquid

[1]

(d) How could the steam be turned back into water?

.....

[1]

Page Total

7 Ashika is boiling an egg for breakfast.

She follows these numbered instructions.

- 1 Pour $\frac{1}{2}$ litre of water into a saucepan.
- 2 Add $\frac{1}{2}$ spoonful of salt and stir.
- 3 Heat the water until it boils.
- 4 Carefully place the egg in the pan and cover with a lid.
- 5 Cook the egg for 3 minutes.

(a) At what temperature will the water boil?

..... [1]

(b) When will dissolving take place?

Instruction [1]

(c) When will evaporation take place?

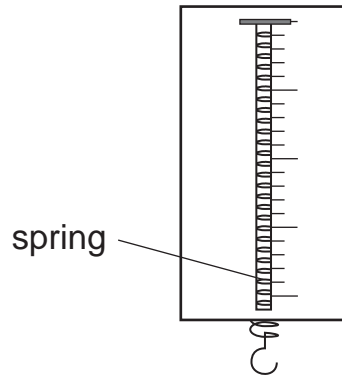
Instruction [1]

(d) When is there an irreversible change?

Instruction [1]

Page Total

8 Naina is measuring forces.



(a) What is this piece of equipment called?

..... [1]

(b) What does it measure? Underline the correct answer.

newtons

grams

centimetres

millilitres

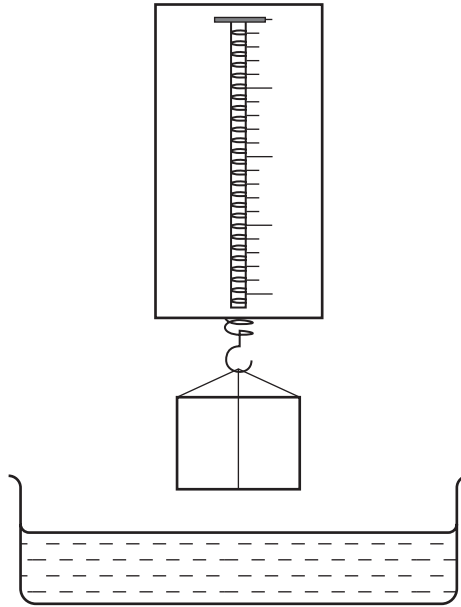
[1]

(c) What happens to the spring when there is a force on it?

..... [1]

Page Total

(d) Naina measures the force on a wooden block in air and in water.



Why does she find that the force is less in water than in air?
Tick (✓) **one** box.

Air resistance is greater than water resistance.

Gravity is less in water than in air.

The water pushes up on the block.

The wooden block soaks up some of the water.

[1]

(e) What would she find if she measured the mass of the block in air and in water?

Tick (✓) **one** box.

The mass is greater in air than water.

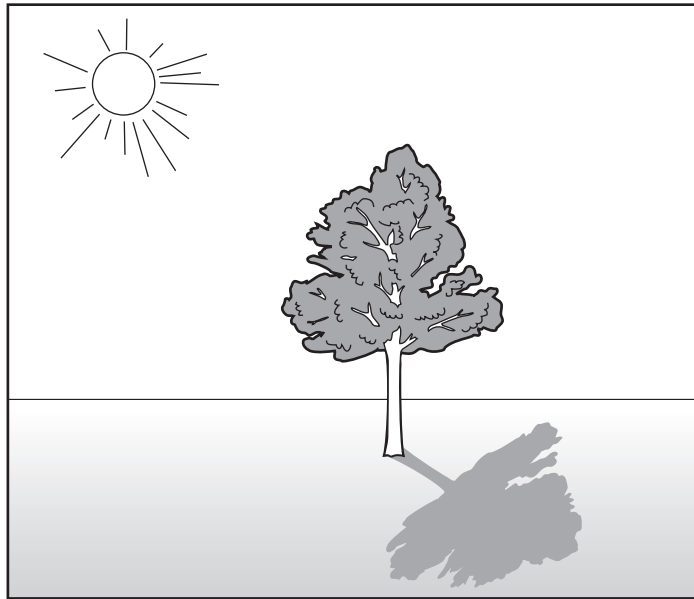
The mass is less in air than in water.

The mass is the same in air as in water.

[1]

Page Total

9 Children are studying the shadow of a tree.



(a) Choose from the words below to complete the sentence about shadows.

opaque blocked passed solid reflected

Shadows are formed when light is by
 materials.

[1]

(b) During the day, the shadow changes position and moves around the tree.

Why does the shadow move during the day?
 Tick (✓) **one** box.

The Sun is spinning on its axis.

The Sun moves round the earth.

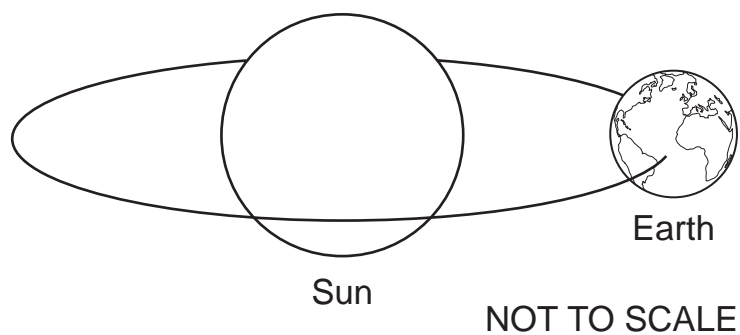
The Earth moves round the Sun.

The Earth is spinning on its axis.

[1]

Page Total

10 Look at the diagram of the Sun and the Earth.



(a) Complete these sentences.

(i) The Earth rotates every hours.

[1]

(ii) The Earth's orbit takes days.

[1]

(b) Shade in the part of the Earth where it is night time on the diagram.

[1]

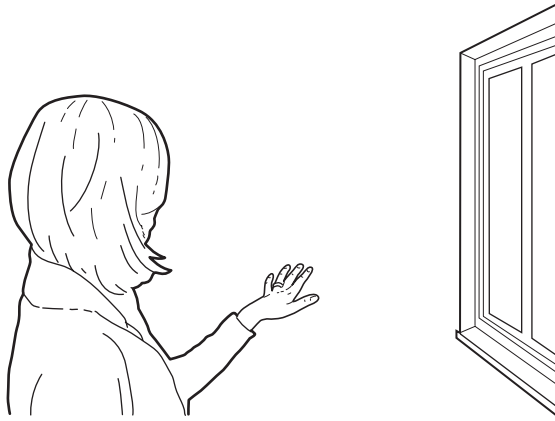
Page Total

11 We need light to see objects.

(a) Name **one** light source.

..... [1]

(b) Jasmine is looking at her new ring.



Why does the metal ring look shiny?
Tick (✓) **one** box.

- It is opaque.
- It reflects light.
- It is a light source.
- It absorbs light.

[1]

(c) Draw **two** arrows onto the picture to show how the light travels when Jasmine sees the ring.

[2]

Page Total

12 Serene can hear traffic out in the street even with the window closed.



(a) Name **two** materials the sound must travel through to reach her ears.

1

2 [2]

(b) She moves further away from the window.

How will the noise change?

Tick (✓) **one** box.

It will get louder.

It will get lower.

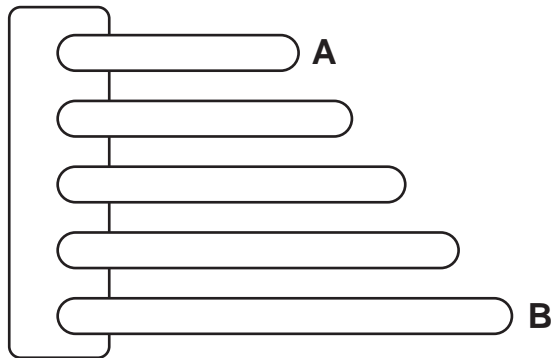
It will get quieter.

It will get higher.

[1]

Page Total

13 The children have made a musical instrument from sticks.



(a) Complete the sentence to show how the musical instrument works.

The sticks make a sound when they are hit because
they

[1]

(b) Stick **A** makes a higher note than stick **B**.

What word describes how high or low the note is?

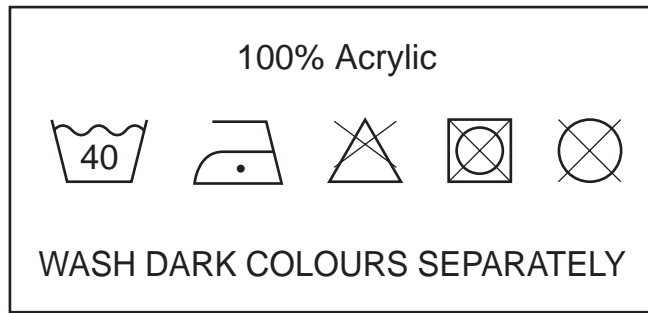
..... [1]

(c) What can they do to get stick **A** to make a louder sound?

..... [1]

Page Total

14 Some dyes wash out of fabrics.



Ajay has this idea.

“I think hot soapy water washes out the dye more than cold soapy water because the temperature affects the dye.”

He decides to wash pieces of fabric from some jeans at five different temperatures to test out her idea.

(a) Choose **five** different temperatures she should test.

..... [1]

(b) Ajay cuts out **six** fabric pieces that are the same size and colour. He washes **five** of them at different temperatures.

Why is it important to have the extra piece of fabric?

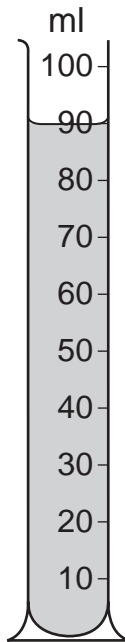
..... [1]

Page Total

- 15 The children are finding out how long it takes for a cube of sugar to dissolve in water at different temperatures.

They use a measuring cylinder to make sure they use the same amount of water each time.

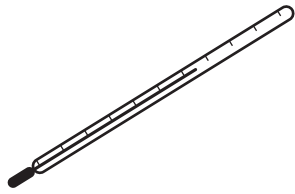
- (a) How much water is in this cylinder?



..... [1]

Page Total

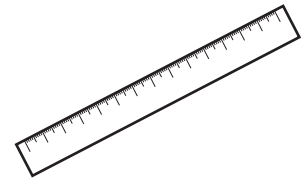
(b) What **two** other pieces of equipment do they need?



thermometer



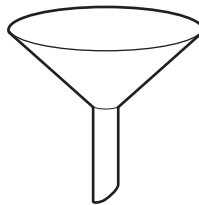
stop clock



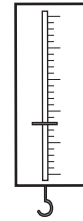
ruler



magnet



filter funnel



force meter

[2]

(c) They do the test at each temperature three times to get an average result.

Why is this a good idea?

..... [1]

(d) Ben suggests another way to improve the experiment.

“Use a different kind of sugar for each test so we find out more information.”

Explain what is wrong with his idea.

..... [1]

Page Total

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SCIENCE

0843/01

Paper 1

October/November 2007

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

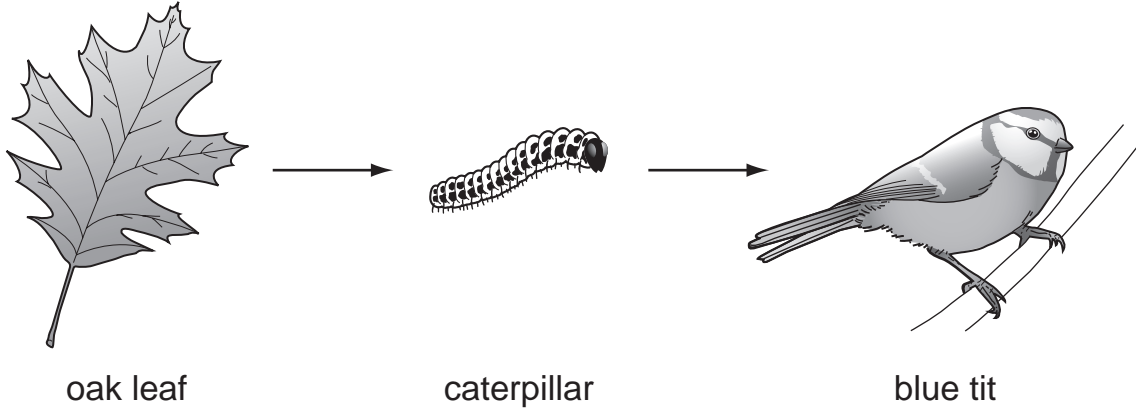
You should show all your working in the booklet.

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| Total | |

This document consists of **15** printed pages and **1** blank page.



1



(a) What does this food chain tell you?
 Tick (✓) **one** box.

- Caterpillars are food for blue tits.
- Blue tits eat oak leaves.
- Caterpillars eat blue tits.
- Oak leaves change into caterpillars.

[1]

(b) The oak tree is made of different parts.

Draw **three** lines to match each part to the reason it is important.

| | |
|---------|---------------|
| flowers | make food |
| leaves | make seeds |
| roots | take in water |

[2]

(c) A tree needs water and minerals for healthy growth.

Name **one** other thing a tree needs for healthy growth.

..... [1]

Page Total



(a) What is the real shape of the Earth?

Tick (✓) **one** box.

a circle

a sphere

flat

a crescent

[1]

(b) There are many changes on Earth caused by movements in the Solar system.

Draw a line from each **Change** to its **Cause**.

NOTE. You may need to use some causes more than once.

Change

Cause

A year is 365¼ days.

The Earth orbits the Sun.

It is dark at night.

The Earth spins on its axis.

The Sun rises and sets.

The Moon hides the Sun.

The Sun orbits the Earth.

[3]

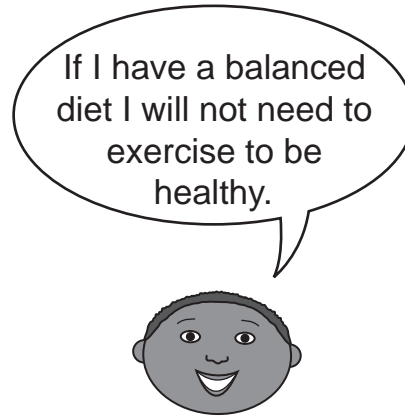
(c) The Moon does not make its own light.

Why does the Moon often look shiny?

..... [1]

Page Total

3 Each student has ideas about why we need to eat a healthy balanced diet.



(a) Tick (✓) **one** box in each row to say whether each idea is **True** or **False**.

| Idea | True | False |
|--|------|-------|
| A balanced diet gives me all the nutrients I need. | | |
| A balanced diet means not eating any sweets or sugar. | | |
| A balanced diet will help my teeth and bones grow strong. | | |
| If I have a balanced diet I will not need to exercise to be healthy. | | |

[2]

Page Total

(b) Look at these different foods.

Draw **three** lines to match each **Food** to its special **Job** in the body.

| Food | Job |
|-------------------|--------------------------|
| bread and cakes | fuel for activity |
| carrot and apples | new materials for growth |
| chicken and eggs | vitamins for health |

[2]

(c) Some people choose to eat different foods.

Tick (✓) the organ affected badly by these diets.

| Diet | Organ | Tick (✓) |
|---------------------|-------|----------|
| Too much fried food | brain | |
| | heart | |
| | lung | |
| Too much sugar | bones | |
| | teeth | |
| | skin | |

[2]

Page Total

4 We need to take in food and oxygen into our bodies.

(a) Which organ takes oxygen into the body?

Tick (✓) **one** box.

brain

heart

lungs

stomach

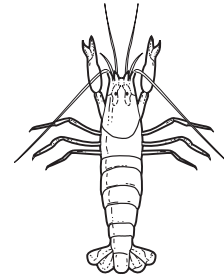
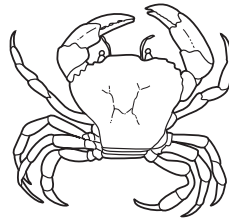
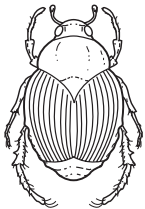
[1]

(b) What is the name of the liquid that carries food and oxygen around the body?

.....

[1]

5 Mia and Matt want to sort some plants and animals into groups by the **way they look**.



(a) What could they use to sort these **animals** into 2 groups?

Tick (✓) **one** box.

age

number of legs

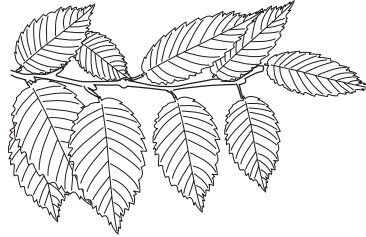
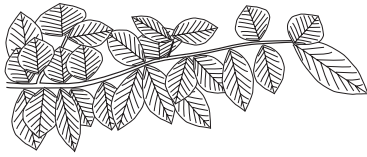
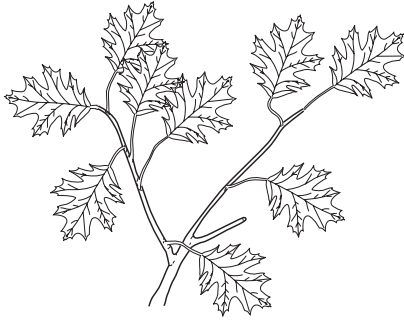
number of young

speed they run

[1]

Page Total

(b) How could they sort these **plants** into 2 groups?



Tick (✓) **one** box.

age

height of tree

number of leaves on branch

shape of leaves

[1]

(c) Mia makes a table to show which life processes are common to animals and plants.

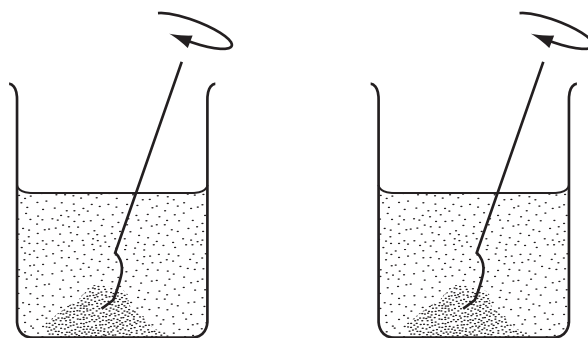
The first line has been filled in correctly.
Complete the table.

| Life process | Animals | Plants |
|--------------|---------|--------|
| Movement | ✓ | ✓ |
| Growth | | |
| Nutrition | | |
| Reproduction | | |

[2]

Page Total

6 Both citric acid and bicarbonate of soda are white powders.



Each powder is stirred separately into a beaker of water.

The table shows what happens.

| Test material | Observation |
|---------------------|-----------------------------------|
| citric acid | makes a clear solution |
| bicarbonate of soda | fizzes and makes a clear solution |

(a) Which solution could now be separated to get back the original powder?

..... [1]

(b) Explain how you could do this.

.....
 [2]

Page Total

7 The cooks are busy in the kitchen cooking food.



There are many changes happening.

(a) What happens to salt when it is put into cold water and stirred?

..... [1]

(b) What happens to some of the water when this mixture is heated?

..... [1]

(c) Why does a metal spoon get hot if it is used to stir a hot mixture?
Tick (✓) **one** box.

- Metal is a hard material.
- Metal is a poor insulator of heat.
- Metal is a poor conductor of heat.
- Metal always gets hot in a mixture.

[1]

(d) What instrument (piece of equipment) should you use to find out how hot water is? Underline your answer.

forcemeter measuring cylinder scales thermometer

[1]

(e) What would be the temperature when the water boils? Give units.

..... [1]

Page Total

8 Materials can be solids, liquids or gases.

(a) Which state is described below? Underline your answer.

It can change shape and volume. It squashes easily and flows from one place to another.

gas

liquid

solid

[1]

(b) Vinegar and warm milk are both coloured liquids. When they are mixed together they change very quickly to make a colourless liquid and a white solid.

The change is not reversible.

(i) Can you get the milk back?

..... [1]

(ii) Can you get the vinegar back?

..... [1]

(c) Tick (✓) **two** of the changes below that are reversible changes.

eggs frying

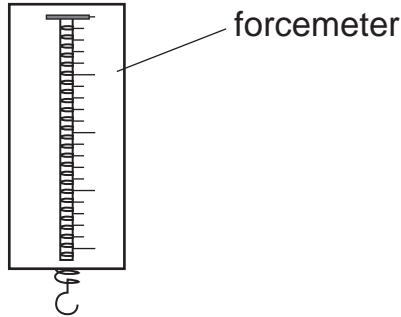
sugar dissolving

ice melting

wood burning

[2]

Page Total



(a) What kind of force will lengthen the spring in the forcemeter?
Tick (✓) **one** box

- pull
- push
- squash
- twist

[1]

(b) Jon measures the force needed to pick up different objects.
These are his results.

| Object | Average force needed (N) |
|--------|--------------------------|
| A | 3 |
| B | 11 |
| C | 7 |
| D | 6 |

Which object has the most weight?

..... [1]

(c) What is the name of the force that gives objects weight?

..... [1]

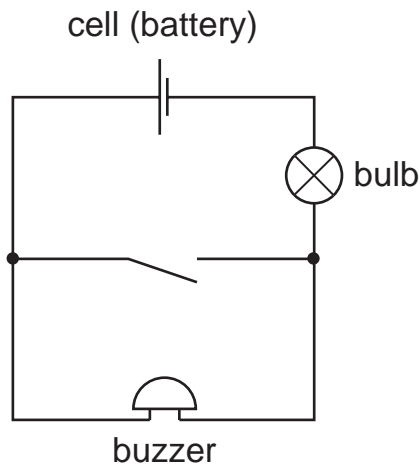
(d) Name the unit of force that has the symbol N.

..... [1]

Page Total

10 Petra makes a circuit. She wants a bulb to light and a buzzer to sound when the switch is closed.

This is a diagram of her circuit.



(a) She closes the switch. The buzzer does not work.

What happens to the bulb when she closes the switch?

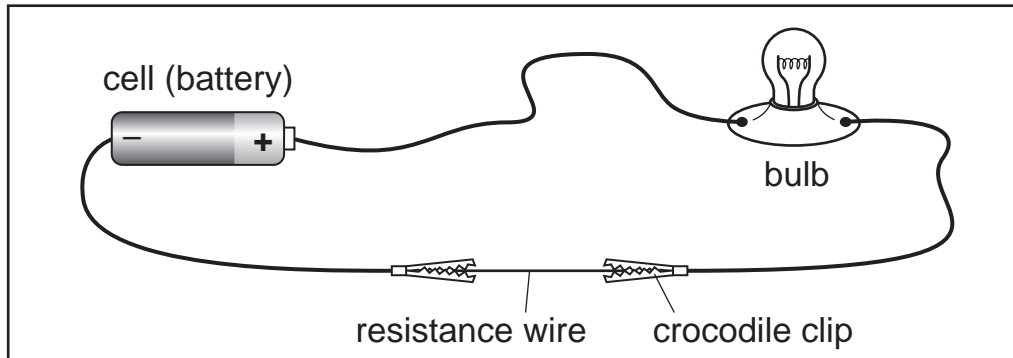
..... [1]

(b) She connects an extra cell (battery) to the cell (battery) already there.

Describe what happens to the bulb and buzzer now?

..... [2]

11 Amima makes a dimmer switch. It looks like this.



The bulb lights up.

How do the changes she makes to the circuit affect the brightness of the bulb?

Complete the table by underlining the correct answers.

| Change | Brightness of bulb |
|---|---------------------------|
| Shorten the resistance wire | dimmer/brighter/no change |
| Add a second bulb | dimmer/brighter/no change |
| Add a second cell (battery) | dimmer/brighter/no change |
| Move the bulb nearer the cell (battery) | dimmer/brighter/no change |

[4]



Page Total



12 Udoka sees a blue butterfly on a blue flower and a yellow butterfly on a yellow flower.

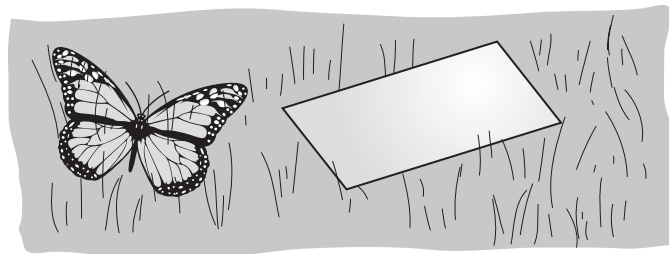


He thinks that butterflies must be most attracted to flowers that are the same colour as themselves.

He plans an experiment to test his idea.

He decides to put pieces of different coloured card outside for 1/2 hour.

He plans to record how many butterflies of different colours land on each one. He puts all the pieces of card in the same sunny place at the same time of day.



(a) What else must he do to make sure this is a fair test?

..... [1]

(b) What is Udoka's prediction?

..... [1]

Page Total

Here are his results.

| Colour of card | Number of butterflies of each colour | | | |
|----------------|--------------------------------------|-----|--------|-------|
| | blue | red | yellow | brown |
| Blue | 6 | 3 | 4 | 1 |
| Red | 2 | 1 | 0 | 0 |
| Green | 0 | 0 | 0 | 0 |
| Yellow | 0 | 0 | 2 | 0 |

(c) Which colour card attracts most yellow butterflies?

..... [1]

(d) Udoka thinks the results support his prediction.

What do **you** think the results suggest about how different colours attract different butterflies?

.....
 [1]

(e) What would you do next to find out more?

.....
 [1]

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SCIENCE

0843/02

Paper 2

October/November 2007

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

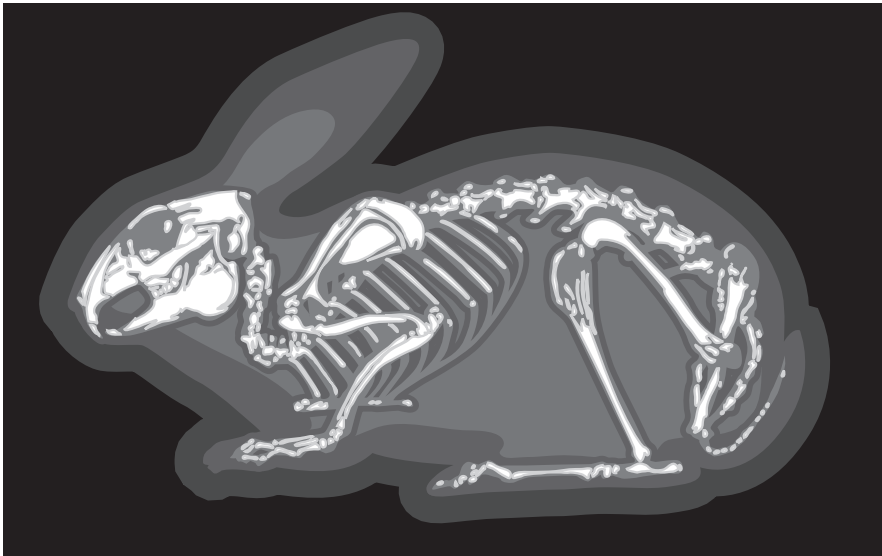
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1 The x-ray shows the bones of a baby rabbit.



(a) What is this collection of bones called?

..... [1]

(b) Having bones allows the rabbit to move.

Give **one** other reason why the bones are important to the baby rabbit.

..... [1]

(c) What must be attached to the bones to allow the rabbit move?

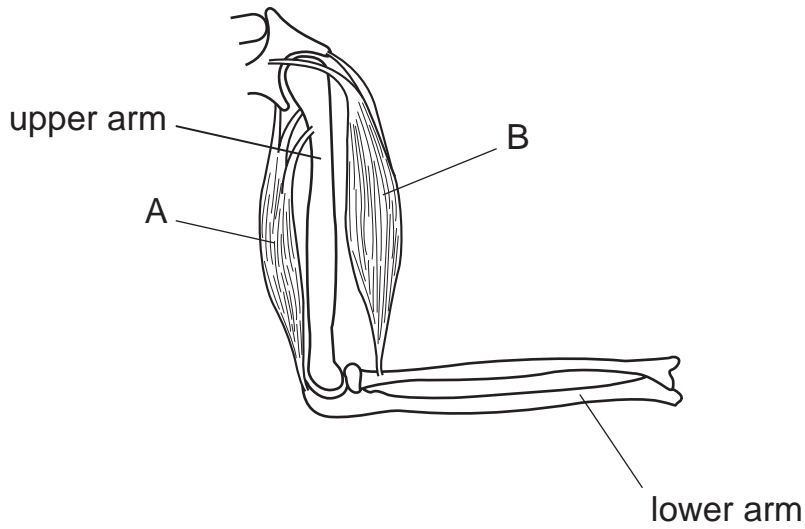
..... [1]

(d) How will the bones look different in an adult rabbit?

..... [1]

Page Total

2 This drawing shows the bones and muscles in the human arm.



(a) What must the muscles do to raise up the lower arm?
Tick (✓) **one** box.

Both muscles A and B must contract (shorten).

Both muscles A and B must relax.

Muscle A contracts (shortens) and muscle B relaxes.

Muscle B contracts (shortens) and muscle A relaxes.

[1]

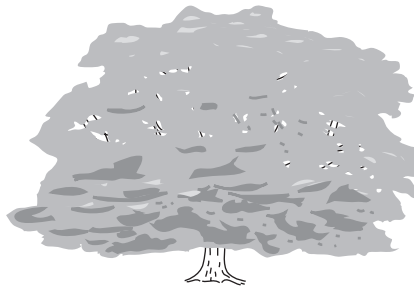
(b) Name an organ in the human body that is made from muscle.

.....

[1]

Page Total

3 New oak trees grow from acorns produced by the oak tree.



(a) These sentences describe germination but they are in the wrong order.

Use the boxes to write the correct order.

1. A tiny root grows downwards into the soil.

2. A tiny shoot grows upwards towards the light.

3. Leaves start to grow so the seedling can make its own food.

4. The seed coat cracks open.

[2]

(b) Underline **three** things that seeds need to germinate.

air

light

soil

warmth

water

[2]

(c) Acorns are dispersed by animals. Birds collect the acorns and bury them in the ground to eat later. Sometimes they do not collect them and the seeds are left in the ground to grow.

Describe **one** other way that animals can disperse seeds.

.....

[1]

Page Total

4 Sairah is investigating different materials.

First she wants to find out which is the hardest rock. She scratches each rock with a different object. She records whether her scratch made a mark.

This table shows her results.

| Type of Rock | fingernail | coin | matchstick | plastic knife |
|--------------|------------|---------|------------|---------------|
| Marble | no mark | mark | no mark | no mark |
| Sandstone | no mark | mark | no mark | mark |
| Talc | mark | mark | mark | mark |
| Granite | no mark | no mark | no mark | no mark |

(a) Which is the hardest rock she tested?

..... [1]

(b) What evidence in the table shows that talc is the softest rock she tested?

..... [1]

(c) She does another test. She finds that both sandstone and talc are *permeable*.

What does *permeable* mean? Tick (✓) **one** box.

has a smooth texture

is hard and shiny

lets water soak through

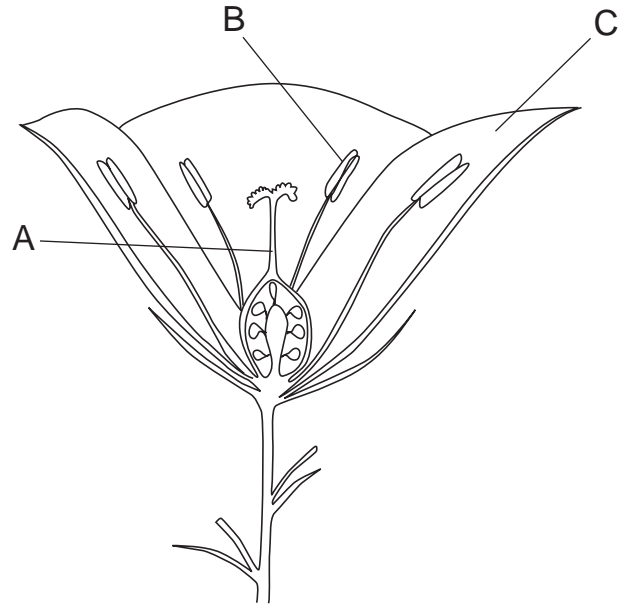
stops water getting through

[1]

Page Total

5

6



(a) Name part A.

..... [1]

(b) Name part B.

..... [1]

(c) The job of part B is to produce pollen.

Why is pollen important?
Tick (✓) **one** box.

It is the female sex cell.

It is the male sex cell.

It provides food for the plant.

It grows into a new plant.

[1]

Page Total

(d) This flower has large petals to attract insects.

For which process is this important?

Tick (✓) **one** box.

dispersal

fertilisation

germination

pollination

[1]

(e) All plants need to produce new plants so their species can survive.

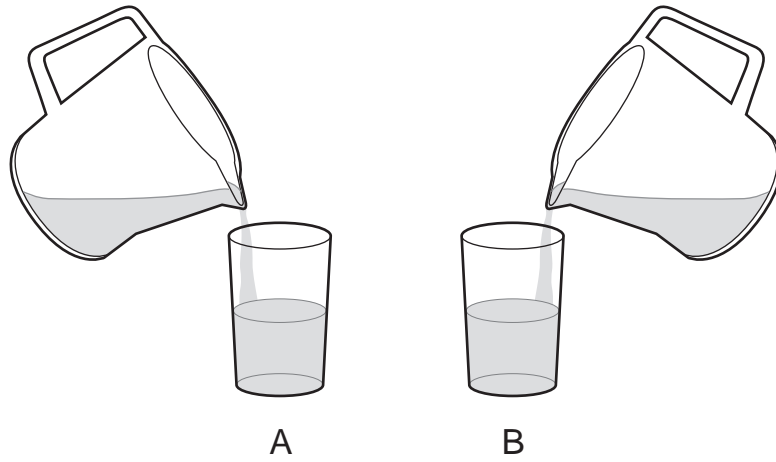
What is the name of this life-process?

.....

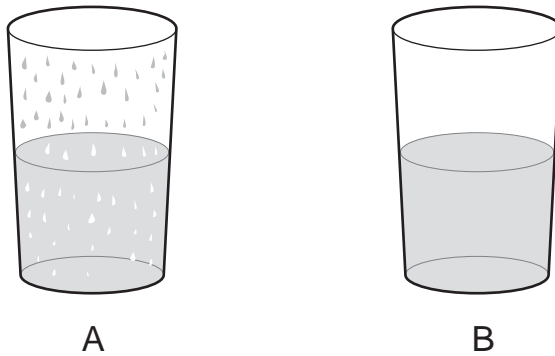
[1]

Page Total

6



Ajay has 2 dry glasses. He pours a cold drink from the fridge into one glass. He pours a drink from a warm cupboard into the other.



Glass A now has water droplets on the outside.
Glass B stays dry outside.

(a) Which glass has had the cold drink poured into it?

..... [1]

(b) Where has the water on glass A come from?
Tick (✓) **one** box.

- the cold drink in the glass
- the warm air outside the glass
- the cold air inside the glass
- the warm drink inside the glass

[1]

Page Total

(c) What is the name of the **process** that makes Glass A wet on the outside?

..... [1]

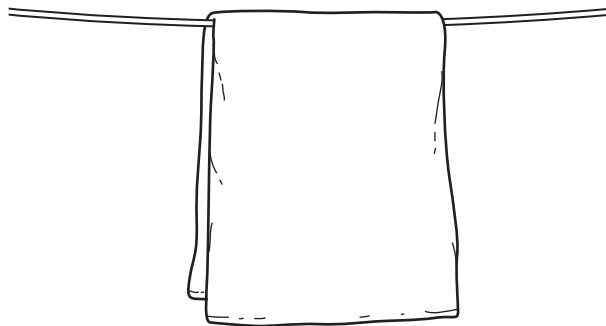
7 Mia gives the dog a bath. She uses a towel to dry the dog afterwards.



(a) Why is the towel heavier after she has used it?

..... [1]

(b) She hangs the towel outside to dry.



Name the **process** that completely dries the towel.

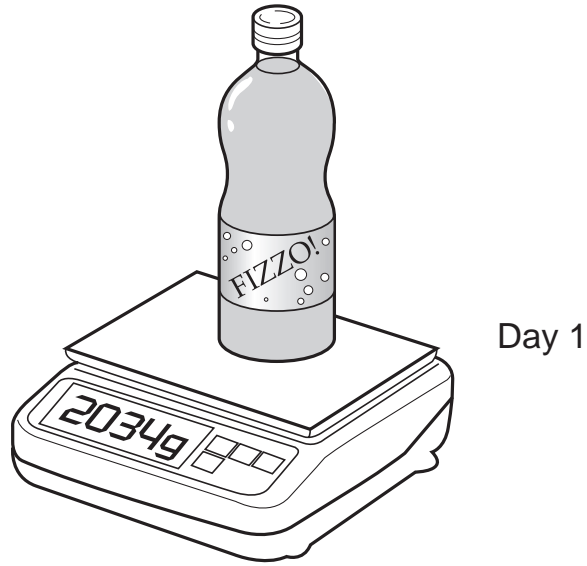
..... [1]

(c) What could help the towel to dry more quickly on the line?

..... [1]

Page Total

- 8 Some children are finding out what happens to the mass of a bottle of fizzy drink after it is left open for 5 days in a warm room.



They weigh the bottle with its lid on.

- (a) What equipment are they using to find the mass?

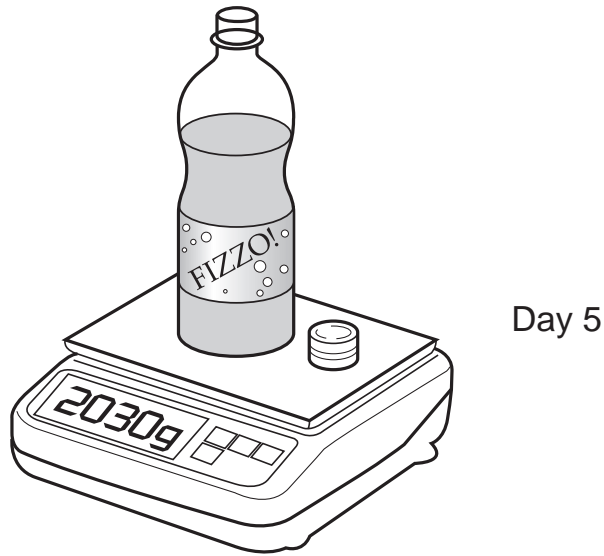
..... [1]

- (b) What is the mass of the bottle and contents?

..... [1]

Page Total

They take the lid off the bottle and leave it in a warm room.
 After 5 days they find the new mass. They find that the mass has decreased.



(c) What is the decrease in mass?

..... g [1]

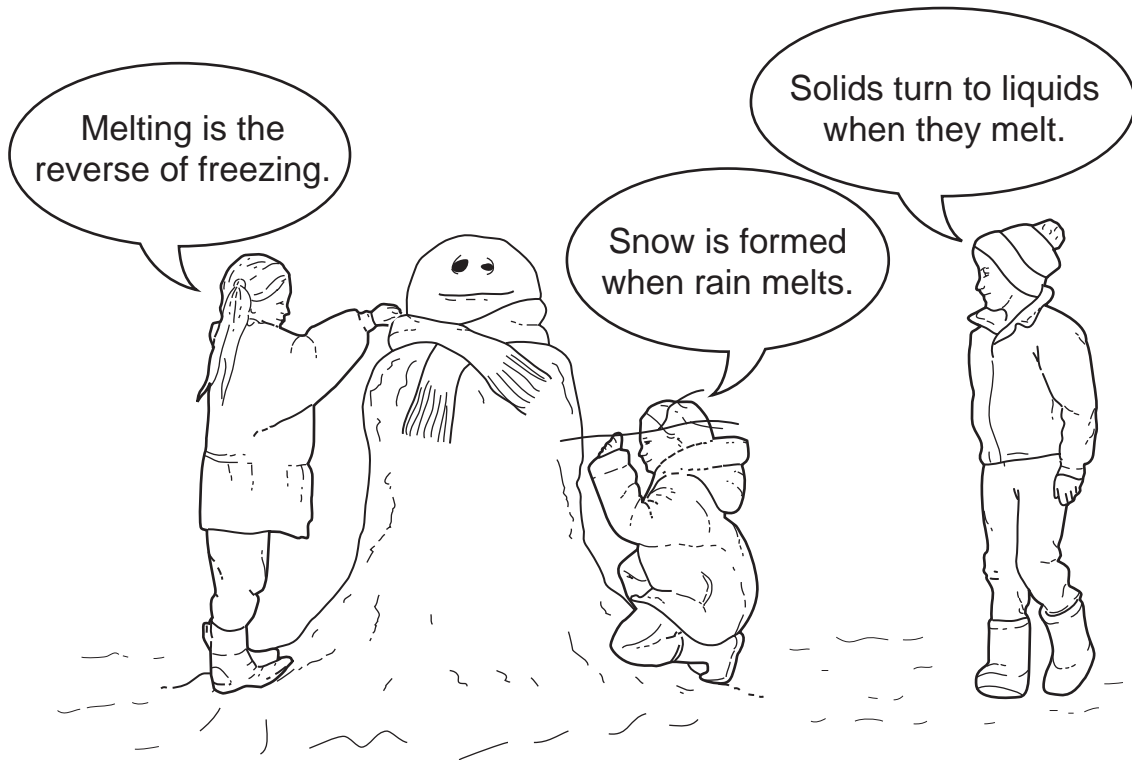
(d) Why did they find the mass of the lid as well as the bottle and contents?

..... [1]

(e) Look at the pictures of the bottles in Day 1 and Day 5. What else is different after 5 days?

..... [1]

Page Total



The children talk about a snowman that they have made.

(a) Tick (✓) **one** box in each row to say whether their statements are **True** or **False**?

| Statement | True | False |
|--|------|-------|
| Melting is the reverse of freezing. | | |
| Snow is formed when rain melts. | | |
| Solids turn to liquids when they melt. | | |

[2]

(b) The snowman's eyes are made from pieces of coal.

Snow melts when it is heated. Coal burns when it is heated.

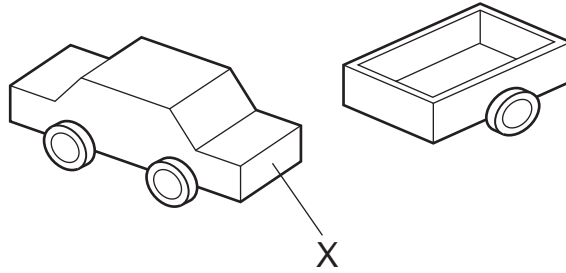
What types of changes are these?

.....

[1]

Page Total

10



The toy car is made from wood. Pedro wants the car to pull a trailer along. He puts one magnet on the car at X.

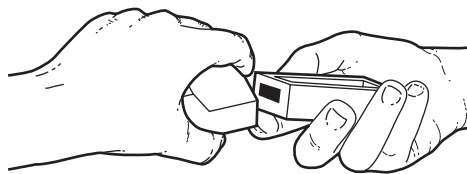
(a) Which material should the trailer be made from so that it sticks to the magnet?

Tick (✓) **one** box.

- aluminium
- iron
- wood
- plastic

[1]

(b) Pedro sticks another magnet on the front of the trailer.



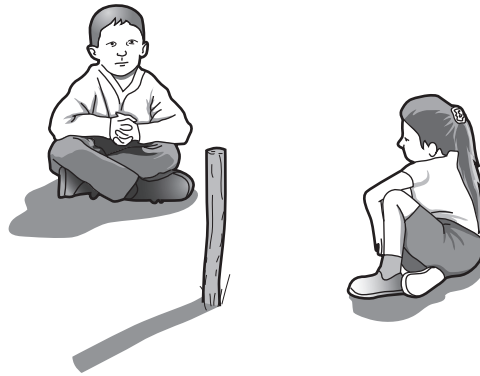
Describe **two** things that could happen.

.....

[2]

Page Total

11 The children put a stick into a hole in the ground. It is a sunny day. A shadow forms.



(a) What is the light source?

..... [1]

(b) Tick (✓) **one** box in each row to say whether each statement is **True** or **False**.

| Statement | True | False |
|--|------|-------|
| The stick makes a dark shadow because it is opaque. | | |
| The stick makes a dark shadow because it reflects the light. | | |
| The stick makes a dark shadow because it blocks the light. | | |
| The stick makes a dark shadow because it bends the light. | | |

[2]

Page Total

(c) The children notice the length of the shadow changes during the day.

The table shows the lengths of the shadow at different times of day.
Use **two** of the numbers below to complete the table.

160

128

98

| Time | Length of shadow (cm) |
|-------|-----------------------|
| 8:00 | 162 |
| 10:00 | 131 |
| 12:00 | |
| 14:00 | |
| 16:00 | 165 |

[2]

(d) How else does the shadow change during the day?

[1]

.....

Page Total



Luis blows over the top of a bottle. Both Luis and Natasha can hear the sound.

(a) What happens to the air in the bottle when it makes the sound?

..... [1]

(b) How can Luis make the sound louder?

..... [1]

(c) Luis puts some water in the bottle and blows exactly the same as before.

What will change about the sound?

Tick (✓) **one** box.

pitch

length

volume

nothing

[1]

Page Total

(d) Natasha walks into the next room and shuts the door. She can still hear the sound.

How will the sound she hears be different now?

Tick (✓) **one** box.

louder

quieter

higher

shorter

[1]

(e) Give **one** material the sound must travel through to reach her ears.

.....

[1]

Page Total

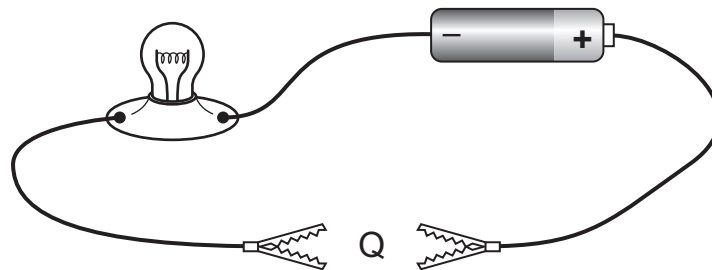
- 13 (a) A bulb will only light up if the circuit has....
Tick (✓) **one** box to complete the sentence.

a switch.

a break in it.

a power source.

[1]



- (b) Which of these materials will light up the bulb when placed in the circuit at Q?

Tick (✓) **one** box.

plastic

copper

string

paper

[1]

Page Total

(c) Two different metals, A and B, were used in the circuit.

The bulb was brighter using metal A than with metal B.
Tick (✓) **one** box to explain why.

Metal A makes more current.

Metal A is a better conductor.

Metal A is a better insulator.

Metal A is better shape.

[1]

Page Total

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2008





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SCIENCE

0843/01

Paper 1

October/November 2008

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

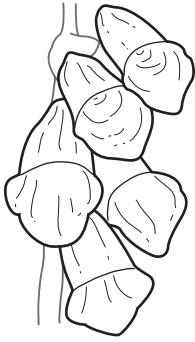
You should show all your working in the booklet.

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| Total | |

This document consists of **15** printed pages and **1** blank page.



1 Use the key to label the **three** different flowers.

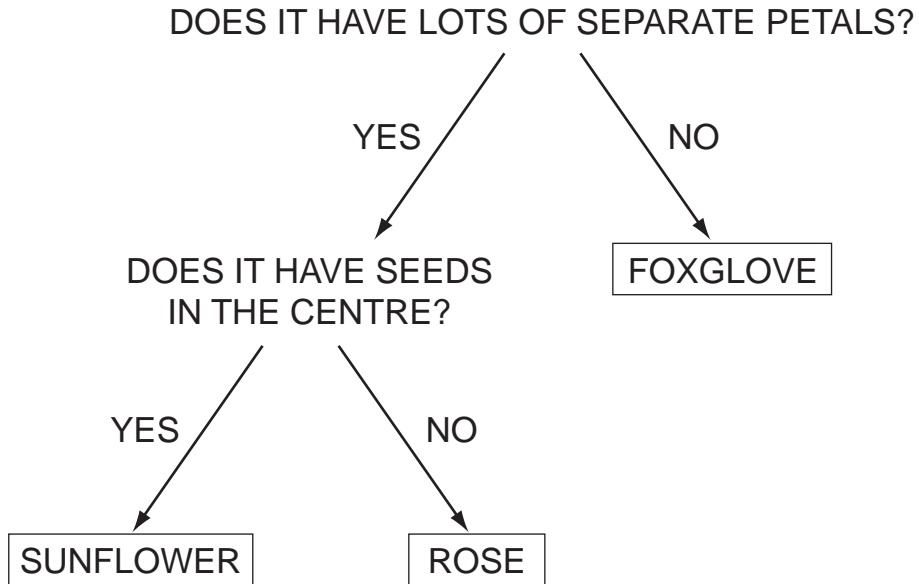


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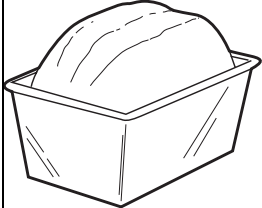
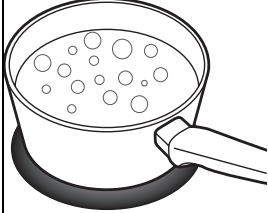


.....

.....

[3]



2 Tick (✓) to show if each change is reversible or non-reversible.

| Process | Reversible | Non-reversible |
|---|------------|----------------|
|  <p data-bbox="531 412 740 450">Baking bread</p> | | |
|  <p data-bbox="531 636 740 674">Boiling water</p> | | |
|  <p data-bbox="523 860 751 898">Dissolving salt</p> | | |
|  <p data-bbox="416 1196 592 1234">Iron rusting</p> | | |

[2]



Page Total



3 Amina hits a piece of metal with a stick to make a noise.

(a) What is happening to the piece of metal that makes the noise?

..... [1]

(b) What material does the sound travel through to reach her ear?

..... [1]

(c) Tick (✓) True or False for the following statements.

| | True | False |
|--|------|-------|
| The pitch of a note is how loud it is. | | |
| Sound travels better through some materials than others. | | |
| Low notes are always soft. | | |

[2]

(d) Amina wraps the piece of metal in a blanket and then hits it again.
What is different about the sound?

..... [1]

Page Total

4 Ramesh is playing football. He takes his pulse rate before and after the game.



(a) What does pulse rate mean?

..... [1]

(b) During the game his pulse rate increases.

Why does his pulse rate increase?

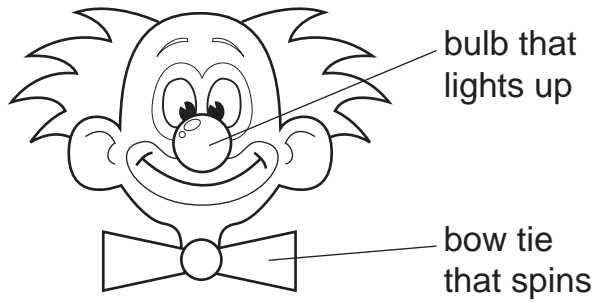
..... [1]

(c) He sits down after the game to rest.

Predict what will happen to his pulse rate.

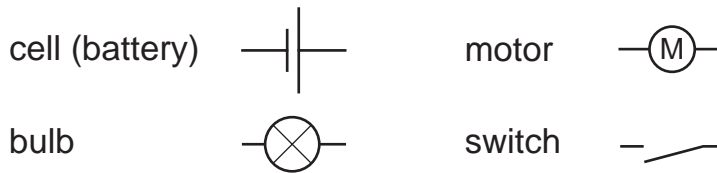
.....
..... [1]

5 Ellie is making a clown face toy.



She wants to make the bulb light up and the bow tie turn by making an electric circuit.

(a) Using the symbols below draw the circuit diagram to make the toy.



[1]

(b) Ellie decides to replace one of the wires with a much longer one.

What effect does this have on

the bulb

The bow tie

[1]

Page Total

(c) She needs some extra connectors to make her circuit. Which objects could be used as circuit connectors?

Tick (✓) **three** boxes.

Steel paperclip

Strip of cardboard

Strip of aluminium foil

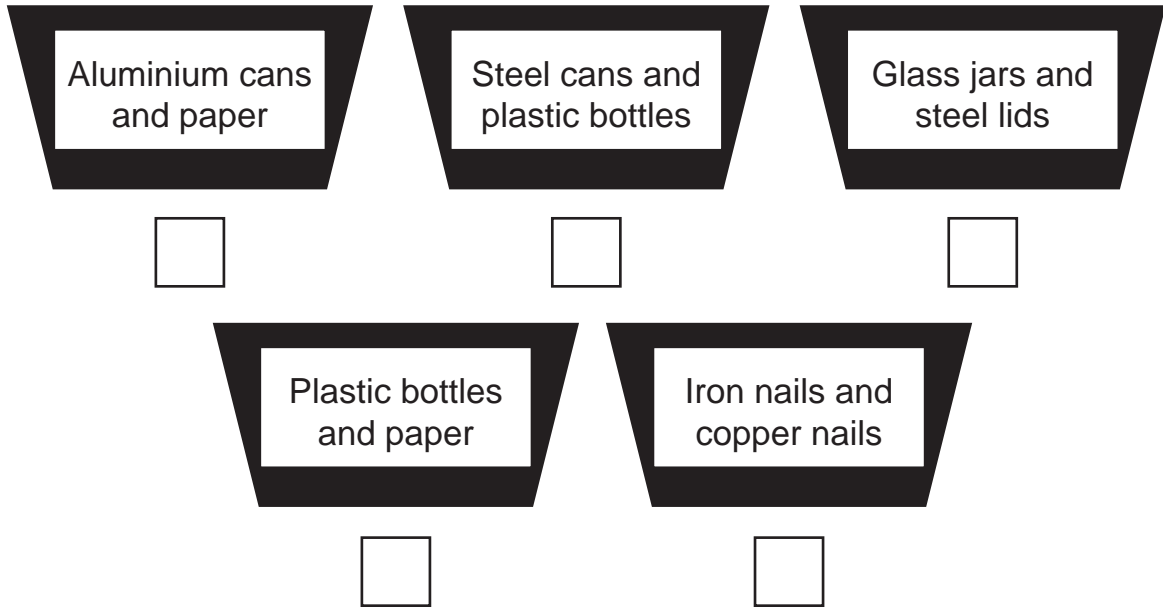
Metal split pin

Plastic paperclip

[2]

Page Total

6 Theo is at a recycling centre. He sees five containers with contents that need separating.



Tick (✓) **three** containers with contents that can be separated with a magnet.

[2]

7 All plants produce seeds.

(a) Underline the word that explains why plants need to produce seeds.

Fertilisation

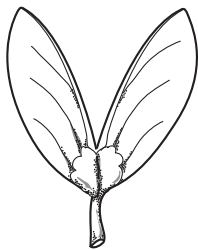
Germination

Growth

Reproduction

[1]

(b) Which seed can be spread by attaching to an animal's fur? Tick (✓) **one** box.









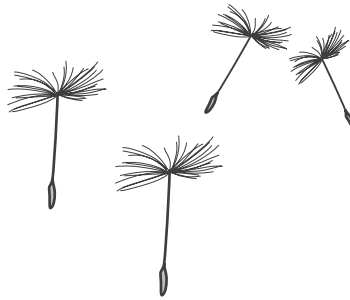
[1]

Page Total

(c) What is the process called when a plant releases its seed?

..... [1]

(d) Which statement **best** describes how these seeds are spread? Tick (✓) **one** box.

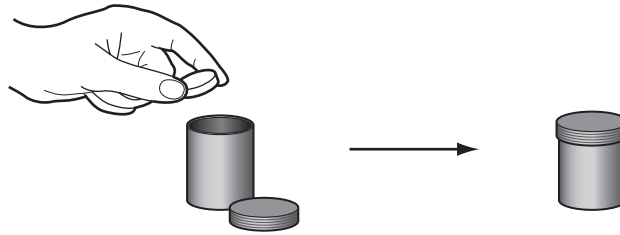


- Animals spread the seeds in their droppings.
- Birds shake out the seeds.
- Water carries the seeds.
- Wind blows the seeds.

[1]

Page Total

- 8 Sam discovers that he can make the lid blow off a small plastic pot, if he puts in an effervescent (gas producing) tablet with a small amount of water.

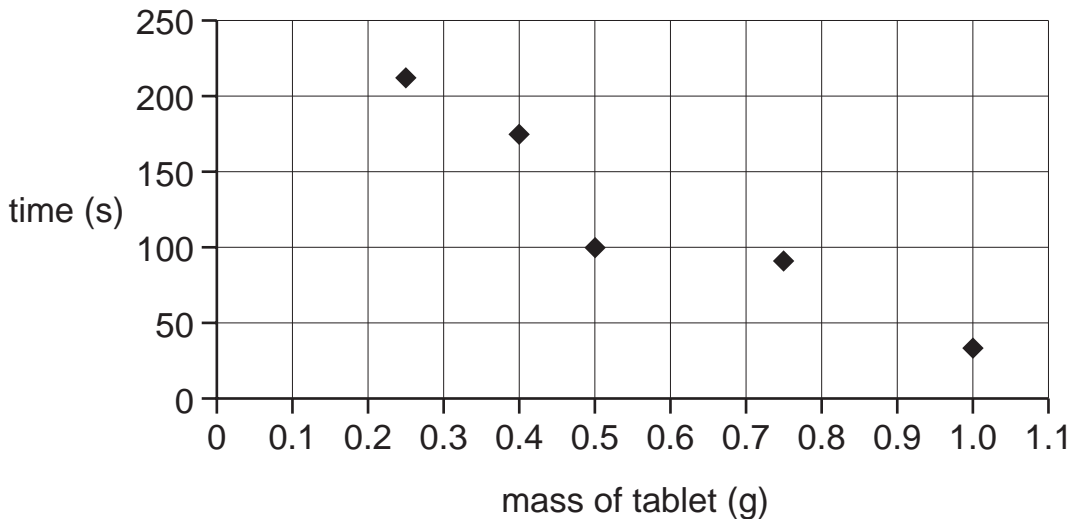


He wants to find out how the mass of tablet put in the pot affects the time taken for the lid to blow off.

- (a) Write **two** things he must keep the same to make it a fair test.

1
 2 [2]

- (b) Sam took the average of three tests and plotted his results on a graph.



Put a circle round the result that does **not** fit the pattern.

[1]

- (c) Predict a result for 0.3 g of tablet, give your answer with the correct unit.

..... [2]

Page Total

9 In some Science fiction stories, there are humans living on Mars. Gravity is weaker on Mars than on Earth.

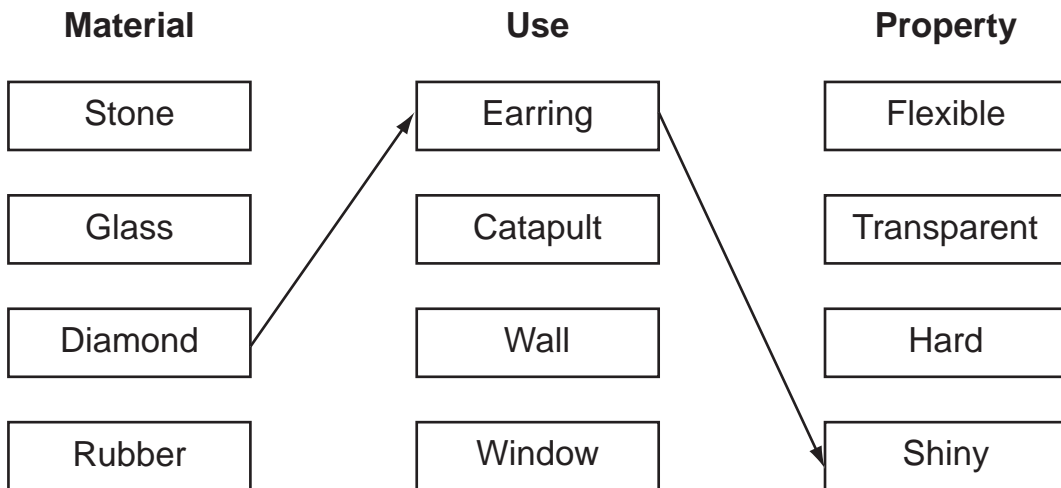
Tick (✓) True or False for the following statements.

| Statement | True | False |
|--|------|-------|
| The mass of someone would be less on Mars than on Earth. | | |
| The weight of someone would be less on Mars than on Earth. | | |
| Mass and weight would be both the same on Mars and Earth. | | |
| Mass is measured in Newtons. | | |
| Weight is measured in Kilograms. | | |

[3]

10 Draw straight lines to match each **Material** with its **Use** and its **Property**.

One has been done for you.



[3]

Page Total

11 (a) Lana wrote these things in her diary for Saturday.

- I got up early.
- I ate lots of sugary cakes.
- I forgot to clean my teeth.
- I played football.
- I watched television.

(i) Choose **one** activity of her day which is bad for her health and explain your choice.

Feature

Explanation [2]

(ii) Which of Lana's activities uses most energy?

..... [1]

(b) Lana also eats an orange. Oranges provide a nutrient to keep us healthy.

Circle the correct nutrient.

fat **salt** **starch** **vitamin C** [1]

12 On a warm, day Ajay took a can of drink from the fridge. He left it on the table for a few minutes whilst he got a glass. When he was pouring the drink into the glass, he noticed that the outside of the can was wet.

Complete the sentence using the words below

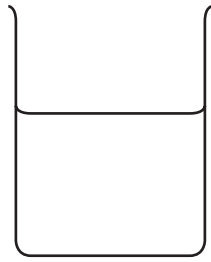
- cold
- condensed
- evaporated
- frozen
- melted
- steam
- water vapour

The can of drink was so the in the air on the outside of it.

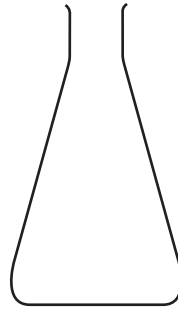
[3]

Page Total

13 Water from the beaker is poured into the flask which is empty.



Beaker



Flask

(a) Is the volume of water in the flask the same as it was in the beaker?

..... [1]

(b) Is the height of the water in the flask the same as it was in the beaker?

..... [1]

Page Total

14 The picture shows the organisms in a grassland food chain.



(a) Which organism is the producer?

..... [1]

(b) Name the predator and the prey.

Predator

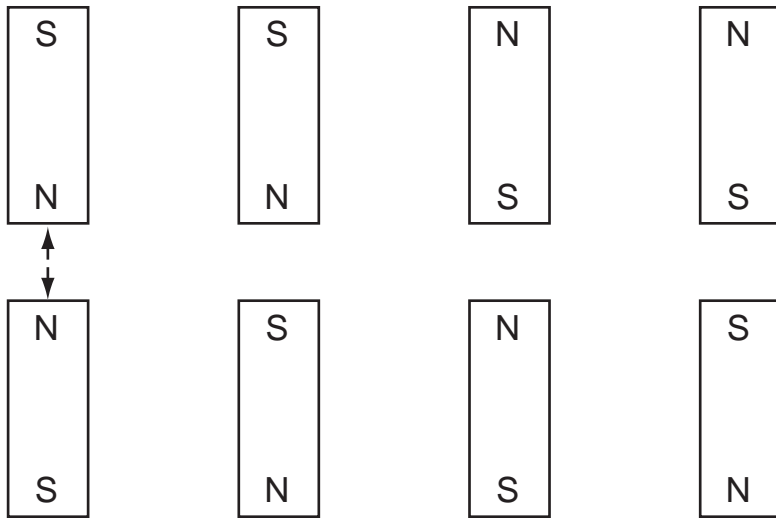
Prey [1]

(c) Where does the grass get its energy from?

..... [1]

15 Michel wants to make a push–pull game using magnets.

(a) Label each picture with arrows to show the forces between the magnets.
The first one has been done for you.



[2]

(b) Give another word that describes the push force.

..... [1]

(c) Give another word that describes the pull force.

..... [1]

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SCIENCE

0843/02

Paper 2

October/November 2008

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

You should show all your working in the booklet.

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This document consists of **14** printed pages and **2** blank pages.



1 Draw straight lines to match the **Process** to the **Change of State**.

Process

melting

boiling

freezing

Change of State

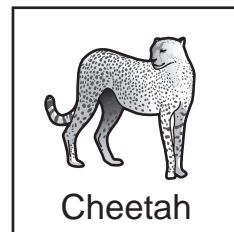
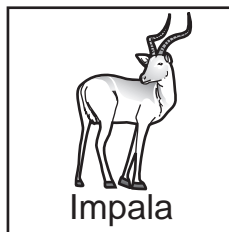
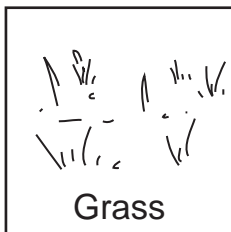
a liquid turning into a gas

a liquid turning into a solid

a solid turning into a liquid

[2]

2 Animals survive by living in food chains. Look at the pictures below.



(a) Draw in the arrows to complete this food chain.

[1]

(b) Which organism is the PRODUCER?

.....

[1]

(c) Which organism is the PREDATOR?

.....

[1]

(d) Which organism is the CONSUMER?

.....

[1]

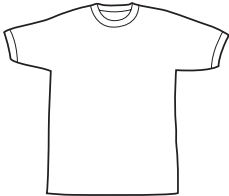
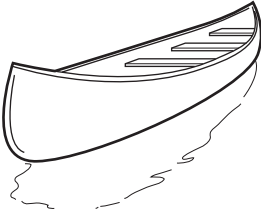
Page Total

3 Materials are either man-made or naturally-occurring.

(a) Underline **three** man-made materials in the list.

glass **metals** **nylon** **oil** **plastic** **rocks** [2]

(b) For each of the things shown name **one** naturally-occurring material and **one** man-made material it could be made from.

| | Naturally-occurring | Man-made |
|--|---------------------|----------|
|  | | |
|  | | |

[3]

Page Total

- 4 Alex and Poppy are investigating soils. They have decided to look at which soil is best at retaining water.

Alex put 100g of each soil into different trays and heated them together in the same oven for one hour. He took the trays out of the oven and let them cool down.

When they were cool Poppy measured the mass of each tray.

The results are shown in the table.

| Soil | Mass before heating/g | Mass after heating/g |
|----------|-----------------------|----------------------|
| sandy | 100 | 80 |
| clay | 100 | 45 |
| gravelly | 100 | 70 |

- (a) Give **two** ways they make sure it is a fair test.

1 [2]

2 [2]

- (b) Why is there a change in mass in the soils when they are heated?

..... [1]

(c) (i) Why did the clay lose the most mass?

..... [1]

(ii) Tick (✓) the box to show what the answer in (c)(i) is known as.

- prediction
- conclusion
- observation
- evidence

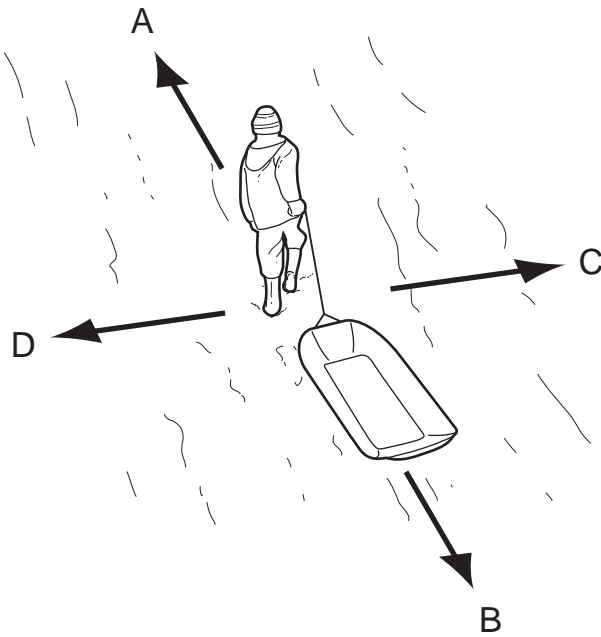
[1]

(d) The sand is permeable. What does permeable mean?

..... [1]

Page Total

5 Hermann is pulling a sledge up a snowy hill.



(a) Write the letter of the arrow that shows the direction of Hermann's pulling force.

..... [1]

(b) Hermann now slides down the hill on the sledge.

Whilst still moving, Hermann digs his boots into the snow. What happens to the speed of the sledge?

..... [1]

(c) When the sledge eventually stops, which of the following statements is true? Tick (✓) **one** box.

The sledge has the same amount of energy as it had when moving.

The sledge has less energy than when it was moving.

The sledge has more energy than when it was moving.

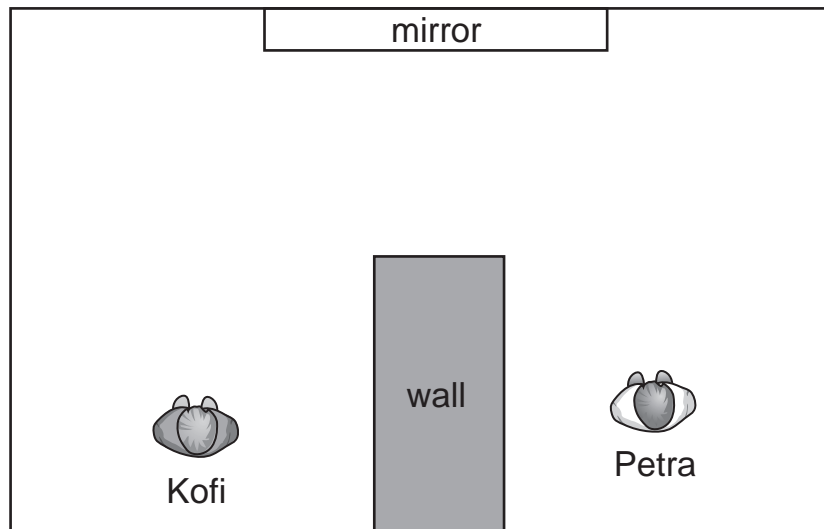
[1]

Page Total

(d) What is the name of the force that makes the sledge stop?

..... [1]

6 Kofi and Petra are in a room with a large mirror. The plan below shows the position of the children and the mirror.



(a) Draw **two** arrows on the picture to show how Petra can see Kofi.

[2]

(b) An opaque material is placed over the mirror.

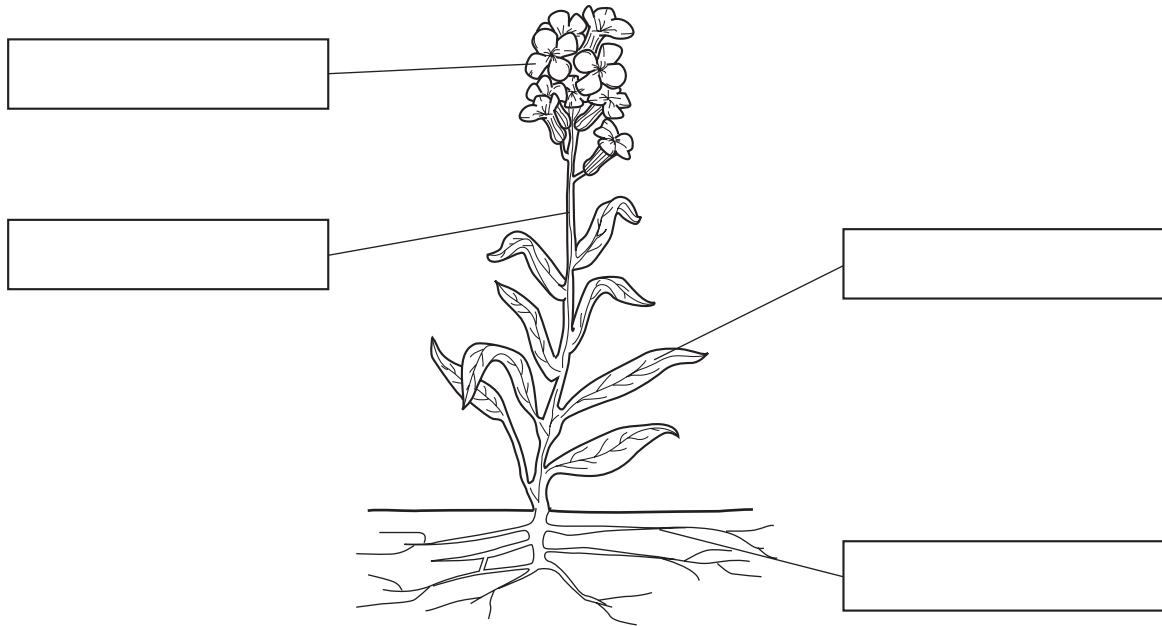
How does this change what Petra can see?

..... [1]

Page Total

7 This is a picture of a flowering plant.

(a) Label the parts of the flower.



[4]

(b) How do insects help flowering plants to reproduce?

..... [1]

(c) Tick (✓) the correct box to finish the following sentence.

When a pollen grain joins with the ovary the plant is

germinated.

fertilised.

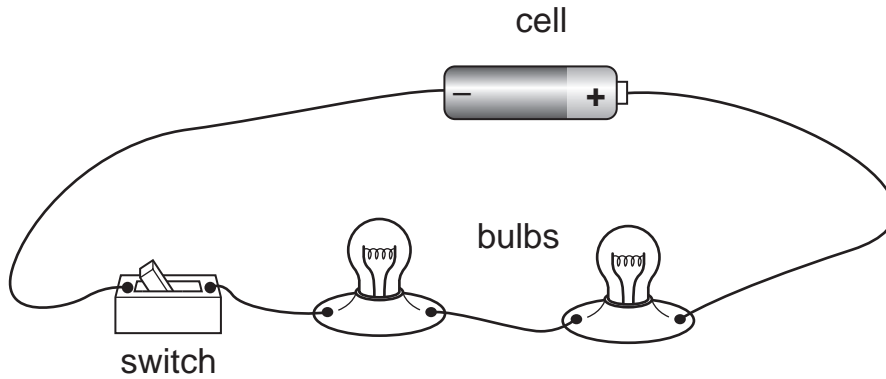
dispersed.

pollinated.

[1]

Page Total

8 Sophia is investigating electrical circuits to see how they behave. The first working circuit she builds is shown in the picture below.



What happens to the brightness of the bulbs if

(a) Sophia adds another bulb?

..... [1]

(b) Sophia now replaces one of the wires with a wire that is 5 times longer?

..... [1]

(c) Sophia now replaces the wire with one the same length but much thicker?

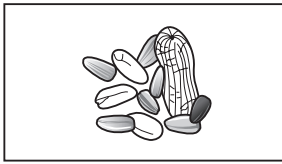
..... [1]

(d) Sophia removes one of the bulbs from its holder?

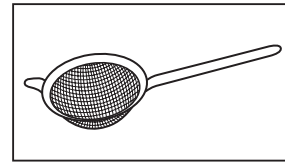
..... [1]

9 Mixtures of two different solids can be separated by different methods.

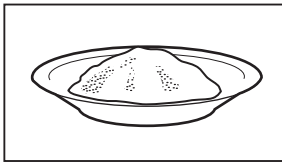
(a) Draw a line between the mixtures and how they can be separated.



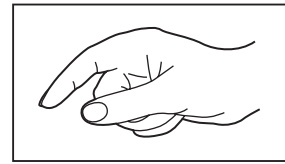
mixed nuts



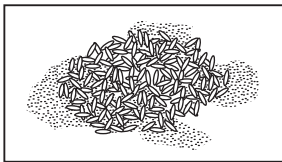
sieve



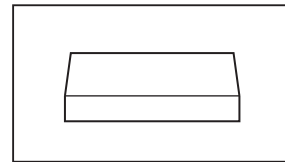
iron powder and salt



fingers



rice and flour



magnet

[2]

(b) The iron powder and salt mixture can also be separated by first adding the mixture to cold water and stirring and then filtering and evaporating.

(i) What happens to the mixture when it is added to the water?

.....

[1]

Page Total

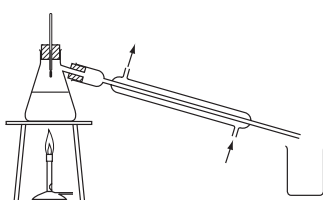
(ii) Write the letter of the apparatus you would use to get back:

Iron powder

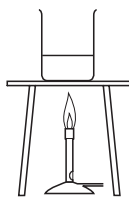
Salt



A



B



C

[2]



Page Total



10 Isaac is walking in a field and sees a set of animal tracks in the mud. He notices that the tracks from his boots are much deeper.



(a) What is the name of the force that makes Isaac sink into the mud and make tracks?

..... [1]

(b) What unit is used to measure force?

..... [1]

(c) Why do you think that Isaac's tracks are deeper than the animals?

..... [1]

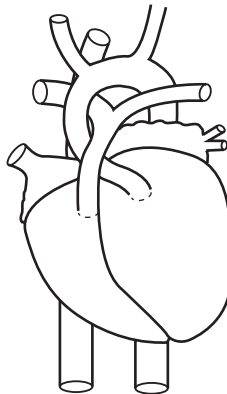
11 The heart pumps blood around the body. To do this it needs special vessels to carry the blood to all the different parts of the body.

(a) Join the **Vessel** to its **Job**.

| Vessel | Job |
|-----------|--|
| Artery | Takes blood to the surface of the skin |
| Capillary | Carries oxygenated blood around the body |
| Vein | Carries blood back to the heart |

[3]

(b) The heart is made up of tissue.

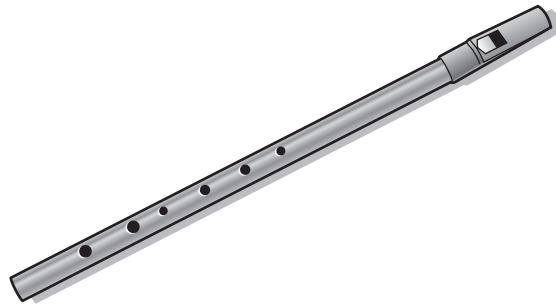


What name is given to this type of tissue?

..... [1]

Page Total

12 Patrick is playing a note on a penny whistle.



(a) Tick (✓) **one** box in each row to say which statement is True or False.

| Statement | True | False |
|--|------|-------|
| The air inside the whistle is vibrating. | | |
| The whistle is vibrating. | | |
| The air around the whistle is vibrating. | | |

[2]

(b) He now plays a note of a different pitch. Tick (✓) the box that describes what 'pitch' means.

- How loud or quiet a note is
- How high or low a note is
- How long the note is played for

[1]

(c) How might he change the pitch of the note?

..... [1]

Page Total

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International Examinations

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Check Point Exams

2009





UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge International Primary Achievement Test

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* 3 3 0 2 2 1 5 3 8 6 *

SCIENCE

0843/01

Paper 1

May/June 2009

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

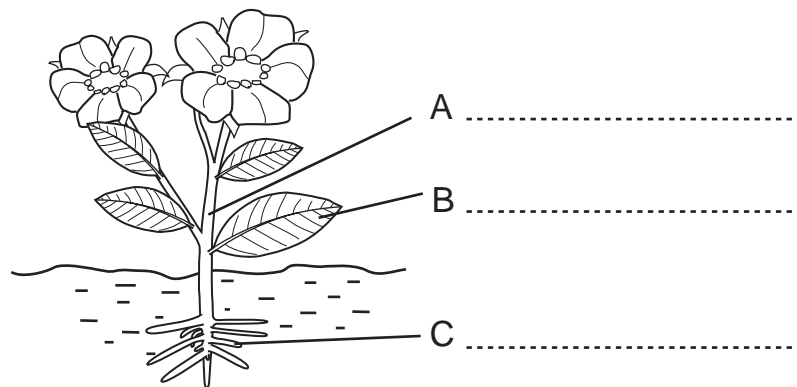
You should show all your working in the booklet.

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| 13 | |
| 14 | |
| 15 | |
| Total | |

This document consists of **15** printed pages and **1** blank page.



1 (a) The diagram shows a plant.



Label the parts A, B and C.

[3]

(b) A potted plant was put in a shallow container of water and covered with a black plastic bag. It was left in the laboratory for a week. When the bag was taken off the leaves had turned yellow.

Why has this happened? Tick (✓) **one** box.

The leaves were too cold.

The plant could not take in water.

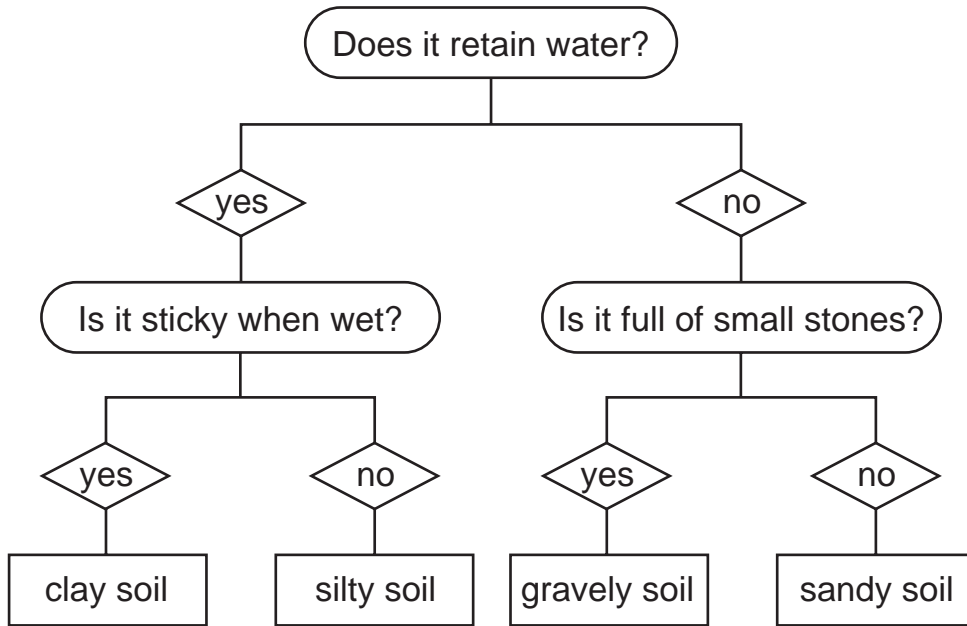
The plant could not take in oxygen.

There was no light getting to the leaves.

[1]

Page Total

2 Soils can be identified using the key shown.



(a) Which soil does **not** retain water and is full of small stones?

..... [1]

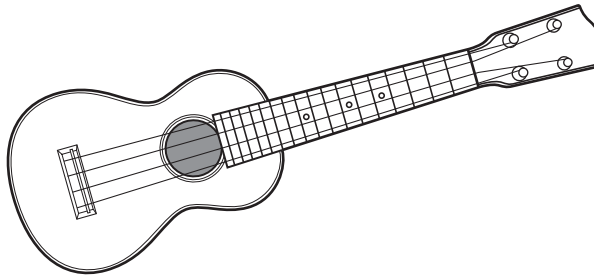
(b) Which soil retains water and is sticky when wet?

..... [1]

(c) Does silty soil retain water?

..... [1]

- 3 Christina is playing a ukulele which is a musical instrument. She plucks the strings to make a sound.



- (a) What is the word used to describe the movement of the string?

..... [1]

- (b) She plays a higher note.
Which word describes how high or low a note is?

Loudness

Pitch

Insulation

Volume

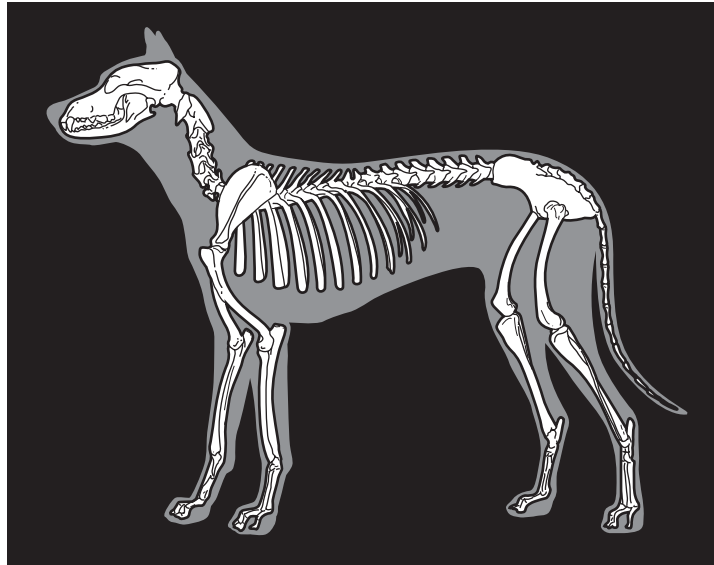
[1]

- (c) Write **two** ways she could make a higher note on the ukulele.

.....
..... [2]

Page Total

4 Here is a picture showing an x-ray of a dog.



(a) What is this arrangement of bones called?

..... [1]

(b) What are bones for? Circle the word which explains best.

SUPPORT GROWTH REPRODUCTION RESPIRATION

[1]

(c) What name is given to animals which only eat meat?

..... [1]

(d) Tick (✓) **two** words which describe what all living things do.

EAT

BREATHE

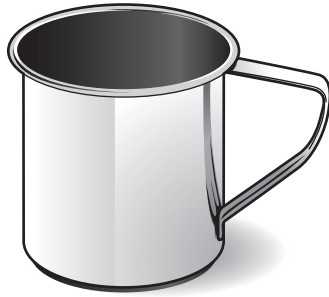
RESPIRE

REPRODUCE

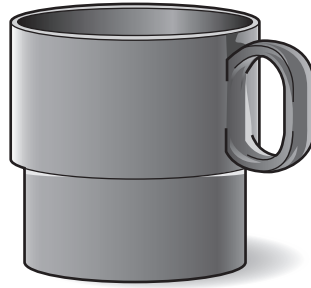
[2]

Page Total

5 The diagram shows a metal and a plastic mug. Both are filled with a hot drink.



metal mug



plastic mug

Choose **one** word from the list to complete each sentence. You can use the words more than once.

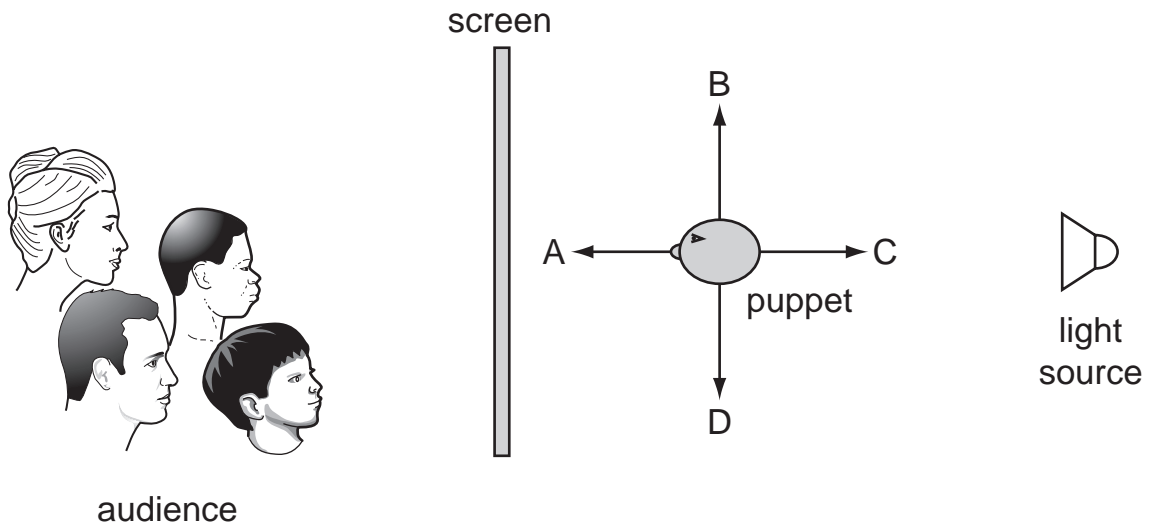
good poor quicker slower

The plastic mug feels cooler than the metal mug if you touch it, because the plastic is a conductor of heat. The hot drink in the metal mug cools down than the drink in the plastic mug because the metal is a insulator of heat.

[3]

Page Total

- 6 A shadow play is a puppet show that uses light and shadow to tell a story. The diagram below shows how it works.



- (a) How does the puppet make a shadow on the screen?

..... [1]

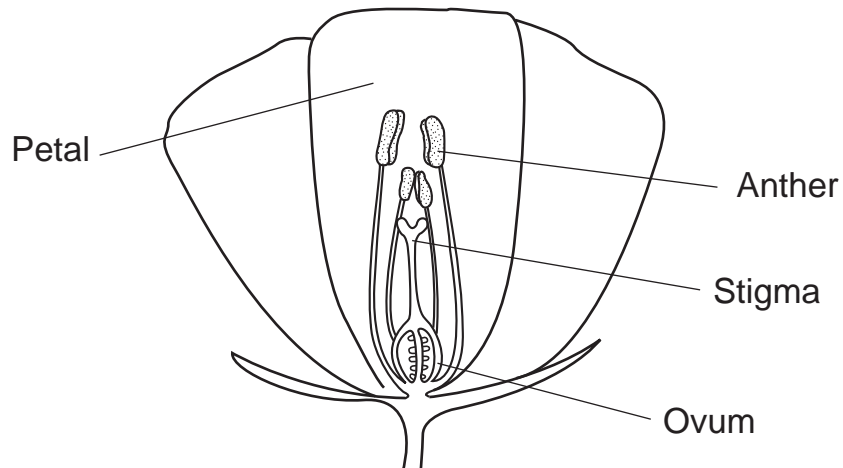
- (b) The puppet is moved to make a bigger shadow.
Which letter shows the direction of the movement?

..... [1]

- (c) What word describes materials that do **not** let light through?

..... [1]

7 The diagram shows a cross-section of a flower.



(a) Match the labelled parts of the flower with the descriptions below.

This part attracts insects.

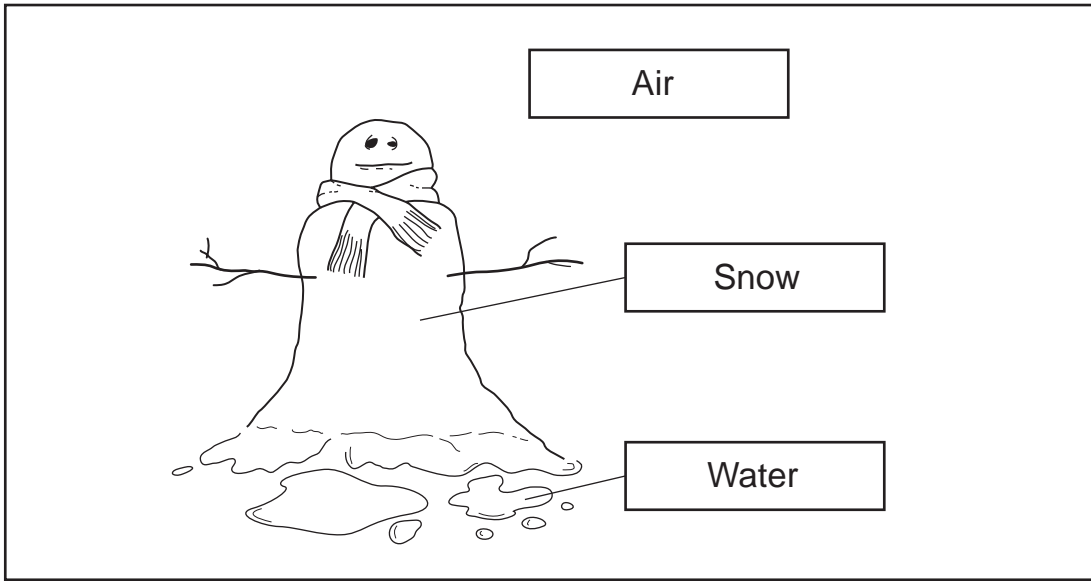
This part contains pollen.

This sticky part catches pollen. [3]

(b) Insects are often attracted to flowers because they are brightly coloured.
Name **one** other thing that attracts insects to flowers.

..... [1]

8 Some children have built a snowman on a cold but sunny day.



(a) What are the states of matter of the following?

Air

Snow

Water

[3]

(b) What is happening to the snowman in the sun?

..... [1]

(c) What will happen to the puddle round the snowman when the temperature drops below 0°C at night?

..... [1]

Page Total

9 (a) What is the correct answer to the teacher's question? Tick (✓) **one** box.



The water used for dissolving a solid.

A solid which dissolves in water.

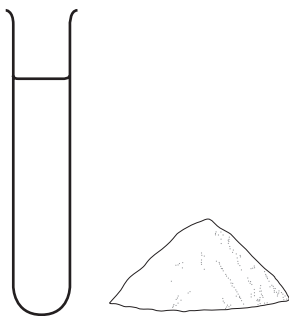
A solid dissolved in water.

A solid which does not dissolve in water.

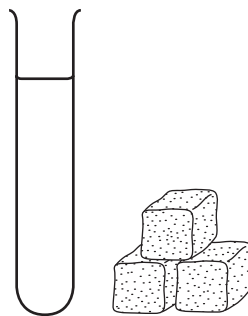
[1]

(b) The class investigates solutions.

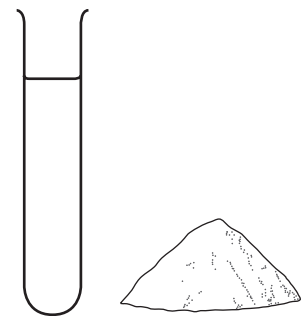
10ml of water and the same mass of sugar is put into separate test tubes and the contents stirred until all the sugar had dissolved.



powdered sugar



sugar cubes



granulated sugar

(i) Which sugar dissolved the quickest?

..... [1]

Page Total

(ii) Other than stirring, what else could you do to speed up the dissolving of all the sugars?

..... [1]

(c) Why was the same amount of water and the same mass of sugar added to each test tube?

..... [1]

10 Hendrik stands on a pillow made of very soft foam.



(a) Draw an arrow showing the direction of the push force from Hendrik on the pillow.

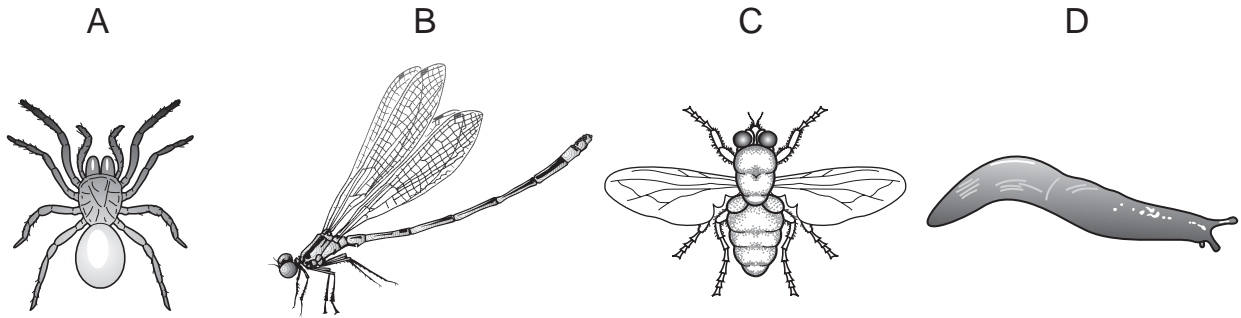
[1]

(b) What might happen to the pillow when Hendrik steps on it?

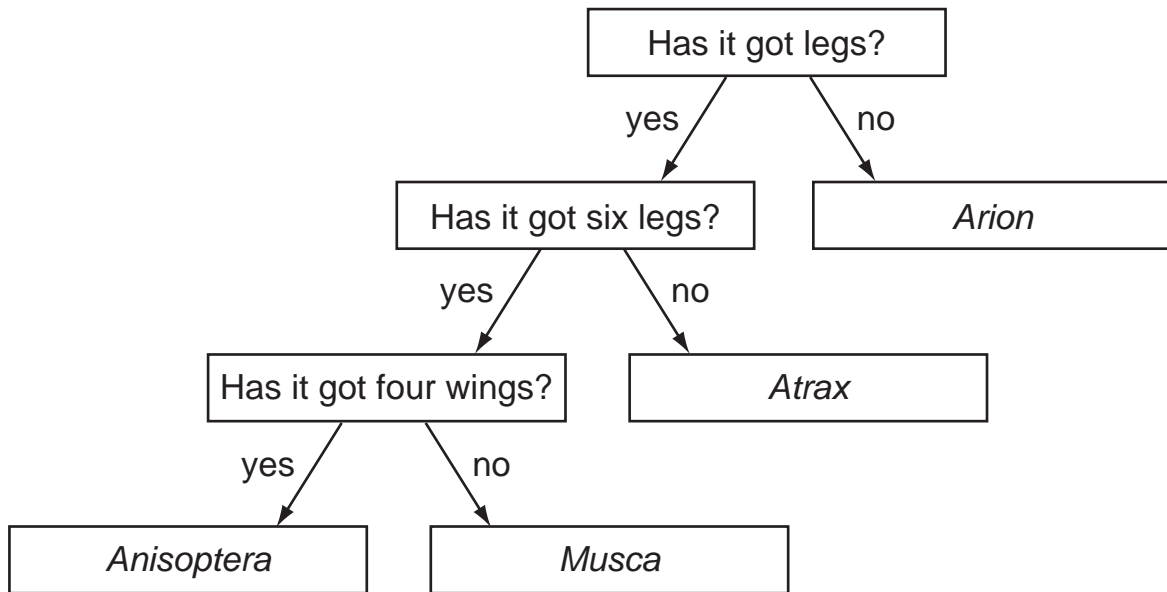
..... [1]

Page Total

11 Four animals are shown in the drawings.



Use the key below to identify the scientific names of these animals.

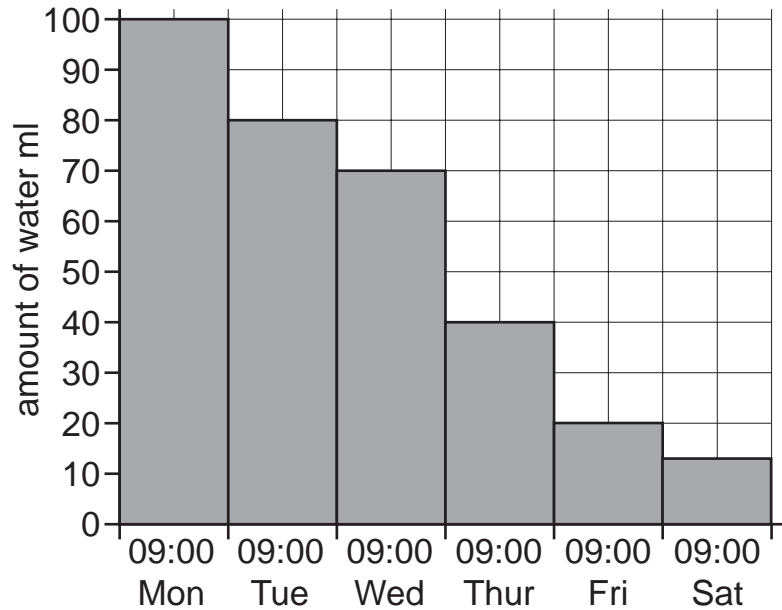
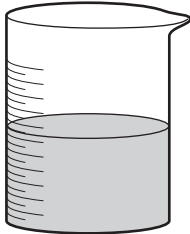


Draw lines to match each letter to the scientific animal name.

| | |
|----------|-------------------|
| A | Musca |
| B | Anisoptera |
| C | Arion |
| D | Atrax |

[3]

12 Shannon and Lark are looking at what happens to a beaker of water if it is left in a warm place.



They start their experiment at 09:00 hours on Monday. They measure the amount of water in the beaker at the same time and record their results in a bar chart. On the following Sunday, there is no water left in the beaker.

(a) Which **two** days did the amount of water fall by the same amount?

..... [2]

(b) What has happened to the water?

..... [1]

(c) Give **one** reason for more water being lost on some days than others.

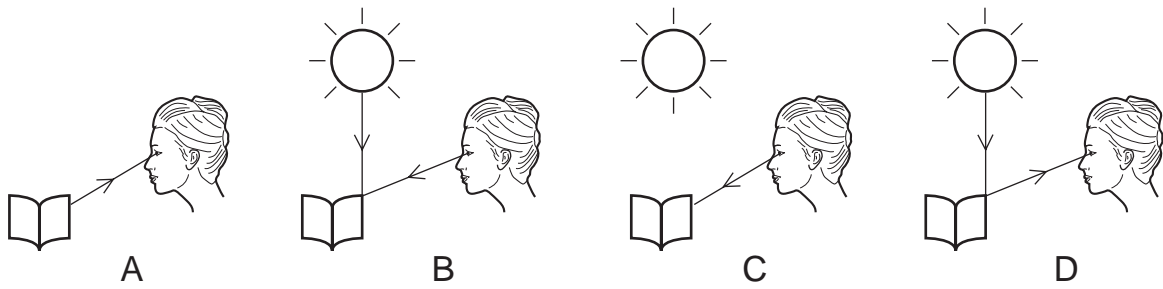
..... [1]

(d) How could Shannon and Lark have prevented any loss of water from the beaker?

..... [1]

Page Total

13 Four children think they know how Shushma sees a book.



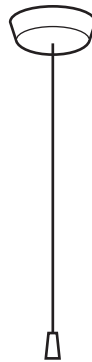
(a) Which diagram is correct?

..... [1]

(b) What does the book do to the light source so Shushma can see it?

..... [1]

14 In washrooms there is sometimes a ceiling switch with a cord that hangs down.



(a) Explain why a normal light switch may be dangerous in a washroom.

..... [1]

(b) The cord is often made of string. Why is string a good material for this?

..... [1]

(c) A heavy object is sometimes tied to the end of the cord to make it hang straight down. What causes this downwards force?

..... [1]

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SCIENCE

0843/02

Paper 2

May/June 2009

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

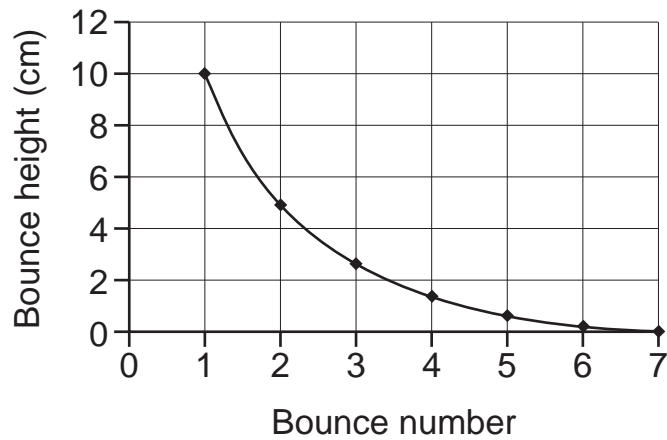
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This document consists of **14** printed pages and **2** blank pages.



- 1 Some children drop a small ball from a height of 20 cm onto a drum. They measure the height of each bounce until it comes to rest. This graph shows their results.



- (a) They discover that higher bounces produce louder sounds. Write the bounce number that produced the loudest sound?

..... [1]

- (b) What do you think happens to the loudness of the sound between Bounce 1 and Bounce 7?

..... [1]

- (c) If the skin on the drum is tightened what will happen to the sound?

Tick (✓) **one** box.

- Louder
- Softer
- No change
- Pitch higher
- Pitch lower

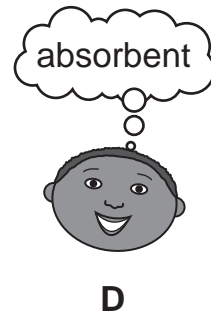
[1]

Page Total

(d) How high does the ball bounce on Bounce 2?

..... [1]

2 Each student has named one property of materials.



Which of the above properties is the **most** useful in making the following?

Belt

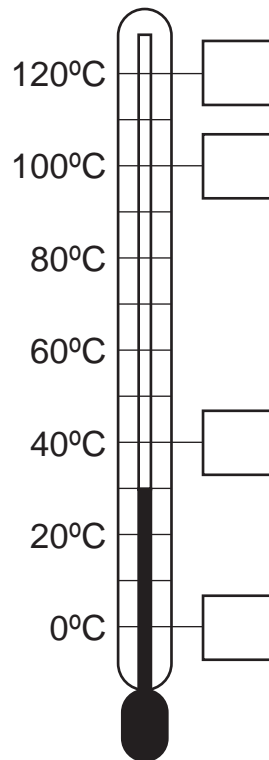
Ladder

Towel

Umbrella [3]

Page Total

3 The diagram shows the apparatus used to measure temperature.



(a) What is the name of this apparatus?

..... [1]

(b) What is the boiling point of water? Tick (✓) **one** box on the diagram.

[1]

Page Total

4 There are hundreds of different animals in the world which is why scientists need to be able to group them.

(a) Fill in the table by putting ticks (✓) to show which features the animals have.

| FEATURE | SCALES | FEATHERS | BACKBONE |
|---------|--------|----------|----------|
| MAMMAL | | | |
| FISH | | | |
| BIRDS | | | |
| REPTILE | | | |

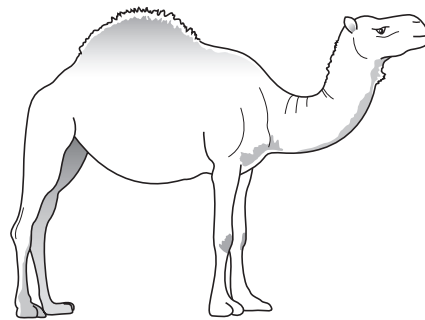
[2]

(b) What do we call animals that have backbones?

..... [1]

(c) Some animals have to adapt so they can live comfortably in their environment.

Camels live in deserts. Name **two** features and their function which help camels to adapt to their environment.

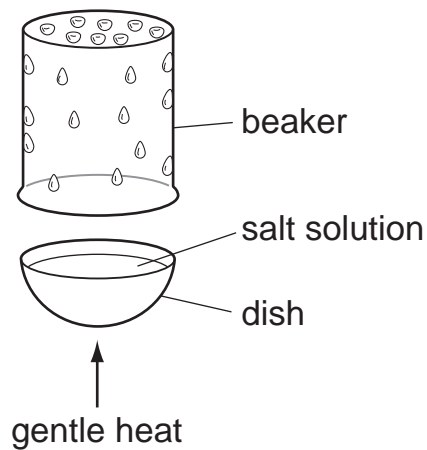


| | Feature | Function |
|----|---------|----------|
| 1. | | |
| 2. | | |

[2]

Page Total

5 Sue heats a salt solution as shown in the diagram.



(a) (i) What is given off when the solution is heated gently?

..... [1]

(ii) What is the name of the process taking place in the dish?

..... [1]

(iii) What is the name of the process taking place in the beaker?

..... [1]

(b) Sue now removes the beaker and continues to heat the salt solution.

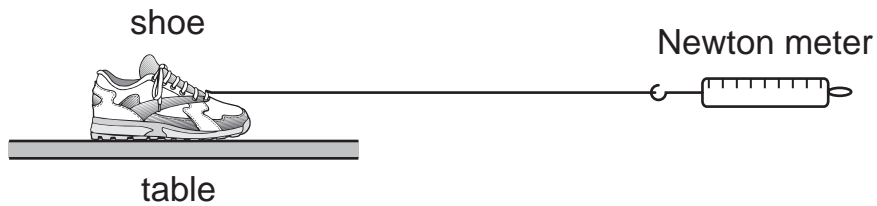
(i) What will be left in the dish after she has finished heating?

..... [1]

(ii) How can a salt solution be obtained from what is left in the dish?

..... [1]

- 6 Class 5 tested the grip of different shoes of the same size. They put each shoe on a table and attached a spring balance to measure the force taken to move the shoe.



- (a) Show the direction of the force that makes the shoe move.

[1]

- (b) They recorded the force required to make the shoe move.

| Shoe | Force N |
|------|---------|
| A | 0.5 |
| B | 2.1 |
| C | 1.4 |

Which shoe had the best grip?

..... [1]

- (c) What is the force called which gives the shoe grip?

..... [1]

Page Total

- 7 (a) Read the sentences. Tick (✓) to show whether each statement is True or False.

| | True | False |
|---|------|-------|
| All animals need water to stay alive. | | |
| A balanced diet should contain a large amount of fat. | | |
| Fruit and vegetables contain vitamins. | | |
| Too much sugar can cause tooth decay. | | |

[2]

- (b) Four girls compared what they had for lunch.

| Girl 1 | Girl 2 | Girl 3 | Girl 4 |
|--|--|--|---|
| cheese bread butter chocolate sweets cola drink | rice meat tomatoes peas apple water | bread butter egg salad pineapple orange juice | rice fish beans herbs orange water |

- (i) Which girl had the least balanced meal?

..... [1]

- (ii) If this girl ate unbalanced meals all the time suggest **one** bad effect this might have.

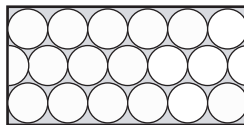
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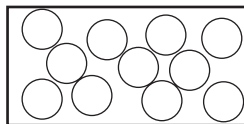
8 The diagram shows the arrangement of particles in solids, liquid and gases.

(a) Draw lines to match the words with the correct diagram.

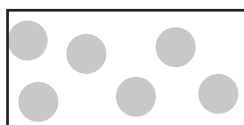
gas



solid



liquid



[2]

(b) The table shows some properties of solids, liquid and gases.

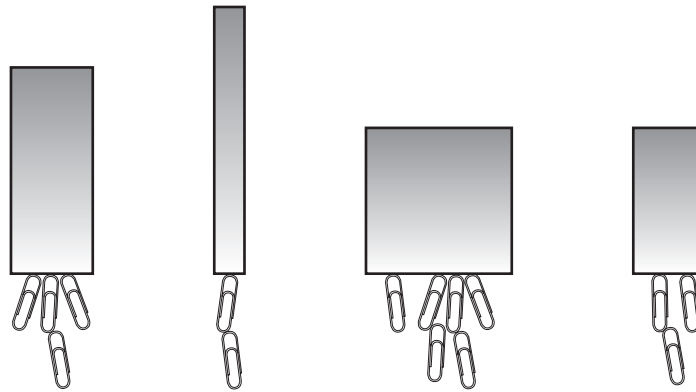
Tick (✓) the box to show if the property is of a Solid, Liquid or Gas.

| Properties | Solid | Liquid | Gas |
|--|-------|--------|-----|
| Particles have lots of room to move around. | | | |
| They are runny and flow downwards. | | | |
| They can be cut and shaped. | | | |
| Particles are tightly packed together and can hardly move. | | | |

[4]

Page Total

9 Yoonecara is using a pile of steel paper clips to test different magnets.



(a) What property of steel allows the paper clips to be lifted by the magnets?

..... [1]

(b) He now tries to pick up plastic paper clips instead of steel ones. What does he notice?

..... [1]

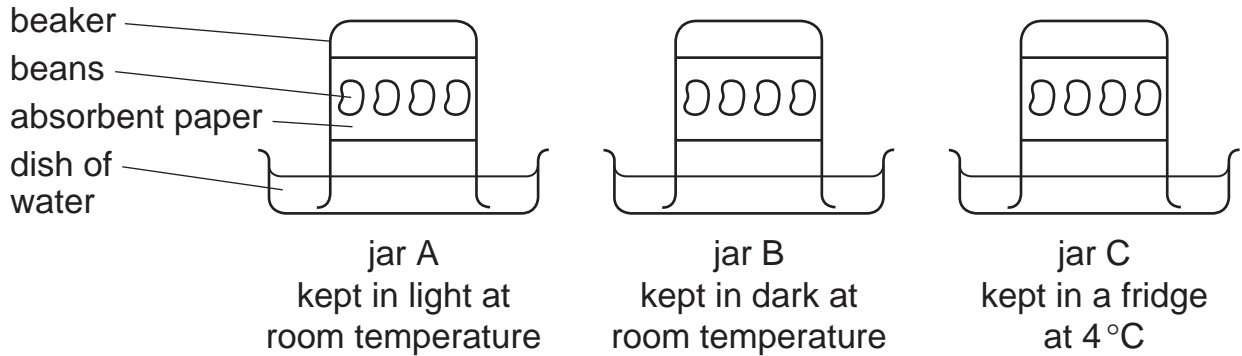
(c) He now puts one of his magnets near a piece of metal. As it gets near, the metal moves away from the magnet. What is special about the piece of metal?

..... [1]

(d) He now puts one of his magnets near another piece of metal but it is not attracted. Why is it not attracted?

..... [1]

10 Some students were given some beans to germinate.
One group set up their experiment as shown in the diagrams below.



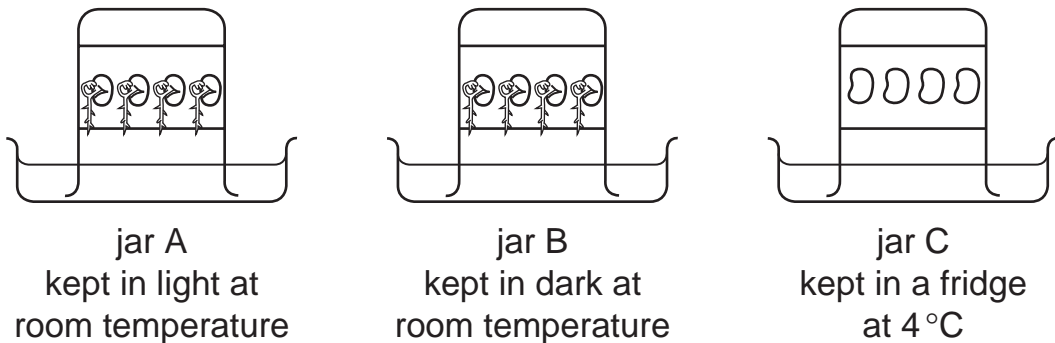
(a) (i) Name **one** thing that they kept the same in each jar in order to make this a fair test.

..... [1]

(ii) Name the **two** things which they are varying.

1.
2. [1]

(b) After one week they looked at their beans and recorded their results in the drawings below.



This was their conclusion. Fill in the missing words.

Beans need to germinate.
Beans do not need to germinate. [1]

Page Total

11 (a) Draw one line from each **Time Period** to the **Statement/Cause**.

Time Period

Statement/Cause

Year

Earth rotates once on its axis.

Earth orbits the sun once.

Day

Moon orbits the Earth.

Earth rotates 24 times.

[2]

(b) If the Earth were to spin faster on its axis, which of the following statements would be true? Tick (✓) **one** box.

Days and nights would get shorter.

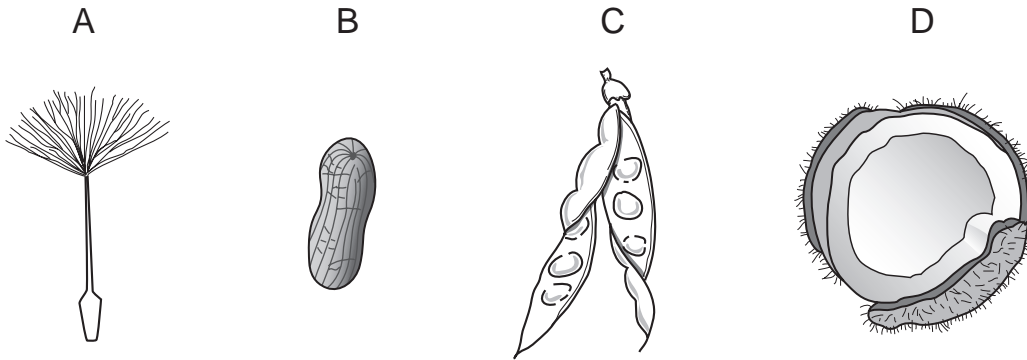
The Earth would have no gravity.

Days and nights would get longer.

[1]

Page Total

12 All these drawings show a part of a plant which contains seeds.



(a) What is the name given to this plant part?
Underline the correct answer.

petal

fruit

stem

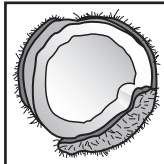
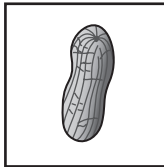
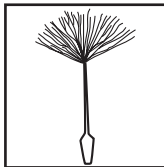
leaf

[1]

(b) Draw lines to match each **plant** to its method of **seed dispersal**.

plant

seed dispersal



Taken away by animals

Blown away by the wind

Thrown out when fruit dies

Carried by water

[3]

(c) When conditions are right seeds start growing to form a new plant.
What is this process called?
Underline the correct answer.

fertilisation

germination

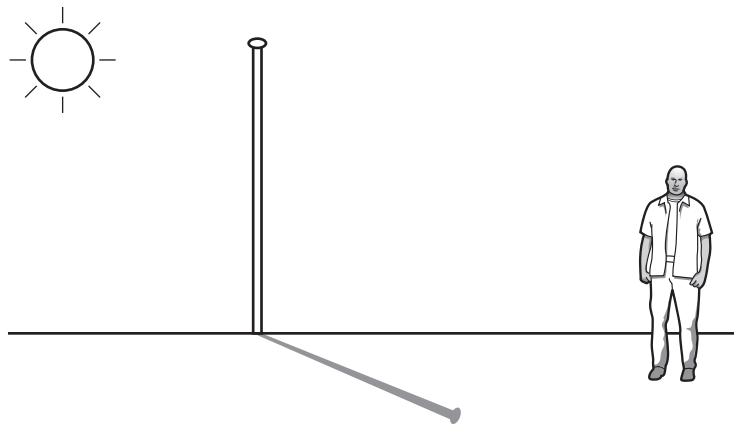
nutrition

pollination

[1]

Page Total

13 Malakia is watching the sun and shadow that a flagpole makes during a day.



(a) The sun appears in different positions in the sky during the day.
Why does this happen?

..... [1]

(b) Malakia observed that two things about the shadow changed during the day.
What were these **two** things?

- 1.
- 2. [2]

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2010

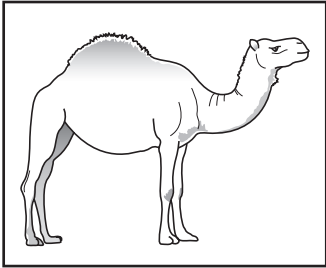


1 The place where an animal lives is called its habitat.

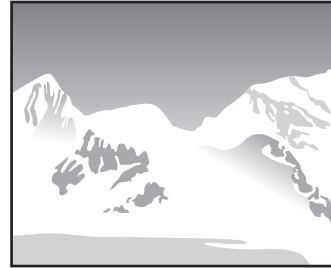
Draw a line to connect each animal in the list to the habitat in which it lives.

Animal

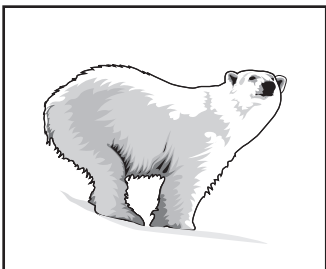
Habitat



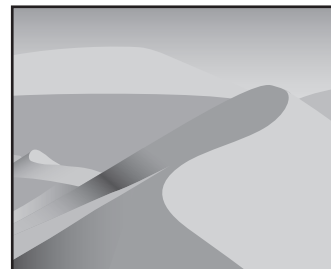
Camel



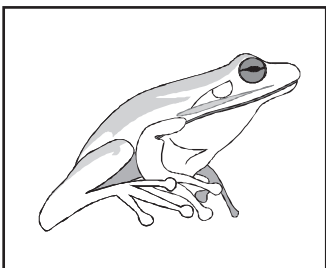
Arctic



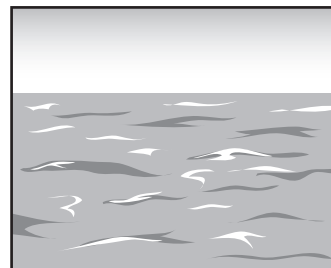
Polar bear



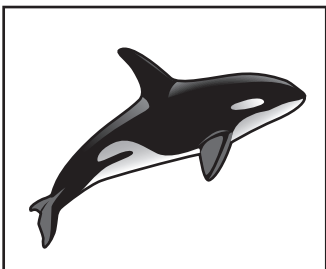
Desert



Tree frog



Ocean



Whale



Rainforest

[3]



Page Total



2 (a) Shirts can be made from synthetic or naturally occurring materials.

Which shirt is made from a naturally occurring material?
Tick (✓) the correct box.



rayon



nylon



polyester



cotton

[1]

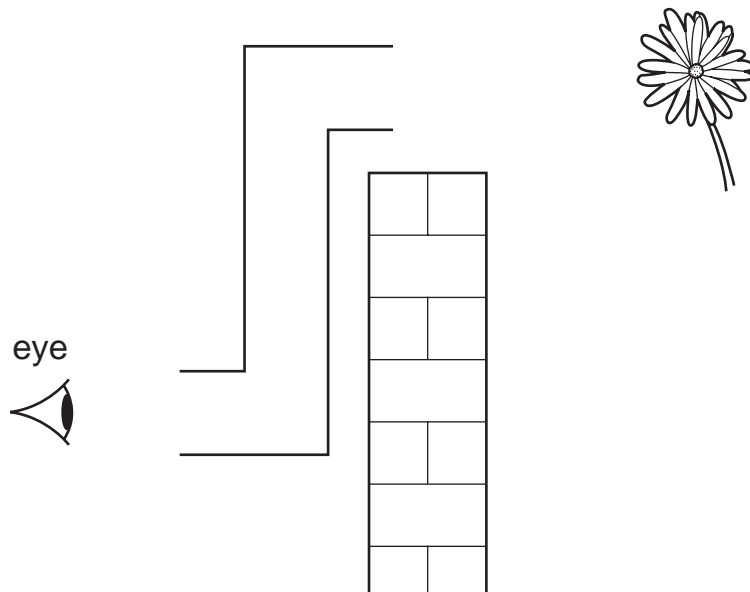
(b) The table shows some materials found in Mr. Patel's house.
Tick (✓) the materials which came from living things.

| Materials | Made from living things |
|-----------|-------------------------|
| gold | |
| wood | |
| diamonds | |
| silk | |
| wool | |
| slate | |

[2]

Page Total

3 (a) Freda is investigating light. She makes a periscope from card and two mirrors.



(i) On the diagram, show how Freda needs to position the mirrors so that the periscope will work.

[1]

(ii) Freda can see the flower using her periscope.

Use a ruler to draw a ray of light on the diagram to show how she sees the flower. (Remember to draw the arrowheads to show the direction of the light.)

[2]

(b) (i) Glass in a bathroom window lets light through but we cannot see through it.

What is the name that we give to materials that behave in this way?

..... [1]

(ii) Glass in a normal window lets light through and we can see through it.

What is the name that we give to materials that behave in this way?

..... [1]

Page Total

- 4 (a) All living things have seven life processes.
Fill in the missing **two**.

Nutrition

Movement

.....

Reproduction

.....

Sensitivity

Respiration

[2]

- (b) Life processes are what we use to explain if something is living or not.
Put each item in the list into the correct box in the table.

car

dog

fallen branch

glass

seaweed

tree

| Living | Non-living |
|--------|------------|
| | |

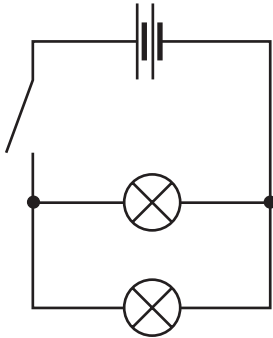
[3]

Page Total

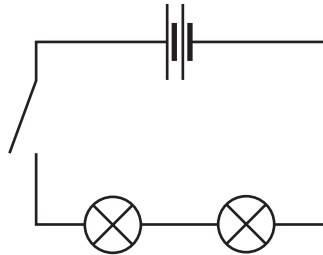
- 5 (a) An electrical circuit has two cells, correctly arranged, and two lamps in series with one switch. When the switch is closed both of the bulbs light up.

Which circuit, **A**, **B** or **C**, matches the description?

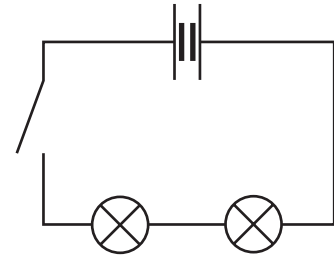
Put a circle around the answer.



A



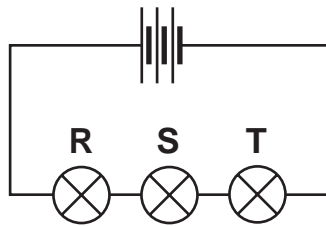
B



C

[1]

- (b) In this circuit, bulb **S** does not light up.



- (i) What happens to bulbs **R** and **T**?

R

T

[1]

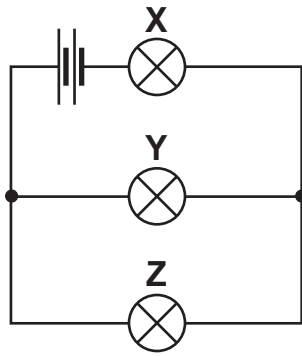
- (ii) Why does this happen?

.....

[1]

Page Total

(c) In this circuit, bulb **Y** fails.

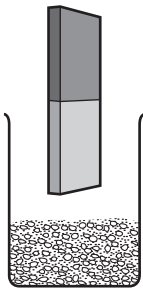


What happens to bulbs **X** and **Z**?

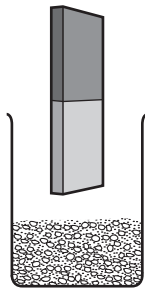
X

Z [1]

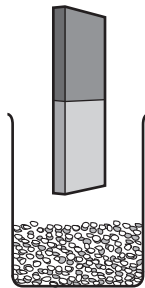
6 Joel is trying to separate the mixtures shown using a magnet.
Tick (✓) **two** mixtures which can be separated using the magnet.



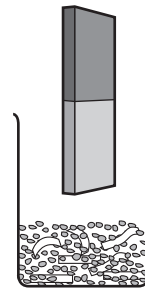
iron and
plastic



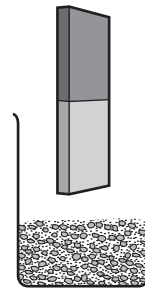
iron and
steel



copper
and steel



copper
and paper

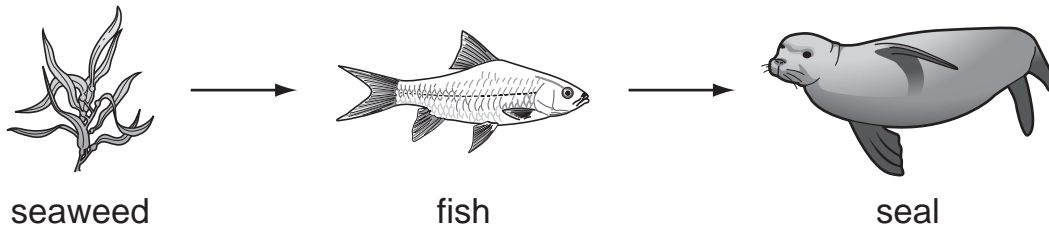


copper
and lead

[2]

Page Total

7 This is a picture of a food chain.



(a) What is the name given to the seaweed in the food chain?

..... [1]

(b) What other name, apart from consumer and carnivore, can be given to the seal in the food chain?

..... [1]

(c) In the box, construct a food chain to show the relationship between a plant, a cat, a bird and a caterpillar.

[2]

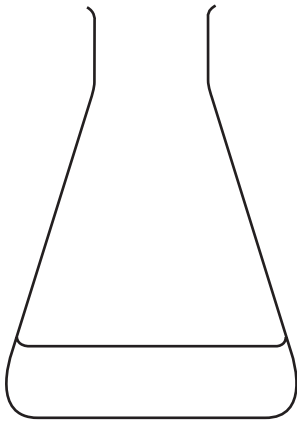
Page Total

8 (a) The water from conical flask 1 was poured into the test tube.

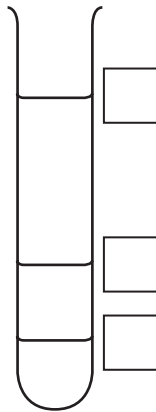
(i) Which line represents the water level in the test tube?
Tick (✓) the correct box.

The water was then poured from the test tube into conical flask 2.

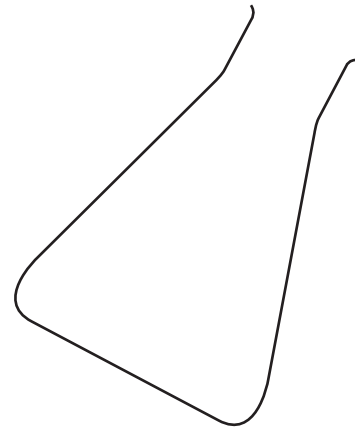
(ii) Draw the approximate water level in conical flask 2.



conical flask 1



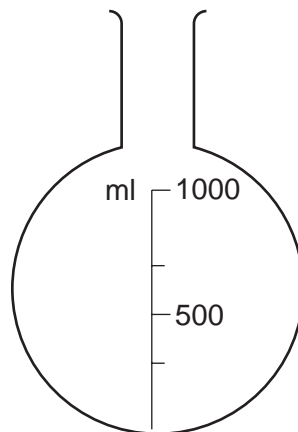
test tube



conical flask 2

[2]

(b) James poured 750 cm³ of orange juice into the flask. Draw a line to show the surface of the juice.

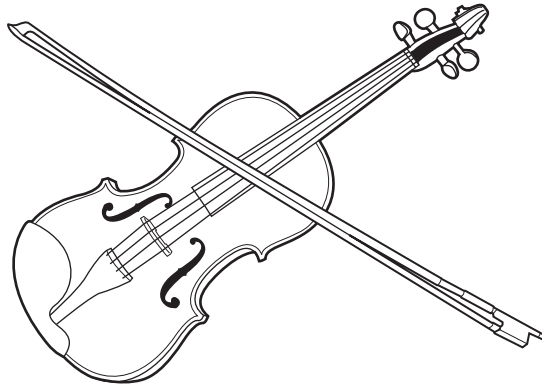


[1]

Page Total

[Turn over

9 (a) Anita plays the violin with a bow.



(i) How would she make the volume quieter?

..... [1]

(ii) What **two** things could she do to play a note with a higher pitch?

1
2 [2]

(b) Here are four statements about how a violin makes a note and the sound reaches our ear.

Put numbers in the boxes next to each statement to show their correct order.

The body of the violin makes the sound louder.

The sound carries vibrating air particles until they reach our ears.

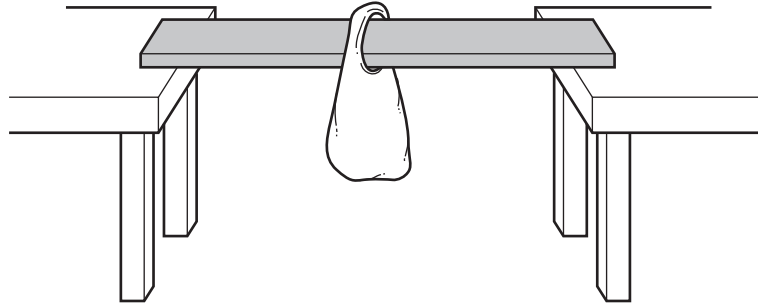
The vibrations enter the body of the violin.

The violin string vibrates.

[1]

Page Total

10 Sam and Emily are experimenting to find the best material for building bridges. They measure the strength of the materials by hanging weights in a bag from each material as shown in the diagram.



Their results are shown in the table

| Material | Mass supported (g) |
|-----------|--------------------|
| cardboard | 25 |
| metal | 150 |
| plastic | 95 |
| thin card | 5 |
| wood | 65 |

(a) Before they started the tests, Emily said that metal would be the strongest.

What is this statement called? [1]

(b) (i) Name **two** things they could do to make their tests fair.

1

2 [2]

(ii) How could they make their results more reliable?

..... [1]

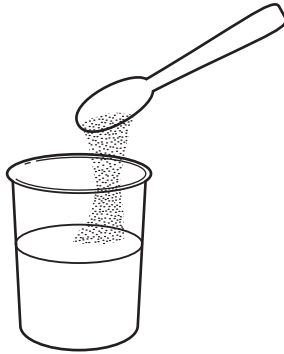
(c) From their results, which is the **third** best material for making a bridge?

..... [1]

Page Total

11 When a solid dissolves in water you cannot filter out the solid.

Aravinder makes a sugar solution by adding sugar to water.



(a) Complete the sentences using either the word **solute** or **solvent** in each of the spaces.

Aravinder leaves the solution he made for a long time in a warm room, the
 evaporates. When all the has gone,
 only the is left. [2]

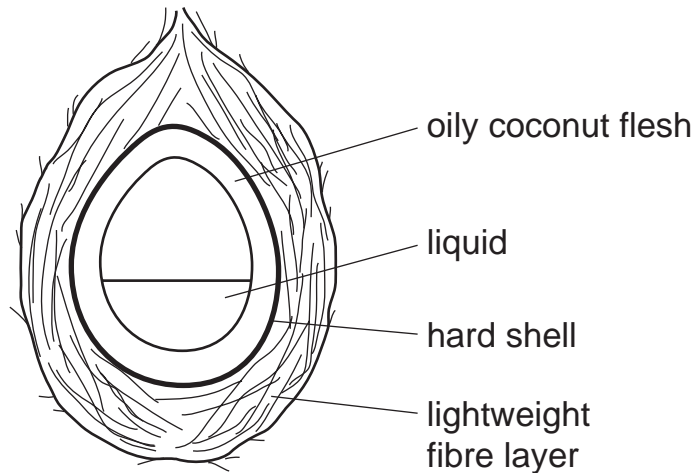
(b) What is the name of the process used to get the solid back from the solution?

..... [1]

(c) What happens to the concentration of the sugar solution as the water is removed?

..... [1]

12 (a) The diagram shows a section through a coconut fruit.



Which part of the fruit stores the food that is used for germination?

..... [1]

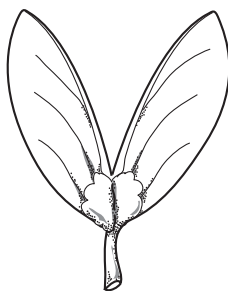
(b) A seed is produced when the male and female sex cells join.
What is this process called?

..... [1]

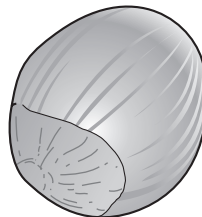
(c) The drawings show four fruits.



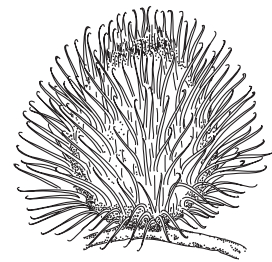
dandelion



maple



hazelnut



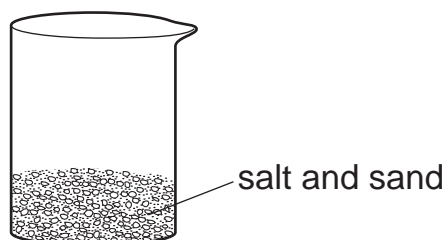
burdock

Which **two** of these plants rely on animals to disperse their fruits?

..... and [2]

Page Total

13 Leroy has a beaker containing salt and sand. He wants to separate the salt from the sand.



He has a list of what to do but it is muddled up.
Write the numbers in the correct order to do the separation.
One has been done for you.

evaporate off the water

5

stir to dissolve the salt

pour salt water into an evaporating basin

filter off the sand

add water

[1]

Page Total

14 Changes can be either reversible or irreversible.

(a) Draw straight lines from each of the changes to show if they are reversible or irreversible.

condensing water

nail rusting

breaking an egg

evaporating water

reversible

irreversible

[2]

(b) Which **one** of the above irreversible reactions is **not** a chemical change?

[1]

Page Total

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* 6 5 1 3 1 9 0 3 7 1 *

SCIENCE

0843/02

Paper 2

May/June 2010

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

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

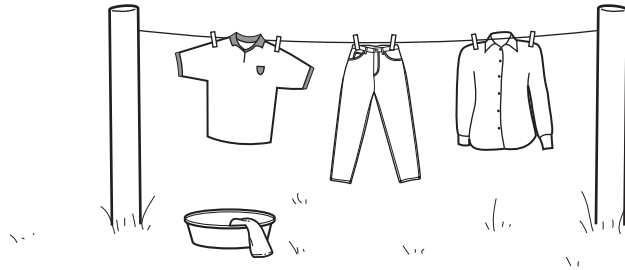
You should show all your working in the booklet.

| For Examiner's Use | |
|--------------------|---|
| 1 | / |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |
| Total | |

This document consists of **16** printed pages.



1 The picture shows washing hanging on a line to dry.



Complete these sentences using some of these words.

condensed **cool** **evaporated** **gained**
hot **inside** **less** **lost**
more **still** **surface** **water** **windy**

The washing dries more quickly when it is a and
 day. The Sun heats up the water in the clothes and
 it is On a windy day the water is carried away from
 the of the clothes.

The clothes always weigh after drying because they
 have water.

[4]



Page Total



- 2 (a) Eating a varied diet is very important to keep our bodies healthy. Look at the diets of Sadiq and Fatima. Who has the healthier diet?
Tick (✓) the correct box.



Sadiq



Fatima

| Sadiq | Fatima |
|--|---|
| eats sweets and chocolate drinks fizzy drinks enjoys eating meat | enjoys eating fruit enjoys eating meat drinks plenty of water |

[1]

- (b) What we eat can be damaging to our teeth.
Tick (✓) **two** foods which can lead to tooth decay.

meat

sugary foods

salt

fizzy drinks

bread

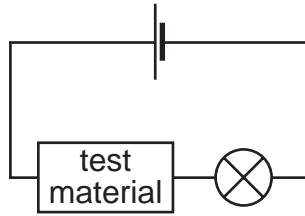
pasta

[1]

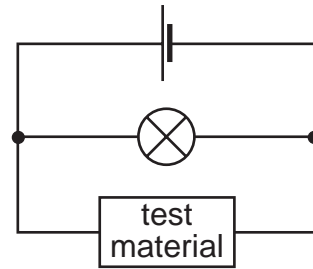
Page Total

3 Alec is going to test some different materials to see if they conduct electricity.

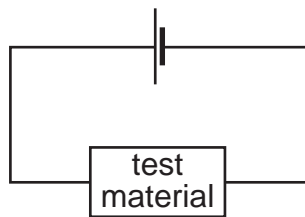
(a) Which of these circuits should he use?
Tick (✓) the correct box.



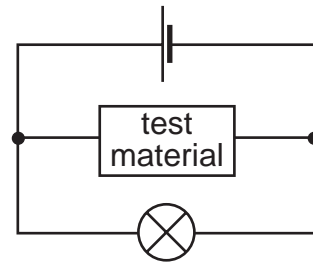
A



B



C



D

[1]

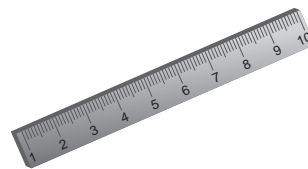
(b) Which **two** items, if put into the correct circuit above, would cause the bulb to light up?
Tick (✓) the **two** correct answers.



plastic comb



steel scissors



wooden ruler



metal paperclip

[1]

Page Total

(c) What do we mean by the terms

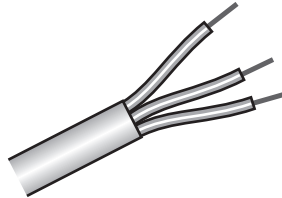
(i) electrical conductor

..... [1]

(ii) electrical insulator?

..... [1]

(d) The picture shows some electrical wiring from a house. Each individual wire is covered in plastic and then all the separate wires are covered in another layer of plastic.

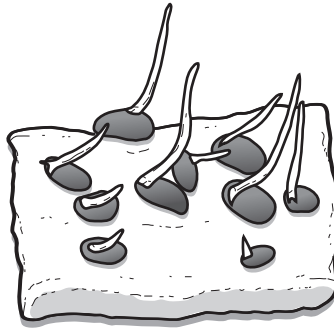


Why are the wires covered in plastic?

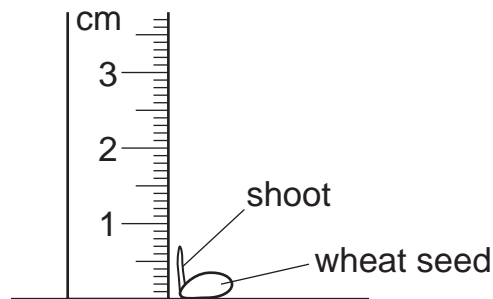
..... [1]

Page Total

- 4 When wheat seeds are grown on damp paper they germinate and grow an upright shoot as shown in the drawing.



Some students are using these seeds to investigate plant growth. They decide to measure the length of each shoot.



- (a) How long is the shoot shown in the diagram?

..... mm [1]

- (b) The students decide to germinate 8 seeds and measure the length every two days for six days. The table shows their results.

| Shoot | Length in mm | | | |
|-------|--------------|-------|-------|-------|
| | Day 0 | Day 2 | Day 4 | Day 6 |
| 1 | 0 | 2 | 6 | 9 |
| 2 | 0 | 3 | 7 | 9 |
| 3 | 0 | 2 | 7 | 10 |
| 4 | 0 | 3 | 7 | 9 |
| 5 | 0 | 2 | 7 | 9 |
| 6 | 0 | 2 | 6 | 10 |
| 7 | 0 | 3 | 7 | 11 |
| 8 | 0 | 3 | 8 | 10 |

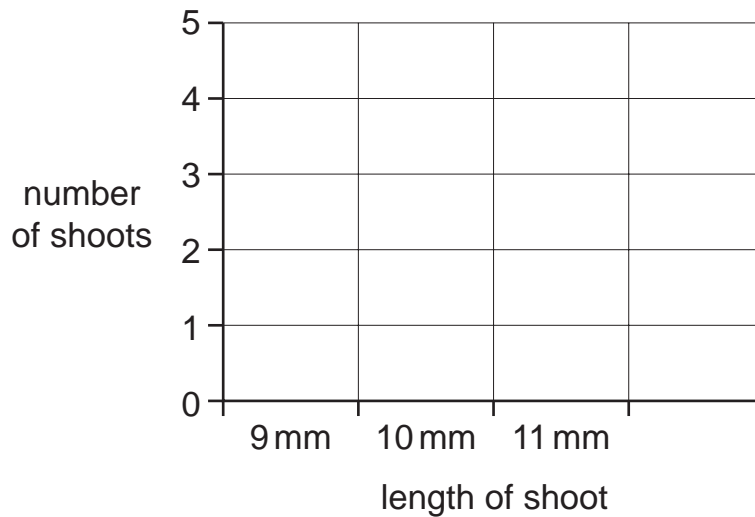
Page Total

Use their results to answer these questions.

(i) How much did **Shoot 2** increase in length between Day 2 and Day 6?

.....mm [1]

(ii) Draw a bar chart on the axes to show how many shoots there are at each height on Day 6.



[2]

(iii) Two of the students made these statements.

Tick (✓) the correct box to show if each statement is True or False.

True False

All the seeds grew at the same rate.

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

All the seeds increased in length as the days passed.

| | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

[1]

Page Total

5 Animals can be divided into groups using body features.

(a) Which group does each animal belong to?

Tick (✓) the correct box.

The first one has been done for you.

| | body covered in hair/fur | body covered in feathers |
|---------|-----------------------------|-----------------------------|
| bear | ✓ | |
| chicken | | |
| duck | | |
| eagle | | |
| horse | | |
| parrot | | |
| penguin | | |
| rat | | |
| tiger | | |
| wolf | | |

[2]

(b) What name is given to animals that have feathers?

[1]

Page Total

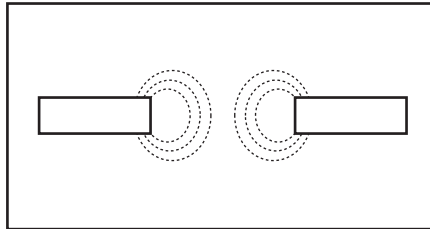
6 Some metals are attracted to magnets.

(a) In the list, tick (✓) the magnetic materials.

- | | | | |
|--------|--------------------------|-----------|--------------------------|
| lead | <input type="checkbox"/> | magnesium | <input type="checkbox"/> |
| copper | <input type="checkbox"/> | steel | <input type="checkbox"/> |
| iron | <input type="checkbox"/> | nickel | <input type="checkbox"/> |

[3]

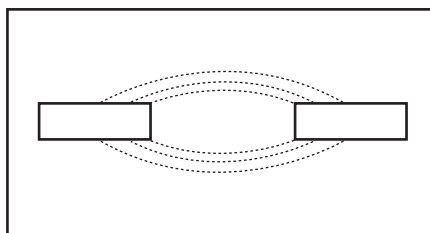
(b) Peter places a sheet of glass over two magnets. The diagram shows what happens when he shakes some iron filings over it.



What does this tell you about the poles of the magnets?

..... [1]

(c) Peter moves one of the magnets. The diagram shows his new results.

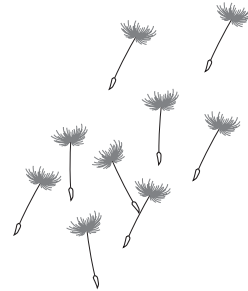


What does this tell you about the poles of the magnets?

..... [1]

Page Total

- 7 Flowering plants and animals have a life cycle.
Write under each picture the stage or name which the plant is in.



.....

.....

.....

[3]

- 8 Some materials can have a range of properties. Plastic can be transparent or opaque. Some plastic bags you can see through, others you cannot see through.

Look at the materials in the table and tick (✓) if the material sometimes has the stated property.

| Property | Metal | Glass | Wool |
|-------------|-------|-------|------|
| flexible | | | |
| hard | | | |
| rigid | | | |
| shiny | | | |
| transparent | | | |

[4]

Page Total

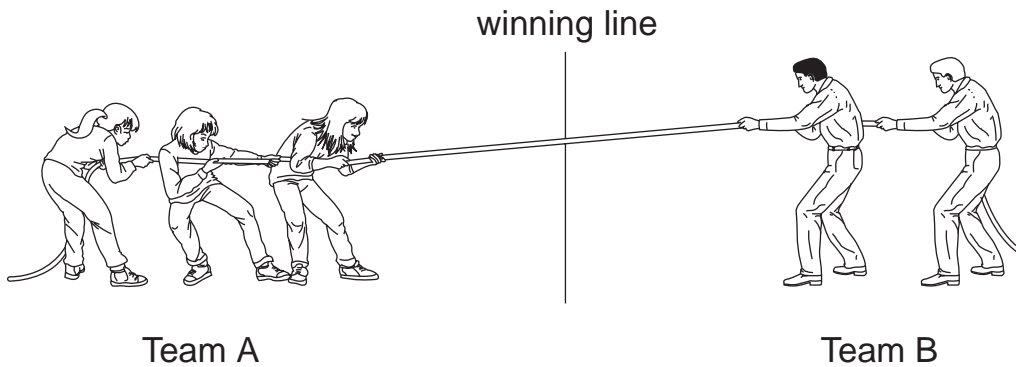
9 (a) Tick (✓) the correct box to complete the statement.

Pulling is an example of a

- mass
- force
- speed
- pressure

[1]

(b) The picture shows two teams having a tug-of-war.



To win, a team has to pull the other team over the winning line.
Which team is likely to win?
Tick (✓) the correct box.

- the team with three people in it
- the team with two people in it
- the team that applies the greatest force
- the team that applies a balanced force

[1]

(c) If Team A applies a total force of 100N and Team B applies a force of 850N explain what will happen.

..... [1]

Page Total

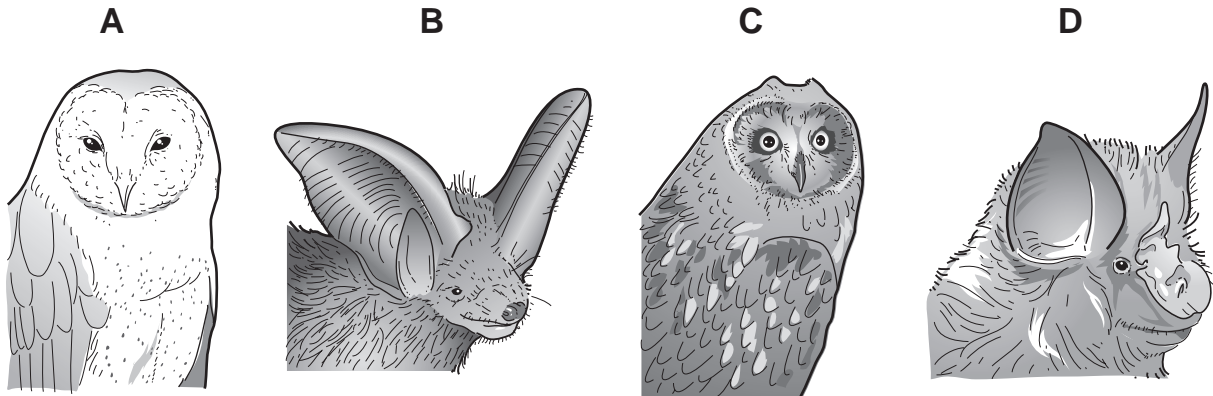
- 10 Some substances dissolve in water, some do not dissolve. Complete the table by ticking (✓) the correct column.

| Substance | Dissolves | Does not dissolve |
|------------------|------------------|--------------------------|
| chalk | | |
| flour | | |
| salt | | |
| wax | | |

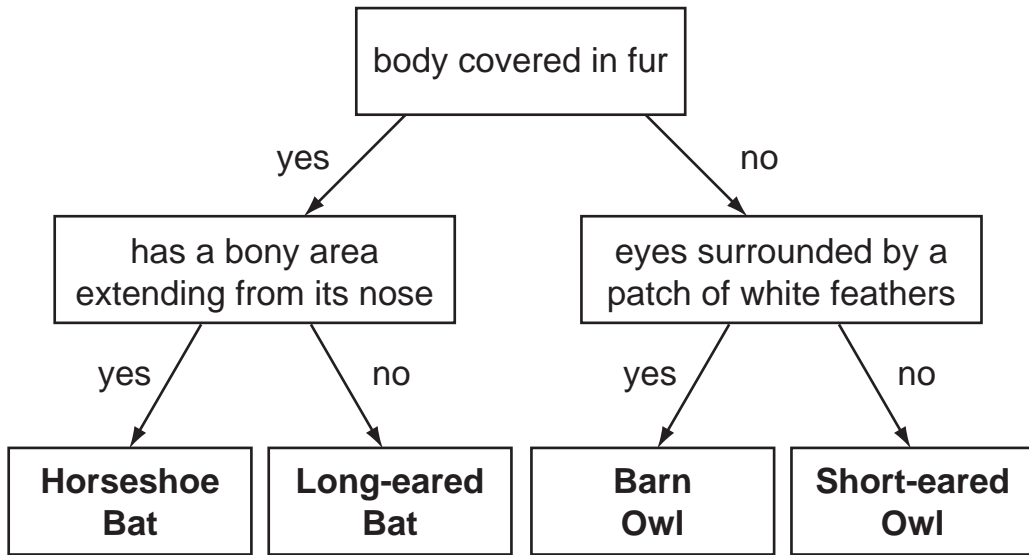
[3]

Page Total

11 The drawings show four animals that fly at night.



Use the key to identify the animals shown.



Animal **A** is

Animal **B** is

Animal **C** is

Animal **D** is

[3]

Page Total

12 (a) A skydiver has jumped out of an aircraft but has not yet opened her parachute.



Which of these statements best describes what is happening?
Tick (✓) the correct statement.

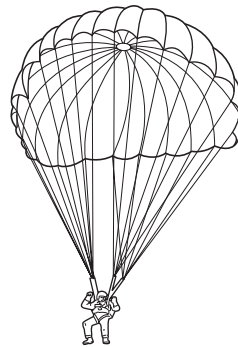
She is pushed towards the surface of the Earth by the force of gravity.

She is pushed towards the centre of the Earth by the force of gravity.

She is pulled towards the surface of the Earth by the force of gravity.

She is pulled towards the centre of the Earth by the force of gravity.

[1]



(b) Tick (✓) the correct statement.

When the skydiver has opened her parachute she will

slow down at first and then fall at a constant speed.

speed up at first and then fall at a constant speed.

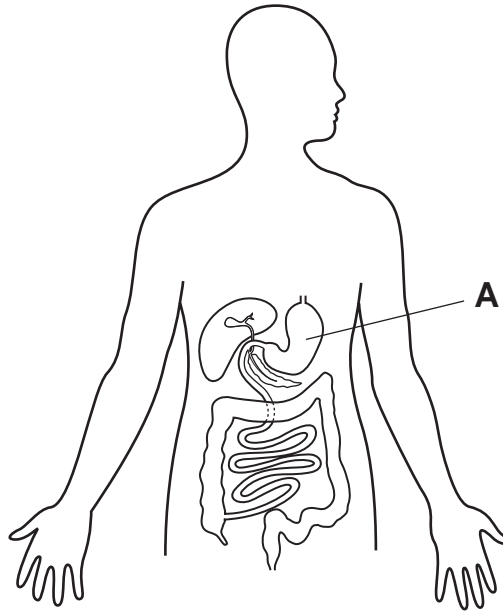
slow down at first then speed up.

speed up until she is stationary.

[1]

Page Total

13 The diagram shows a human body and part of one of its major organ systems.



(a) Which organ system is shown?
Circle the correct answer.

circulatory

digestive

nervous

reproductive

[1]

(b) Name the organ labelled **A**.

.....

[1]

(c) (i) Mark an **X** on the diagram to show the position of the heart.

[1]

(ii) What is the function of the heart?

.....

[1]

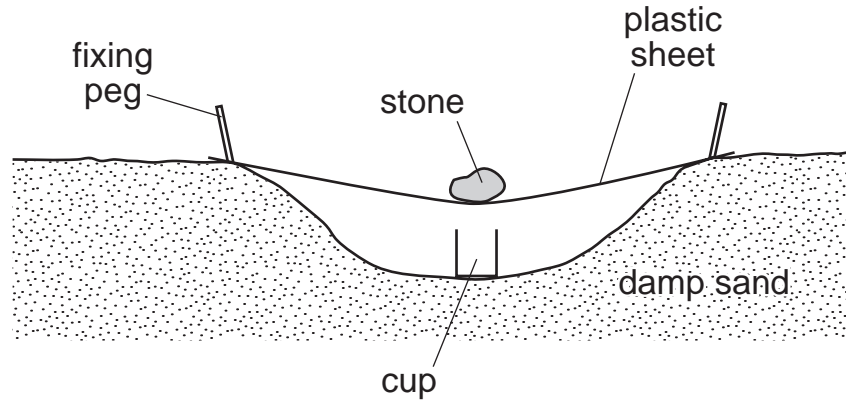
(d) What does the excretory system do?

.....

[1]

Page Total

- 14 Ahmed was trying to get some drinking water from damp sand in the desert. He digs a hole and fixes a plastic sheet over it. He puts a stone in the middle of the sheet. Underneath the stone in the centre of the hole is a cup. The diagram shows the equipment he set up.



Use these words to complete the sentences.

boils

condenses

cup

evaporates

freezes

hollow

topside

underside

The Sun heats up the damp sand. The water in the sand
 It on the of the plastic sheet, and runs
 down the sheet and collects in the

[3]





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International Examinations

Cambridge International School

Check Point Exams

2012





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Cambridge Primary Checkpoint

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SCIENCE

0846/01

Paper 1

October 2012

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

* 4 9 3 0 1 2 7 6 9 *

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

DO NOT WRITE IN ANY BARCODES.

Answer **all** questions.

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

You should show all your working in the booklet.

The total number of marks for this paper is 50.

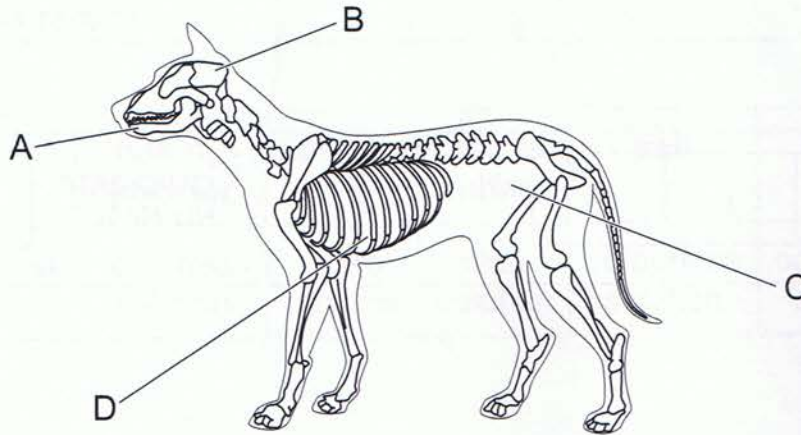
| For Examiner's Use | |
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| 11 | |
| 12 | |
| 13 | |
| Total | |

This document consists of **20** printed pages.





1 The picture shows the inside of a dog.
A dog has different organs.



(a) Draw a line to connect the **letter** to the position of the **organ**.

letter

organ

A

lung

B

kidney

C

brain

D

tongue

[2]

Each organ in the dog has a job to do.

Here are some organs.

brain

heart

kidney

lung

stomach

(b) Which organ pumps blood around the circulatory system?

.....

[1]

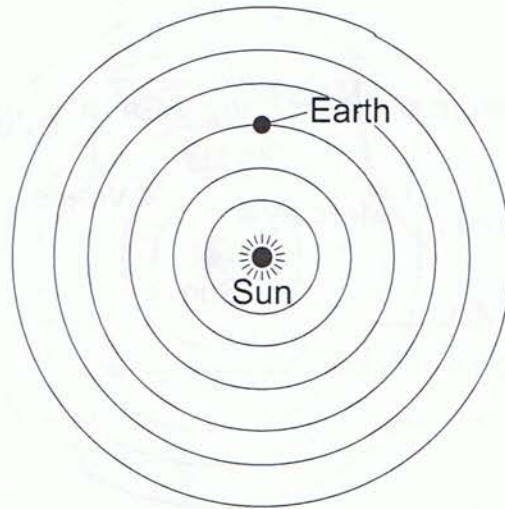
(c) Which organ produces acid and digests food?

.....

[1]



2 (a) The Earth orbits the Sun.



How long does the Earth take to orbit the Sun?

Tick (✓) **one** box.

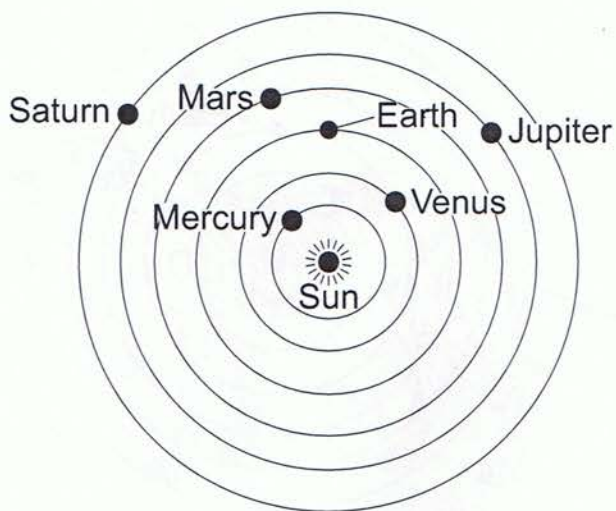
| | |
|---------|--------------------------|
| 1 hour | <input type="checkbox"/> |
| 1 day | <input type="checkbox"/> |
| 1 week | <input type="checkbox"/> |
| 1 month | <input type="checkbox"/> |
| 1 year | <input type="checkbox"/> |

[1]





Other planets also orbit the Sun.



(b) Name **one** planet that takes less time to orbit the Sun.

..... [1]

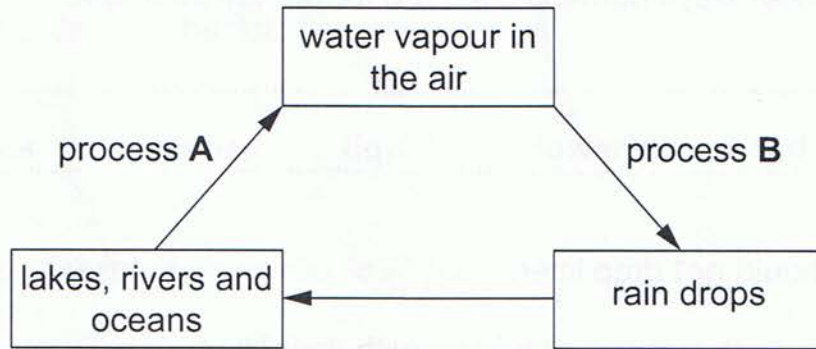
(c) Suggest why this planet takes less time to orbit the Sun.

..... [1]



3 On a very humid day the air contains lots of water vapour.

Here is a diagram showing how some of the water vapour gets into the air.



Draw a line between the **process** and the **name** of the process.

process

name

A

boiling

condensation

B

evaporation

melting

[2]





4 (a) Humans care for the environment.

One way they do this is by **not** dropping litter.

Give **two** other ways humans can care for the environment.

1

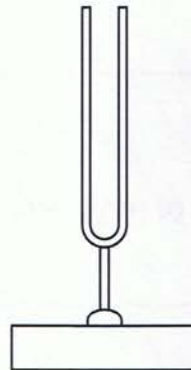
2 [2]

(b) Humans should **not** drop litter.

Write down what humans should do with their litter.

..... [1]

5 Gianni has a tuning fork.



(a) When he hits the tuning fork, he hears a sound.
What is happening to the fork?

..... [1]

(b) He hits the fork and puts it in a cupboard.
What will happen to the sound he hears?

..... [1]

(c) Now he hits a larger tuning fork, with longer prongs.
What does he notice about the sound?

..... [1]



6 Sea water contains salts dissolved in water.

(a) Complete the sentences about sea water.

Choose words from the list.

gas higher liquid lower solid

The freezing point of sea water is $-7\text{ }^{\circ}\text{C}$.

The freezing point of pure water is than the freezing point of sea water.

When sea water freezes it changes from a to a

The boiling point of sea water is $106\text{ }^{\circ}\text{C}$.

The boiling point of pure water is than the boiling point of sea water.

When sea water boils it changes from a to a

[4]

(b) Feng leaves a dish of salt water in the hot sun.

He returns after five hours to see that there is a white solid left in the dish.

What process has happened to the water during the five hours?

..... [1]

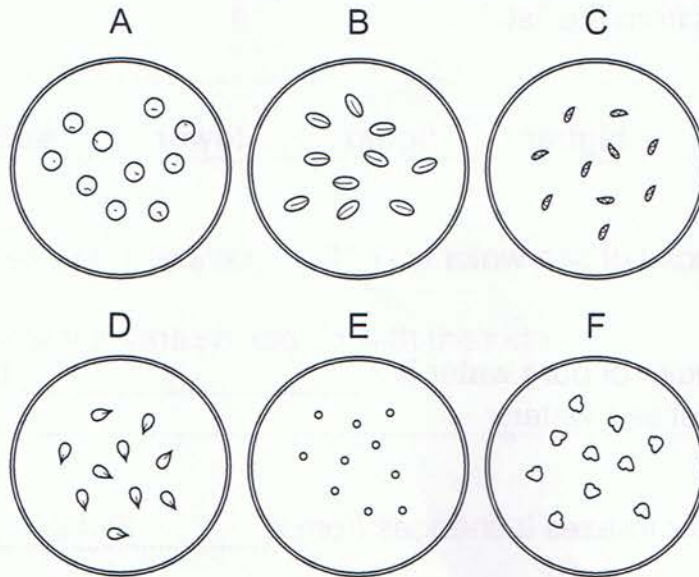
DO NOT WRITE IN THIS MARGIN





7 Maja and Ivan investigate seeds growing.

Here are the six different **types** of seed they use.



(a) Maja and Ivan give the seeds 8cm³ of water.

Circle the equipment they use.

beaker

cup

measuring cylinder

test tube

[1]

(b) Maja and Ivan want to make their investigation fair.

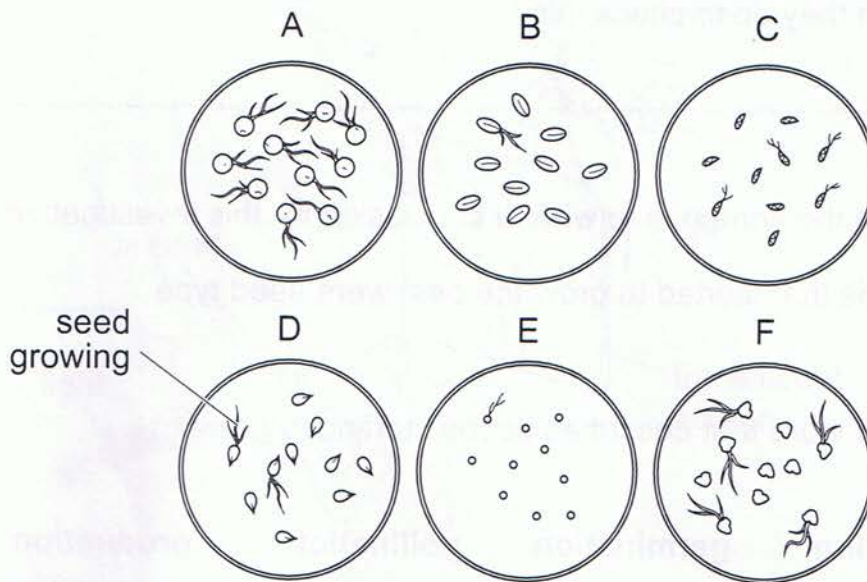
They give all the seeds the **same** amount of water.

Write **one other** fair test they can make when growing the seeds.

..... [1]

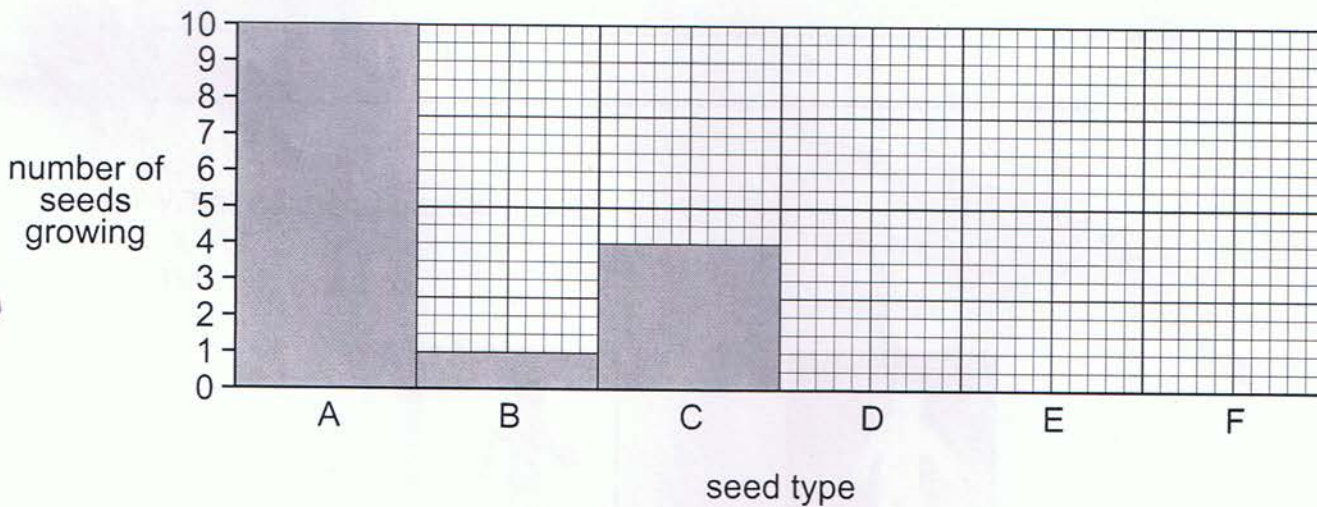


Here are their results.



(c) Maja and Ivan start to draw a bar chart.

Complete their bar chart.



[1]





(d) Maja and Ivan are not sure their results are correct.

What can they do to check this?

..... [1]

(e) Complete the sentence to write a conclusion for this investigation.

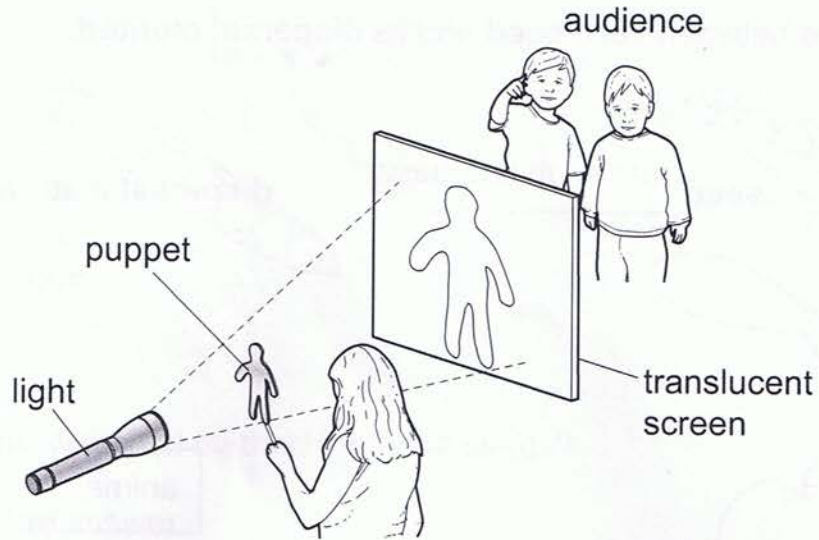
The seeds that started to grow the best were seed type [1]

(f) Circle the word that describes seeds starting to grow.

fertilisation germination pollination production [1]



8 Here is a diagram of a puppet show.



(a) Complete this sentence.

The puppet makes an image called a on the screen. [1]

(b) What must the girl do to the puppet to make this image smaller?

.....
..... [1]

(c) What do the audience see?

Tick (✓) **one** box.



[1]

(d) What would the audience see if the screen were opaque?

..... [1]



DO NOT WRITE IN THIS MARGIN



Here are some seeds in a pod.



(b) What is the dispersal method for these seeds?

Tick (✓) **one** answer.

| | |
|---------------------|--------------------------|
| animal dispersal | <input type="checkbox"/> |
| rain dispersal | <input type="checkbox"/> |
| explosive dispersal | <input type="checkbox"/> |
| vegetable dispersal | <input type="checkbox"/> |

[1]

(c) Complete the sentence to show how this method works.

After the seed pod dries out, the pod open. [1]



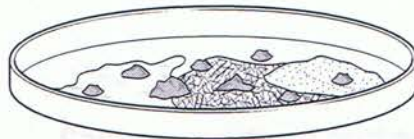
DO NOT WRITE IN THIS MARGIN



10 Lee is given a mixture to separate.

The mixture contains:

- iron filings
- salt
- sand
- small lumps of rock



(a) He removes the small lumps of rock by sieving.

Why does he use a sieve?

..... [1]

(b) Next he uses a magnet.

Which substance is attracted to the magnet?

..... [1]

(c) Lee uses three more stages to complete the separation.

Stage A – Evaporation

Stage B – Filtration

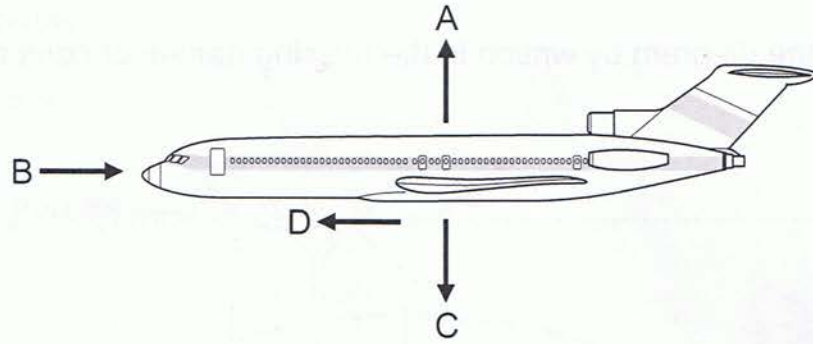
Stage C – Mix and stir with water

Put these stages in the correct order.

First stage Second stage Third stage [1]



11 The picture shows an aeroplane flying.



(a) Draw a line to connect each letter to the correct force.

| letter | force |
|--------|---------------------------|
| A | air resistance |
| B | moving aeroplane upwards |
| C | moving aeroplane forwards |
| D | gravity |

[2]

(b) The force moving the aeroplane forward is increased more than the air resistance.

What happens to the aeroplane?

Tick (✓) **one** box.

| | |
|-----------------------|--|
| moves up in the air | |
| moves down in the air | |
| speeds up | |
| slows down | |
| stops moving | |

[1]

(c) Write down **one** way air resistance can be reduced.

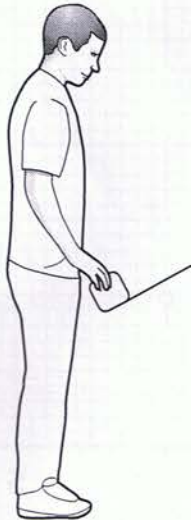
.....

[1]



12 Jessica and Tom investigate sound from a CD player.

- The volume control on the CD player goes from 0 to 6. Jessica sets the volume control on 1.
- Tom walks away from the CD player until he can no longer hear the music. He measures how far he is from the CD player.
- Jessica and Tom repeat the test and increase the volume each time.



Here are their results.

| volume control of CD player | distance sound heard in m |
|-----------------------------|---------------------------|
| 1 | 3 |
| 2 | 7 |
| 3 | 10 |
| 4 | 18 |
| 5 | 17 |
| 6 | 20 |

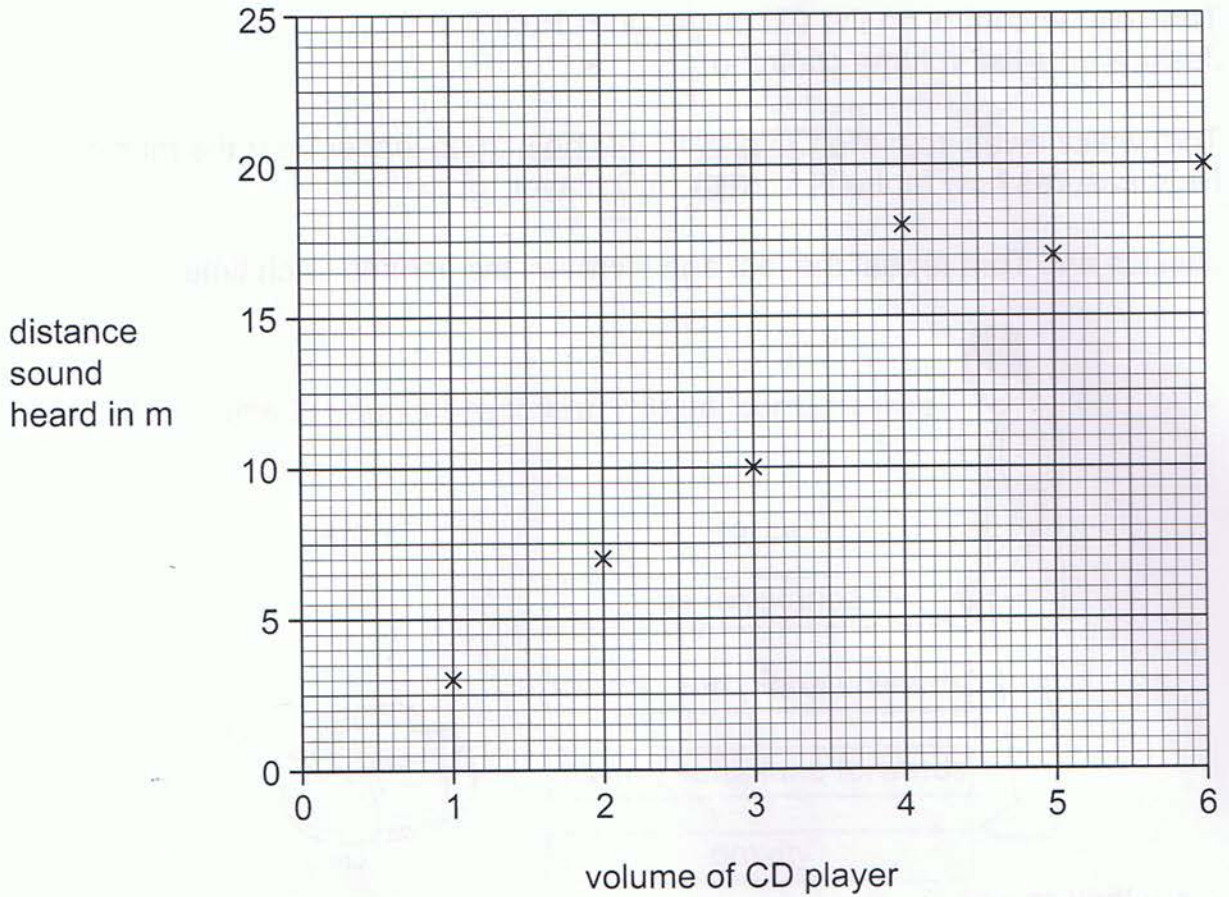
(a) Write down the factor they are changing.

..... [1]





Jessica and Tom plotted their **results**.



(b) Which of their results does not fit the pattern?

..... [1]

(c) This was their conclusion. Fill in the missing word.

The higher the volume of the CD player, the
the distance it can be heard. [1]



(d) Cheetan repeats the experiment four more times.

Each time he uses a different solid.

Here are his results.

| solid | baking powder | chalk | copper sulfate | salt | sugar |
|-------------|---------------------|---------------|----------------|---------------------|---------------------|
| observation | colourless solution | white mixture | blue solution | colourless solution | colourless solution |

Which solid did **not** dissolve in water?

..... [1]



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SCIENCE

0846/02

Paper 2

October 2012

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator



READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

DO NOT WRITE IN ANY BARCODES.

Answer **all** questions.

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

You should show all your working in the booklet.

The total number of marks for this paper is 50.

For Examiner's Use

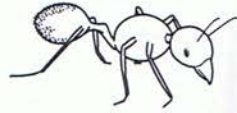
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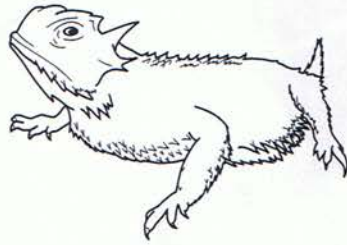
1 The pictures show some living things found in a desert.



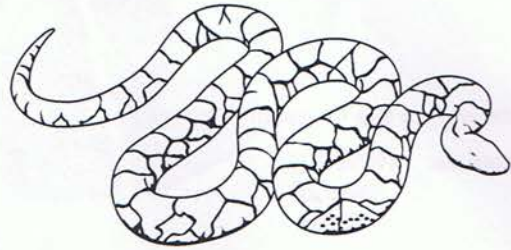
ant



plant



lizard



snake

(a) Draw arrows (→) between the pictures to make a food chain. [2]

(b) Name the producer in this food chain.

..... [1]



(c) The producer uses energy.

Where does it get its energy from?

Tick (✓) **one** box.

| | |
|------|--|
| food | |
| rain | |
| soil | |
| Sun | |
| wind | |

[1]

(d) Name **one** predator in this food chain.

.....

[1]

(e) Use **one** word to complete the sentence.

plant

predator

prey

producer

An animal being hunted by another animal is the

[1]



DO NOT WRITE IN THIS MARGIN



2 Felipe investigates four water samples.

He measures the melting point and the boiling point of each water sample.

Here are his results.

| water sample | melting point in °C | boiling point in °C |
|--------------|---------------------|---------------------|
| A | -10 | 108 |
| B | 0 | 100 |
| C | -2 | 102 |
| D | -5 | 104 |

(a) Water sample A is salt solution.

Which water sample is pure water?

.....

Explain how you could tell from the information in the table.

.....

.....

[2]

(b) Complete the sentence about melting.

Choose words from the list.

solid

liquid

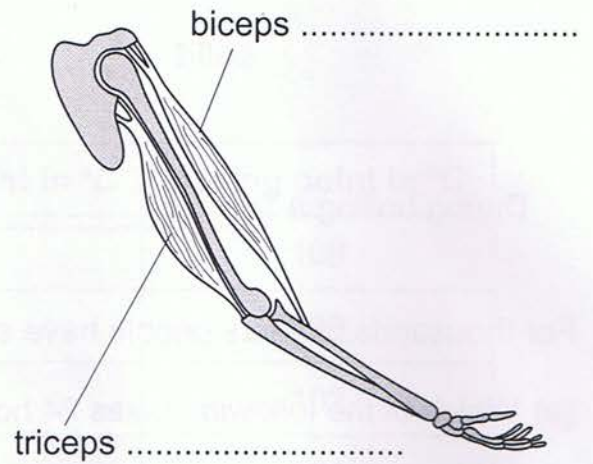
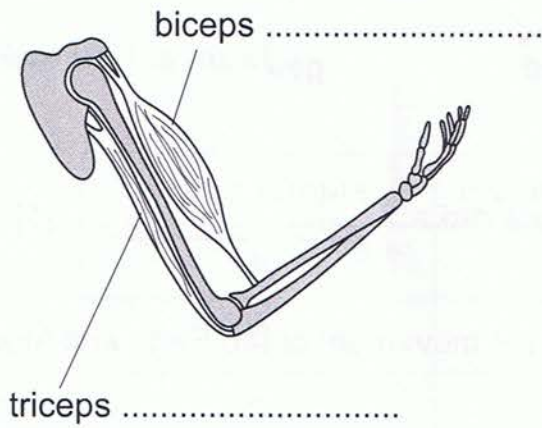
gas

During melting a changes into a

[1]



4 Class four are looking at a diagram of the human arm.



(a) What are biceps and triceps?

..... [1]

(b) To make the arm move the biceps and triceps either relax or contract.

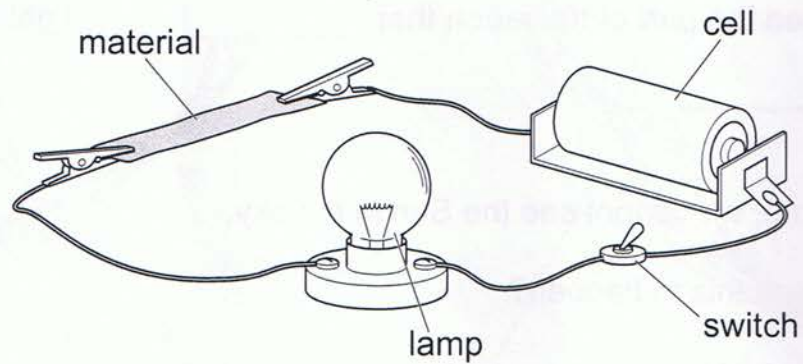
Write **contract** or **relax** after biceps and triceps to say what is happening in each diagram.

[2]



6 Tomas and Jakub investigate electrical conductors.

They put different materials in an electric circuit.



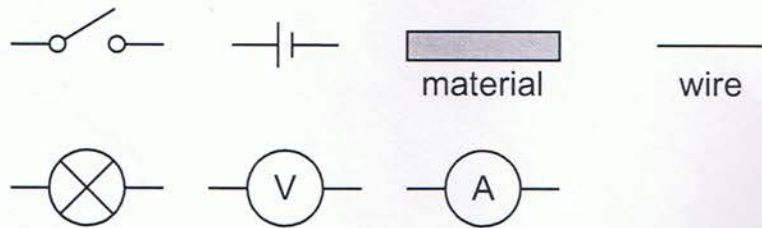
(a) They keep the length of the material the same each time.

Why do they do this?

..... [1]

(b) Draw the circuit diagram for **this** experiment.

Choose the **correct** symbols from those shown.

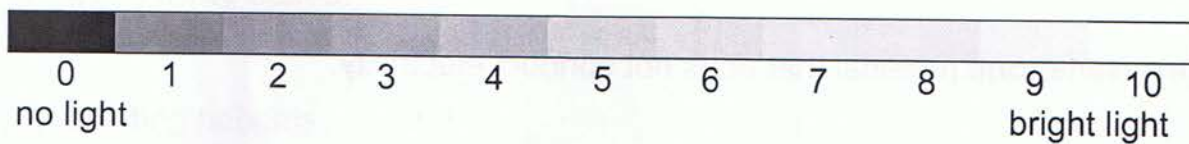


[2]



(c) Tomas and Jakub measure the brightness of the lamp for each material they test.

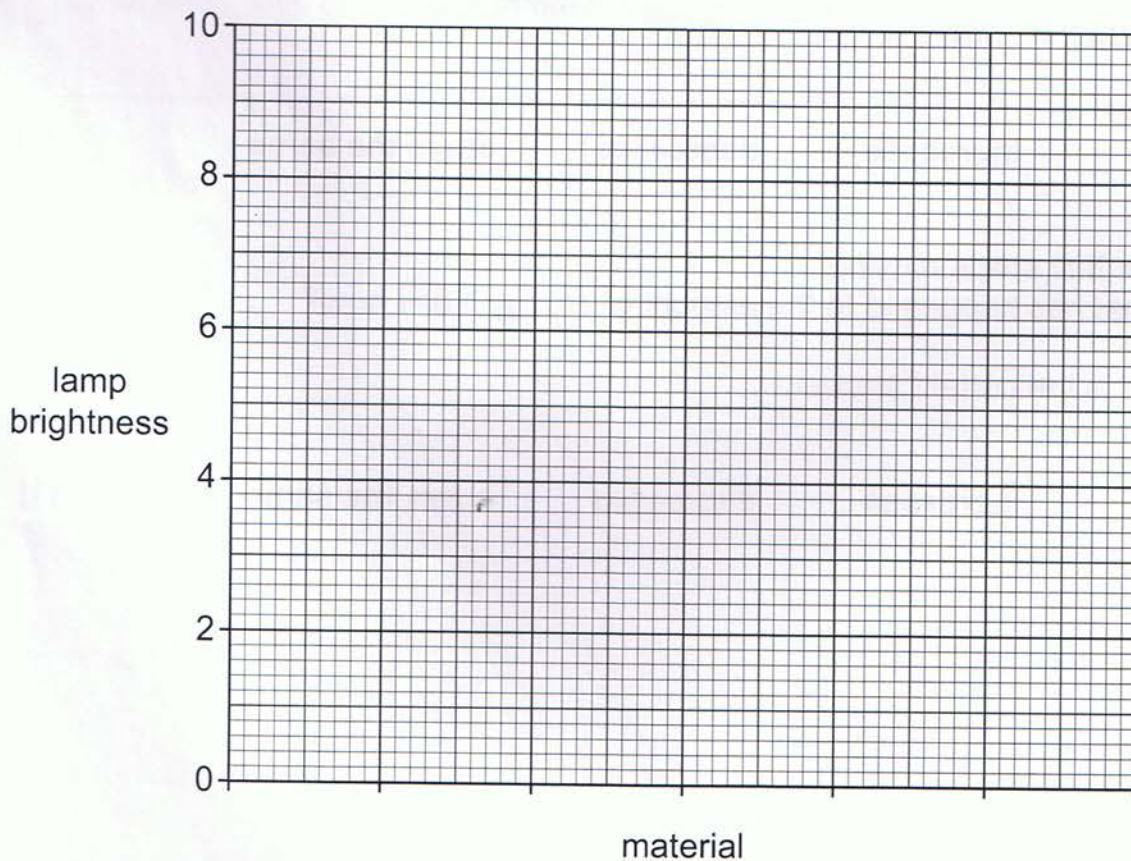
Here is their scale for lamp brightness.



Here are their results.

| material | lamp brightness |
|----------|-----------------|
| brass | 4 |
| copper | 9 |
| wood | 0 |
| silver | 10 |
| plastic | 0 |
| lead | 3 |

Draw a bar chart of their results.



[3]





(d) Which material is the best electrical conductor?

..... [1]

(e) Name **one** material that does not conduct electricity.

..... [1]

7 A ball rolls along the ground.
It has energy because it is moving.

(a) The ball rolls **faster**.
What has happened to the amount of energy it has now?

Circle the correct answer.

increases decreases stays the same [1]

(b) The ball rolls **slower**.
What has happened to the amount of energy it has now?

Circle the correct answer

increases decreases stays the same [1]

(c) The ball **stops** moving.
What has happened to the amount of energy it has now?

Circle the correct answer.

increases , decreases stays the same [1]



8 Humans can have positive and negative effects on the environment.

(a) From the list choose three things that are **positive** effects.

Tick (✓) **three** boxes.

protecting habitats

overfishing

removing trees

recycling

not littering

[2]

(b) Another negative effect is 'loss of species'.

What does 'loss of species' mean?

.....

[1]



DO NOT WRITE IN THIS MARGIN



9 (a) Draw a line to connect the **word** and the **explanation**.

word

explanation

soluble

a solid that does **not** dissolve in a liquid

insoluble

a solid that dissolves in a liquid

solvent

a liquid that dissolves a solid

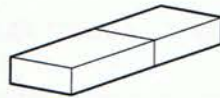
[2]

(b) Complete the sentence.

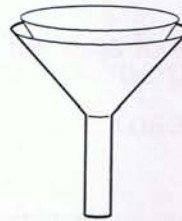
Some solids dissolve in water to form a

[1]

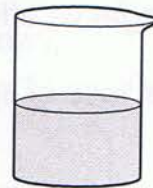
10 Look at these pictures of apparatus **A**, **B** and **C**.



bar magnet
A



filter paper in funnel
B



water
C

(a) Which apparatus would you use to separate sand from water?

..... [1]


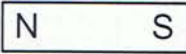

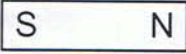

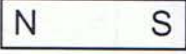

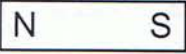
(b) Which apparatus would you use to separate a mixture of sand and iron filings?

..... [1]



11 A magnet is moved close to four objects.

Tick (✓) the correct boxes to show what happens.

| object | | attract | repel | no effect |
|--|---|---------|-------|-----------|
|  plastic straw |  magnet | | | |
|  magnet |  magnet | | | |
|  iron nail |  magnet | | | |
|  candle |  magnet | | | |

[3]

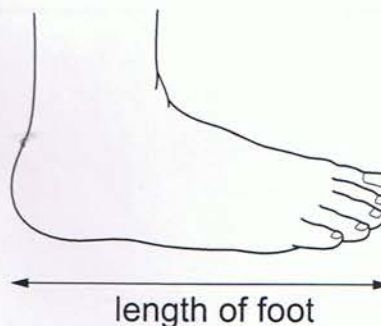
12 The foot bones of the skeleton grow as humans grow.

(a) Why do foot bones need to grow as humans get older?

.....

[1]

(b) The length of a foot can be measured.



What piece of apparatus do you use to measure the length of a foot?

.....

[1]

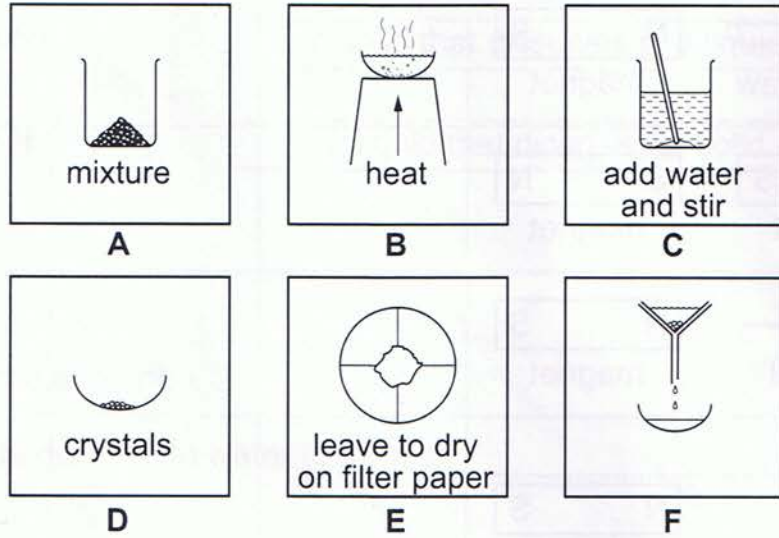




13 Minahil wants to separate a mixture of salt and sand.

The diagram shows the steps she uses.

They are not in the correct order.



(a) Put the steps in the correct order.

Two have been done for you.

| | | | | | |
|---|--|--|---|--|--|
| A | | | E | | |
|---|--|--|---|--|--|

[2]

(b) Which solid substance is on the filter paper in step E?

.....

[1]

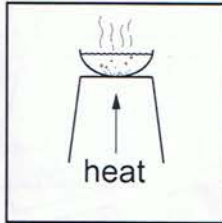


(c) Steps **B** and **F** are processes.

Draw a line between the **step** and the **process** that happens.

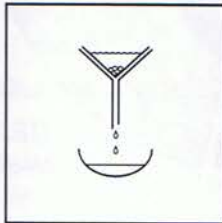
step

process



condensation

dissolution



evaporation

filtration

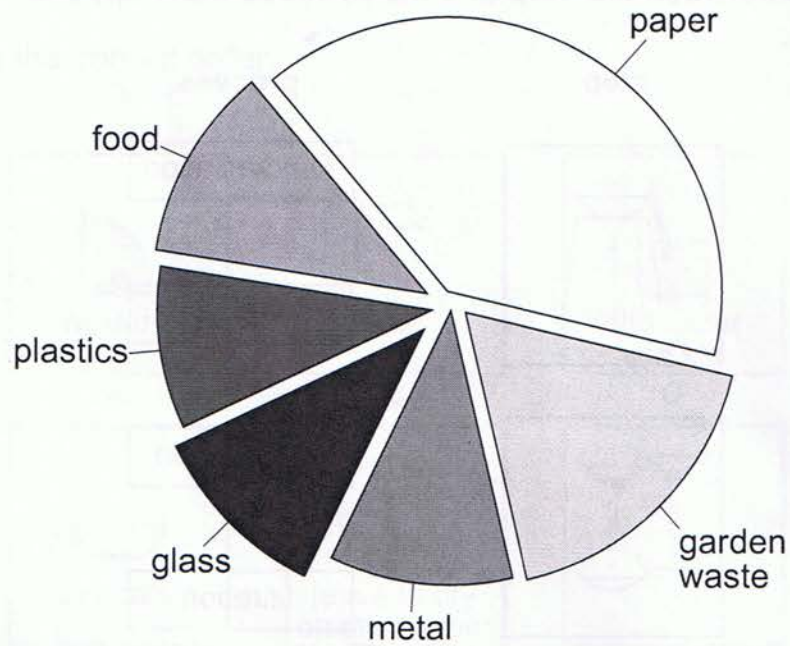
[2]

DO NOT WRITE IN THIS MARGIN





14 The pie chart shows some of the waste produced by humans.



Use the pie chart to answer the questions.

(a) The largest amount of waste produced is [1]

(b) Some of these waste products can be decomposed.

Name **two**.

..... and [1]

(c) Suggest how the amount of waste glass can be reduced.

..... [1]

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2013





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SCIENCE

Paper 1

0846/01

October 2013

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator



READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

DO NOT WRITE IN ANY BARCODES.

Answer **all** questions.

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

You should show all your working in the booklet.

The total number of marks for this paper is 50.

| For Examiner's Use | |
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| 13 | |
| 14 | |
| 15 | |
| Total | |

This document consists of **18** printed pages and **2** blank pages.










1 Each body system contains organs.

Here is a table.

It shows the body system and an organ found in the body system.

Complete the table.

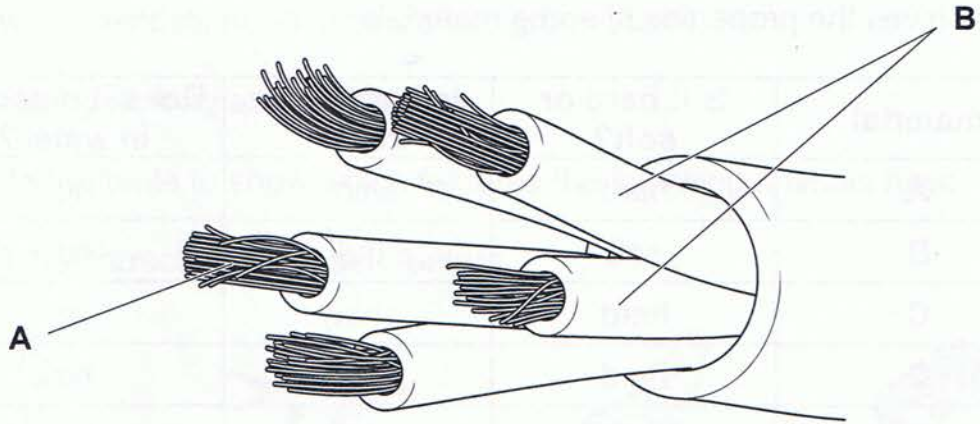
Two have been done for you.

| system | organ |
|--|---------|
|  circulatory | ..... |
|  digestive | stomach |
|  respiratory | ..... |
|  nervous | brain |
|  excretory | ..... |

[3]



2 Electrical cables contain wires.



(a) Complete these sentences.

Part A needs to be a good of electricity.

The best material to use is [2]

(b) What material is used to make the parts labelled B?

..... [1]

DO NOT WRITE IN THIS MARGIN





3 Different materials have different properties.

The table gives the properties of some materials.

| material | Is it hard or soft? | Is it shiny or dull? | Does it dissolve in water? |
|----------|---------------------|----------------------|----------------------------|
| A | hard | shiny | no |
| B | soft | dull | no |
| C | hard | shiny | no |
| D | hard | shiny | no |
| E | soft | dull | yes |
| F | soft | dull | no |

(a) Which material dissolves in water?

..... [1]

(b) Scientists often sort materials using their properties.

Sort the materials **A** to **F** in the table into two groups.

Two materials have been done for you.

| first group | second group |
|-------------|--------------|
| A | B |
| | |
| | |

[2]

(c) Material **A** is attracted to a magnet.

Write down the **name** of a material that is attracted to a magnet.

..... [1]



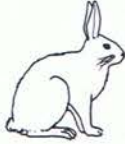
4 There are hundreds of different species in the world.

This is why scientists need to be able to group them.

We do this by looking at their features.

Complete the table to show which features the following animals have.

Tick (✓) the correct box for each feature.



mammal



fish



bird



reptile

| | features | | | |
|---------|----------|----------|----------|------------|
| | scales | feathers | backbone | hairy skin |
| mammal | | | | |
| fish | | | | |
| bird | | | | |
| reptile | | | | |

[4]



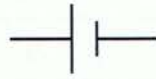
DO NOT WRITE IN THIS MARGIN



5 Class 6 investigate electric circuits.

(a) Hania builds a complete circuit to turn one lamp on and off.

Draw the circuit diagram using these symbols.



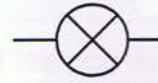
cell



wire



switch



lamp

[2]

(b) Hania adds another lamp to the circuit.

What happens to the brightness of the lamps?

Circle the correct answer.

decreases

increases

stays the same

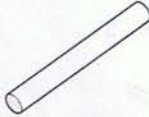



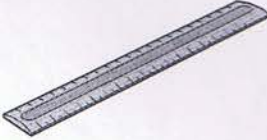
[1]



(c) Hania removes the switch from her circuit.

She replaces the switch with an object shown in the table.

Tick (✓) the box if the lamps work.

| object to replace switch | lamps work |
|---|------------|
|  a piece of chalk | |
|  plastic pen | |
|  an iron nail | |
|  a coin | |
|  wooden ruler | |

[2]





6 (a) Nadine and Gita are discussing the movement of the Earth.

They are discussing five ideas.

Tick (✓) the **two** correct statements.

The Earth orbits the Sun every 24 hours.

The Earth spins on its axis once every 24 hours.

The Sun spins on its axis every 24 hours.

The Earth orbits the Sun once every 365 days.

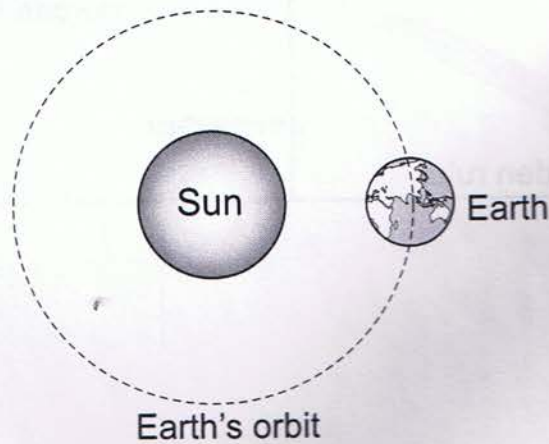
The Sun orbits the Earth once every 365 days.

[1]

(b) The diagram shows the positions of the Sun and the Earth in December.

Where will the Earth be in June?

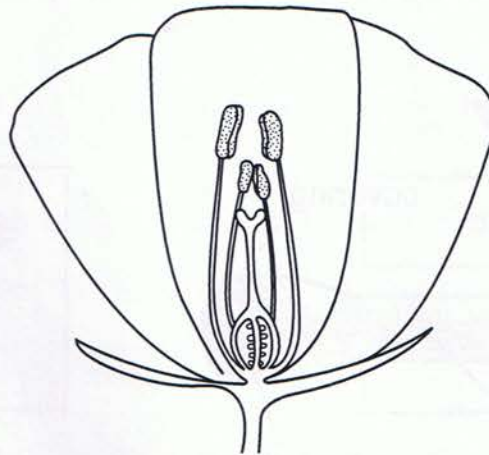
Draw a cross (X) on the diagram.



[1]



7 Here is a diagram of a flower.



(a) To make seeds, pollen and ova join together.

What is this process called?

..... [1]

(b) Why is it important that seeds are dispersed away from the parent plant?

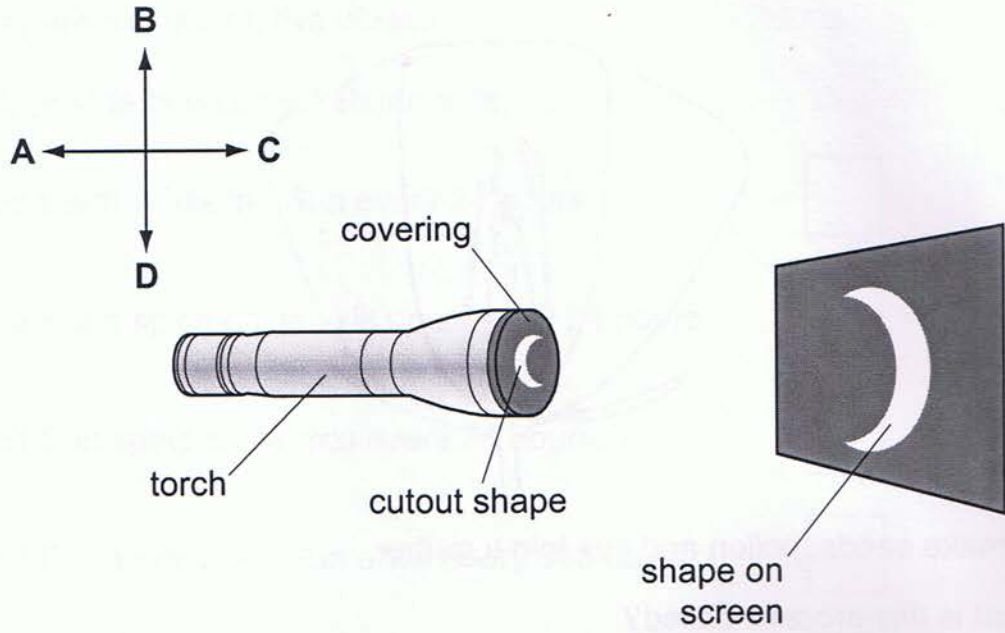
.....
..... [1]

DO NOT WRITE IN THIS MARGIN





8 A torch has a covering on the end to make shapes on a screen.



(a) Why does the covering make a shadow on the screen?

..... [1]

(b) The torch is moved to make a smaller shape on the screen.

Which **letter** shows the direction the torch is moved?

..... [1]

(c) What word is used to describe materials that **do not** let light through?

..... [1]

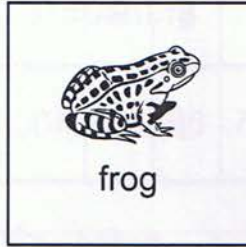


9 Animals and plants are found in different habitats.

(a) Draw a line from each picture to the habitat it is found in.

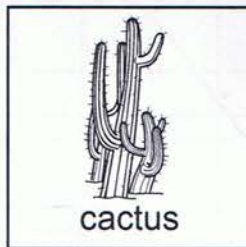
picture

habitat



desert

sea



pond

volcano

[2]

(b) Frogs need oxygen from their habitat.

What two **other** things does the frog need from its habitat?

1.

2.

[2]



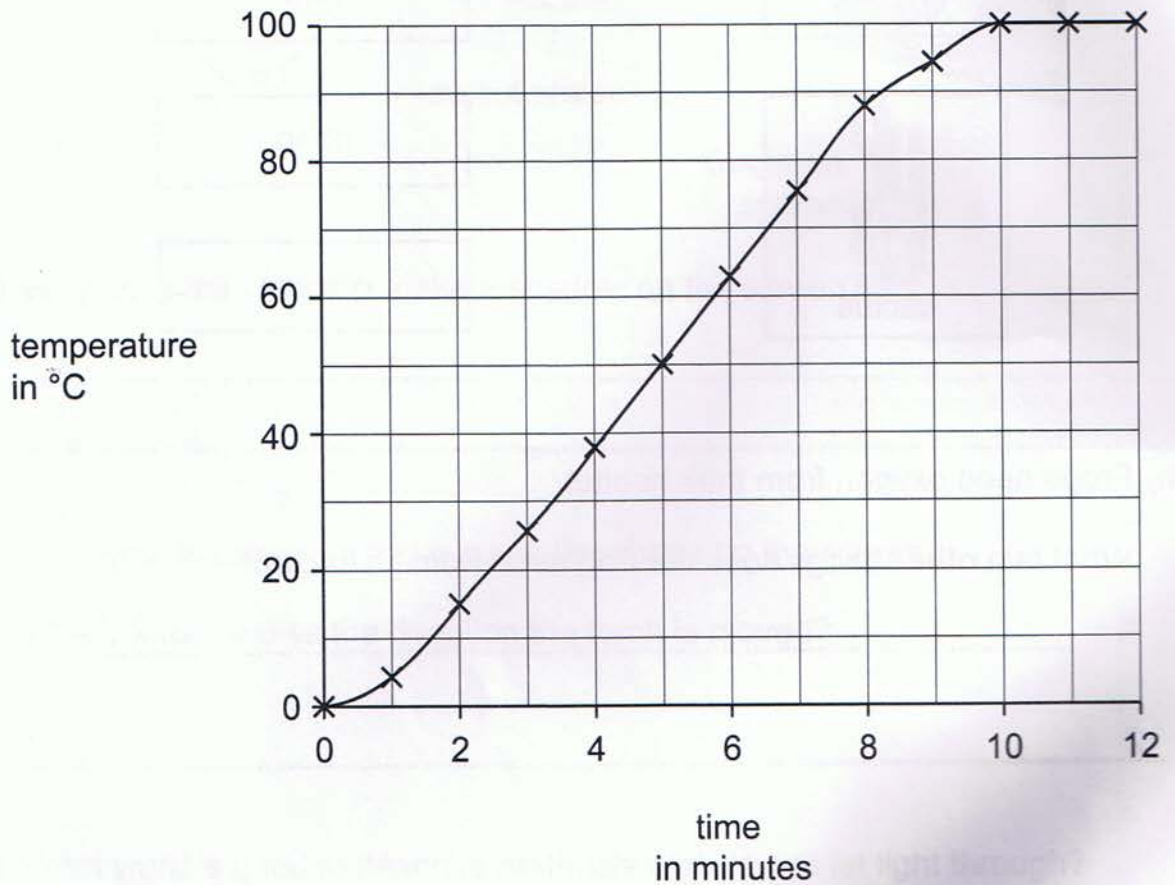


10 Roberto and Jill are exploring the effect of heat on melting ice.

They warm the ice and measure the temperature every minute.

Here are their results

| | | | | | | | | | | | | | |
|-------------------|---|---|----|----|----|----|----|----|----|----|-----|-----|-----|
| time in minutes | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| temperature in °C | 0 | 4 | 15 | 26 | 38 | 50 | 62 | 75 | 88 | 94 | 100 | 100 | 100 |



(a) Use the graph to find the temperature at 2 ½ minutes.

..... °C

(b) At 11 minutes, what is the process happening in the container?

.....
.....



11 Units are useful when you measure things.

(a) Complete the table.

The first two have been done for you.

| quantity | unit | symbol |
|----------|--------|--------|
| distance | metre | m |
| time | second | s |
| force | ..... | ..... |
| mass | ..... | ..... |
| weight | ..... | ..... |

[2]

(b) Different equipment are used to measure things.

Which piece of equipment can be used to measure the volume of sound?

.....

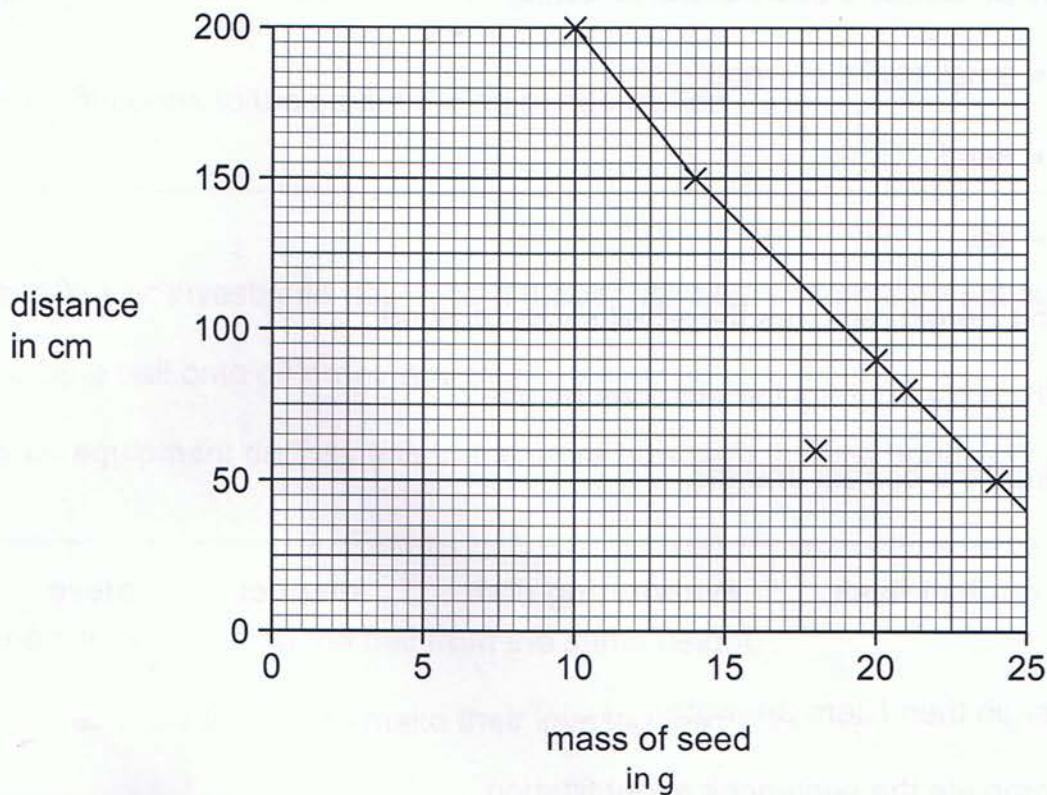
[1]



DO NOT WRITE IN THIS MARGIN



Janey and Danni plot their results on a graph.



(b) They find one result does not fit the pattern.

How can they make their results more reliable?

.....

..... [1]

(c) Janey had said 'I think the heavier seeds roll further'.
Danni had said 'I think the lighter seeds roll further'.

Which girl, Janey or Danni, had made the correct prediction?

Explain your answer.

.....

..... [1]





13 Sergio wants to purify some water.

The water contains some of the following:

- small sticks of wood
- sand
- salt

(a) First Sergio removes the small sticks of wood.

Which piece of equipment does he use?

Circle the correct answer.

- conical flask evaporating dish magnet sieve**

[1]

(b) Sergio then filters the water.

Complete the sentences about filtering.

Choose words from the list.

- colourless insoluble soluble solution white**

Sand is removed by filtering because sand is in water.

Salt passes through the filter paper because salt is in water.

[2]

Next Sergio heats salt solution to form steam.

The steam is then condensed.



(c) What is the name of the process that makes steam from salt solution?

..... [1]

(d) What happens to the steam during condensation?

..... [1]

14 Erik and Xavier investigate how high a rubber ball bounces on different surfaces.

They drop a ball onto different surfaces.

(a) What equipment do they use to measure how high the ball bounces?

..... [1]

(b) Eric and Xavier drop the ball from the same height.

What else did they do to make their investigation fair?

..... [1]

(c) Here are their results.

| surface | height ball bounces in cm |
|----------|------------------------------|
| concrete | 74 |
| grass | 60 |
| mud | 53 |
| tarmac | 64 |

Write down the surfaces in order of how high the ball bounces.

Start with the highest first.

highest

.....

.....

lowest

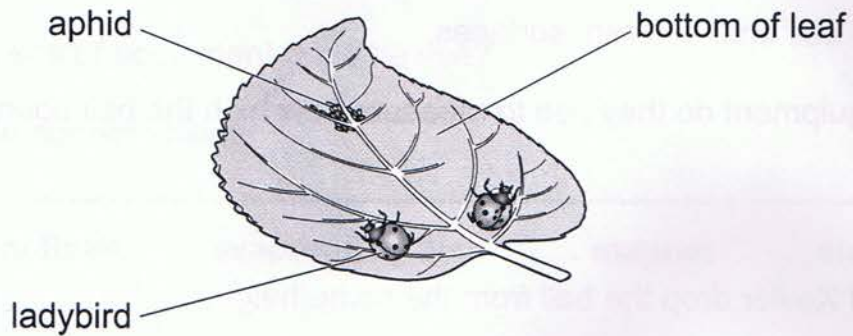
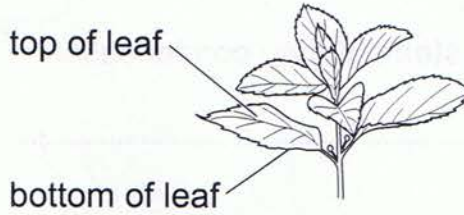
..... [1]



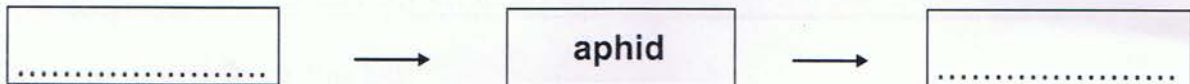


15 Hina and Amina investigate where different animals live on plants.

They look at the leaves on plants.



(a) Complete the food chain for this picture.



[1]

(b) Hina predicts there will be more aphids than ladybirds.

Why does she make this prediction?

..... [1]

(c) Amina predicts there will be more aphids on the bottom of the leaves than the top of the leaves.

Why does she make this prediction?

..... [1]

(d) Some time later Hina notices the leaves do not have ladybirds on them anymore.

Why do you think this has happened?

..... [1]



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SCIENCE

0846/02

Paper 2

October 2013

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

* 5 1 1 5 0 8 8 4 9 5 *

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

DO NOT WRITE IN ANY BARCODES.

Answer **all** questions.

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

You should show all your working in the booklet.

The total number of marks for this paper is 50.

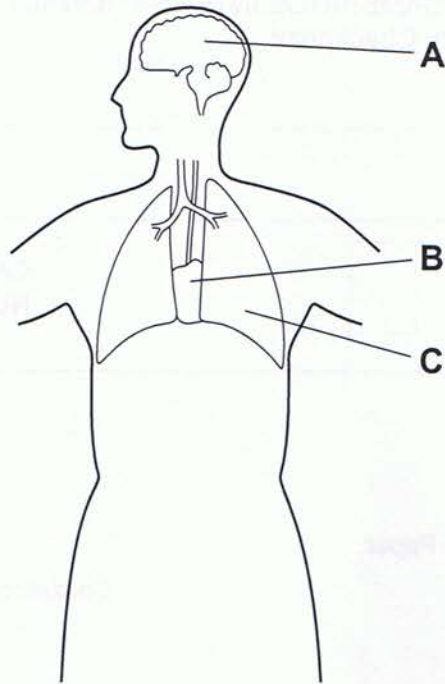
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| Total | |

This document consists of **19** printed pages and **1** blank page.





1 The diagram shows the location of some human organs.



(a) Write down the name of the organ **A**.

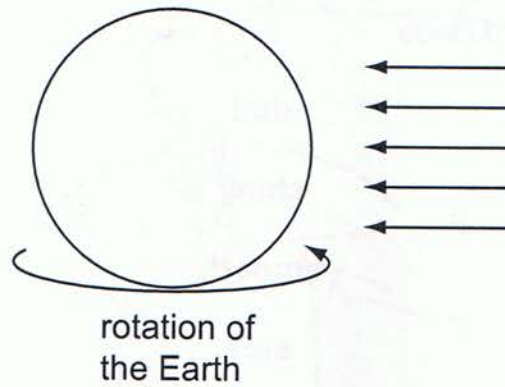
..... [1]

(b) What is the function of organ **B**?

..... [1]



3 The diagram shows the Earth with rays of light reaching it from the Sun.



(a) Gently shade in that part of the Earth that is experiencing night time. [1]

(b) Write the letter **N** at any point on the diagram where the time will be approximately noon and a letter **M** where the time will be approximately midnight. [2]



4 Joe is in his kitchen on a cold day boiling pasta.

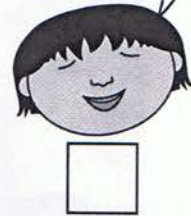
The windows have misted up.

His friends try to explain what has happened.

Steam from the boiling water condensed on the windows.



The windows got hot and sweaty because it is hot in here.



The windows need a clean then they will not mist up.



The water vapour in the air has condensed on the cold windows.



Tick (✓) **two** statements that explain best what has happened.

[2]

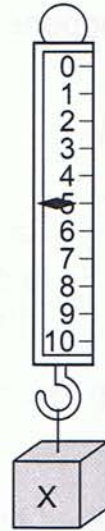


DO NOT WRITE IN THIS MARGIN



5 Jamil has a block of wood.

He uses a force meter as shown in the diagram.



(a) What is he measuring?

Circle the correct answer.

friction

mass

upthrust

weight

[1]

(b) Write down the measurement shown on the force meter.

..... N [1]



7 Food chains tell us about feeding relationships.

This chain has **four** living things, (**A, B, C** and **D**).



Use this chain to answer the following questions.

(a) What do the arrows mean?

Tick (✓) **one** box.

hunts

is bigger than

is food for

is more than

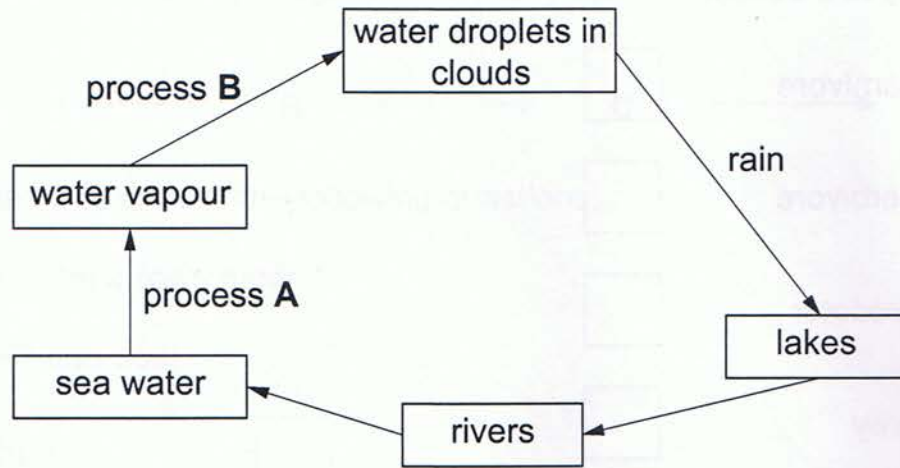
[1]

(b) What word describes living thing **A**?

..... [1]



8 The flow chart shows part of the water cycle.



(a) What is the name of process A?

..... [1]

(b) What is the name of process B?

..... [1]

(c) Sometimes it is so cold that the water in a lake becomes ice.

What is the name of this process?

..... [1]

(d) Sea water is boiled in a beaker for a long time.

What would you see?

..... [1]



10 There are five objects below.

They are either **transparent** or **opaque**.

Write down the objects into the correct box.

window

tin can

spectacles

microscope slide

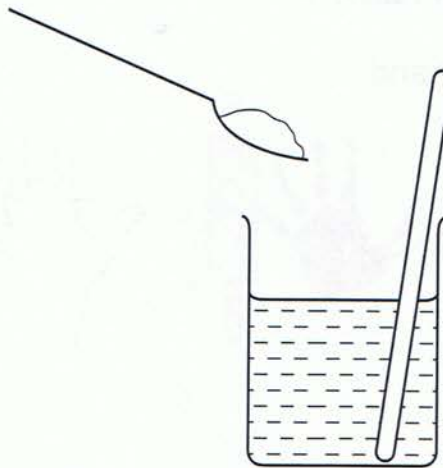
car tyre

| transparent | opaque |
|-------------|--------|
| | |
| | |
| | |
| | |
| | |

[2]



11 Rachel and Imre are adding two different solids to two different liquids.



Here are their results.

| | chalk | sugar |
|---------|-----------------|-----------------|
| vinegar | fizzing | nothing happens |
| water | sinks to bottom | dissolves |

(a) Which solid changes irreversibly in **vinegar**?

..... [1]

(b) Which solid changes reversibly in **water**?

..... [1]

(c) Which solid and liquid makes a new substance?

Tick (✓) the correct box.

vinegar and chalk

water and chalk

water and sugar

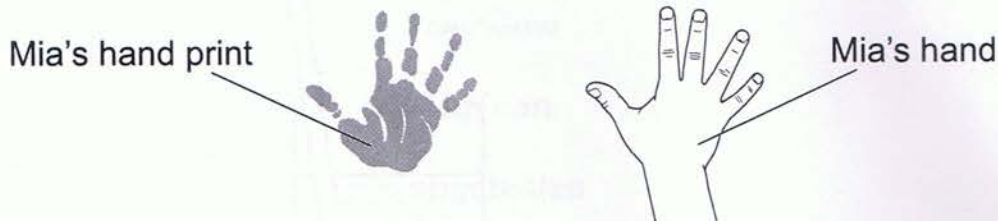
[1]



12 Mia is aged 7 years.

She wants to measure her hand.

She makes a print of her hand.



She makes a hand print every month for 12 months.

(a) Mia wants to measure how much her hand changes.

What does she measure on the hand print?

..... [1]

(b) Why is it important to make the **same** measurement each month?

..... [1]

(c) Write down one way Mia makes the measurements **more** reliable?

..... [1]

(d) Predict what will happen to Mia's hand size after 12 months.

Circle the correct answer.

stays the same **decreases** **increases**

[1]

(e) What is the name of the hard part **inside** the hand?

Circle the correct answer.

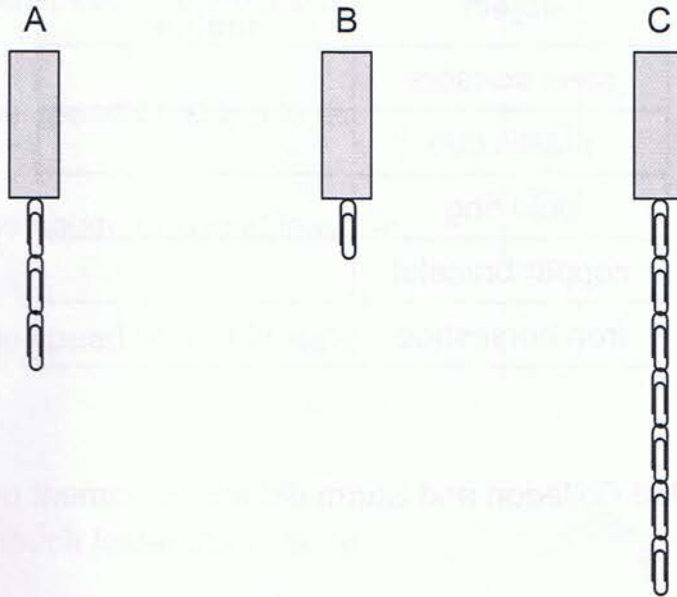
blood **bone** **muscle** **skin**

[1]



13 Alina and Troy investigate the strength of magnets.

Here are their results.



(a) Which is the strongest magnet?

Circle the correct answer.

A

B

C

[1]

(b) What **two** factors must they keep the same to make it a fair test?

1

2

[2]



DO NOT WRITE IN THIS MARGIN



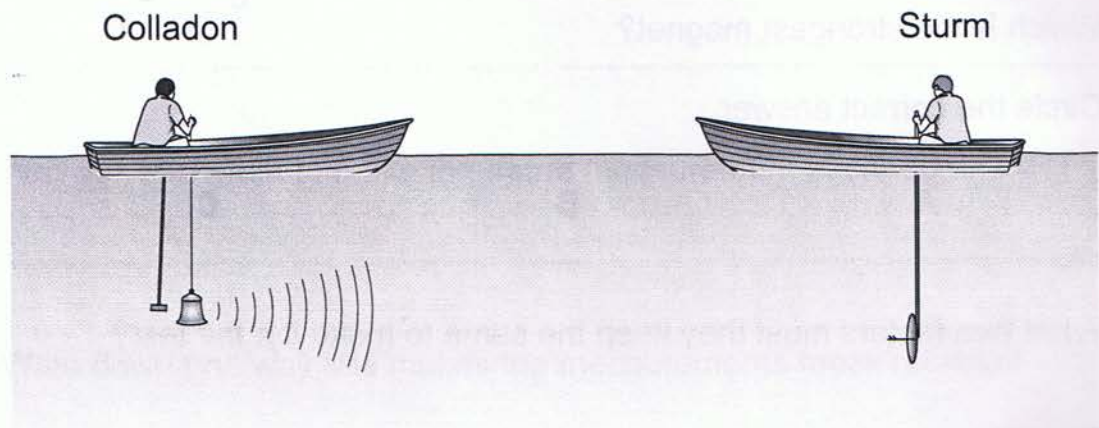
(c) Complete the table to show what objects are attracted to a magnet.

Tick (✓) the **two** correct boxes.

| object | attracted to magnet |
|-----------------|---------------------|
| steel scissors | |
| plastic cup | |
| gold ring | |
| copper bracelet | |
| iron horseshoe | |

[2]

14 Two scientists called Colladon and Sturm did an experiment on Lake Geneva in 1826.



This is what they did:

- Colladon struck a bell underwater.
- When the bell was struck he set off a flash of light.
- Sturm was nine miles away. He listened for the bell underwater.
- Sturm recorded the time between seeing the flash and hearing the bell.

This experiment was conducted at night.



(a) What were they trying to find out?

Tick (✓) the correct box.

The speed of the water.

The speed of sound in air.

The speed of sound in water.

The speed of light in water.

[1]

(b) Light travels much faster than sound.

Tick (✓) the box next to the correct conclusion.

He hears the bell before he sees the flash of light.

He sees the flash of light before he hears the bell.

He hears the bell at the same time as he sees the flash of light.

[1]

(c) Why was the experiment carried out at night?

.....

[1]

(d) Why do they repeat their experiment three times?

.....

[1]

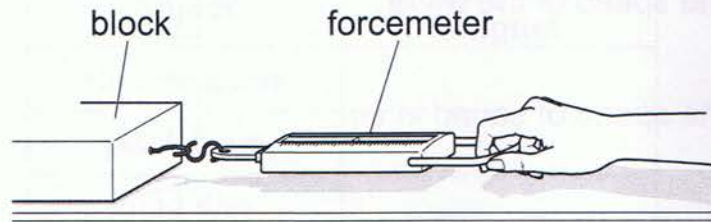


DO NOT WRITE IN THIS MARGIN



15 Noa and Tamar investigate friction.

They pull a block using a forcemeter.



(a) Draw an arrow on the diagram to show the direction of frictional force. [1]

(b) What is force measured in?

Circle the correct answer.

cm^3

Kg

m^2

N [1]

Noa and Tamar repeat the investigation using different surfaces.

Here are their results.

| surface | force needed |
|------------------|--------------|
| table top | 3.0 |
| paper towel | 3.3 |
| fine sand paper | 3.4 |
| rough sand paper | 3.7 |

(c) Complete the sentence to write a conclusion for this investigation.

The rougher the surface, the the force needed. [1]



(d) Predict what will happen if oil is added to the surface of the table top.

Tick (✓) **one** box.

the force needed will be about 2.6

the force needed will be about 3.0

the force needed will be about 3.1

the force needed will be about 3.6

[1]

16 Rowan and Lark investigate how the number of stirs affects the time it takes for sugar to dissolve in water.



Here are their results.

| | | | | |
|--------------------------------------|----|----|----|----|
| number of stirs | 5 | 10 | 15 | 20 |
| time it takes to dissolve in seconds | 49 | 41 | 27 | 15 |

(a) Write down **two** things they must do to make their investigation a fair test.

1

2

[1]

(b) Write down **one** other factor they could change which affects how quickly the same mass of sugar dissolves in water.

.....

[1]



DO NOT WRITE IN THIS MARGIN



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SCIENCE

0846/01

Paper 1

October 2015

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

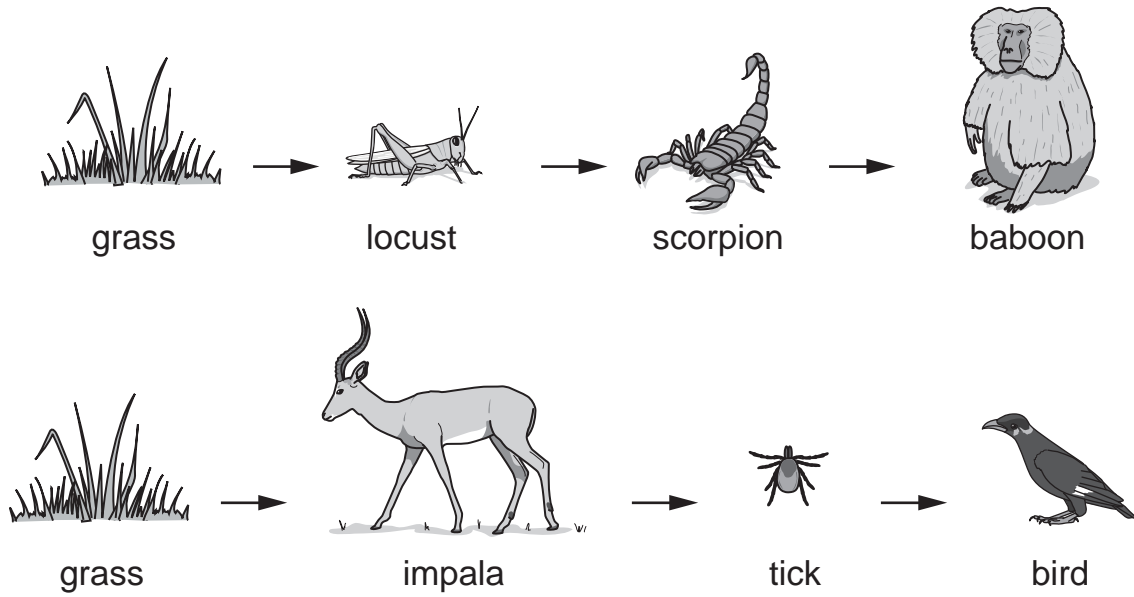
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.
You should show all your working in the booklet.
The total number of marks for this paper is 50.

This document consists of **22** printed pages and **2** blank pages.

1 There are food chains in the jungle.



(a) Which is a producer?

Circle the correct answer.

- bird** **grass** **locust** **scorpion**

[1]

(b) What does the impala eat?

..... [1]

(c) What is eaten by the scorpion?

..... [1]

(d) Circle the word that describes the baboon in the food chain.

- producer** **predator** **prey**

[1]

(e) The baboon also eats ticks.



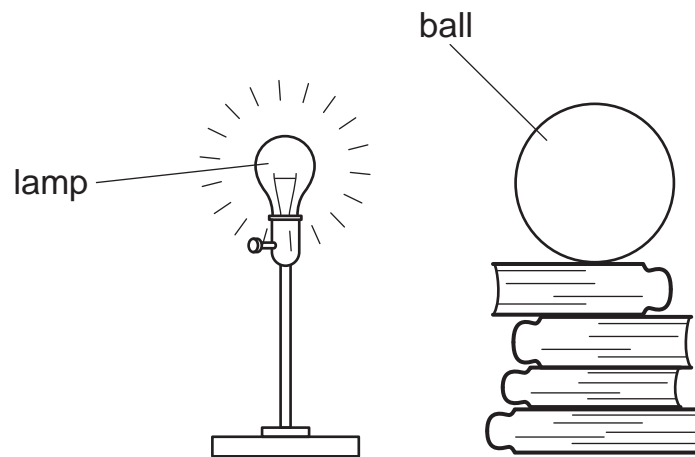
baboon



tick

On the picture draw an arrow (→) to show that the baboon eats the tick. [1]

2 The teacher makes a model of the Sun and Earth.



The lamp in the model is the Sun.

The ball in the model is the Earth.

(a) Draw the letter **D** on the ball to show where it is day.

Draw the letter **N** on the ball to show where it is night.

[1]

(b) The teacher uses the model to show how day becomes night.

Circle what she does to the model.

spins the lamp on its own axis

spins the ball on its own axis

moves the lamp around the ball

moves the ball around the lamp

[1]

3 Ahmed and Lily are playing a game.

They are trying to identify different objects without looking at them.



They have a bag with an object inside the bag.

(a) They try to guess what the object is using their hands.

What sense are they using?

..... [1]

(b) Complete the sentence.

Choose from the words.

conclusion

prediction

question

result

When they guess what the object is this is called a [1]

(c) They are allowed to look and see if they have guessed correctly.

What sense are they using?

..... [1]

4 Angelique has a sound meter.

(a) Circle the thing she measures.

the mass
of an object

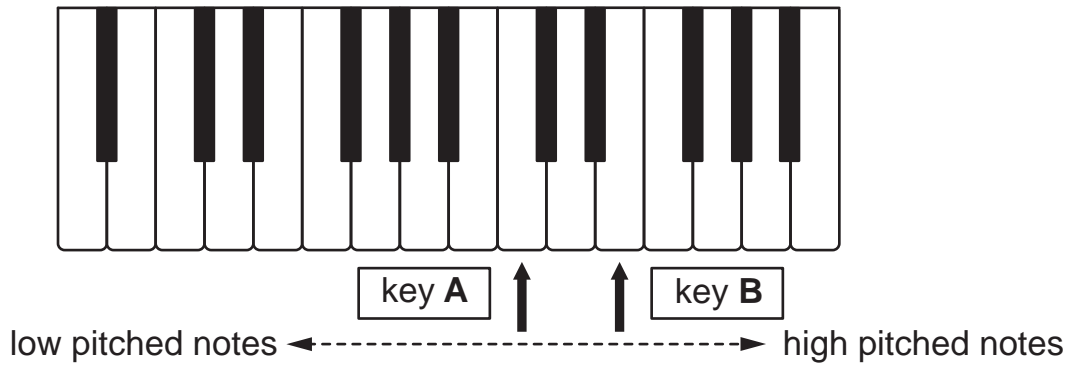
the weight
of an object

the loudness
of a sound

the speed
of a sound

[1]

(b) Here is a picture of a piano keyboard.



Angelique pushes key **A** and key **B**.

She uses the same force each time.

Tick (✓) the correct sentence.

Key **A** has a higher pitch than key **B**.

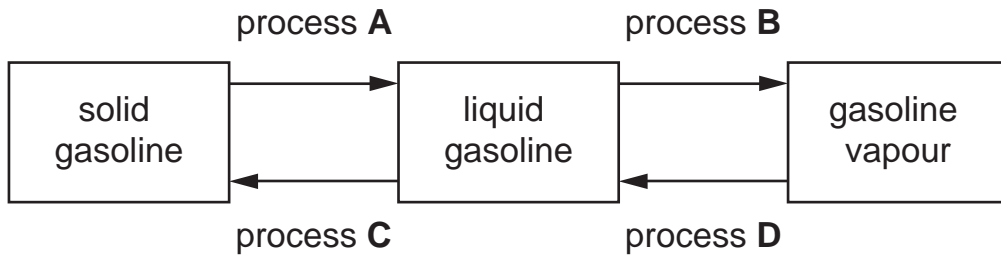
Key **B** has a higher pitch than key **A**.

Key **A** is louder than key **B**.

Key **B** is louder than key **A**.

[1]

5 Gasoline can exist as a solid, liquid or a gas.



(a) What is the name of process **A** in the diagram?

..... [1]

(b) What is the name of process **B** in the diagram?

..... [1]

(c) What is the name of process **C** in the diagram?

..... [1]

(d) What is the name of process **D** in the diagram?

..... [1]

6 Materials are chosen for certain purposes because of their properties.

Glass is used to make windows.

This is because glass is colourless.

Complete each of the following sentences about the uses of materials.

Choose from the list of properties.

attracted to a magnet

not attracted to a magnet

brittle (breaks easily)

flexible (bends easily)

not poisonous

poisonous

insoluble in water

soluble in water

strong

weak

a good electrical conductor

a poor electrical conductor

(a) This bridge is made from steel.



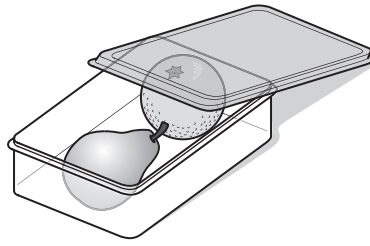
This is because steel is [1]

(b) This bar magnet is made from steel.



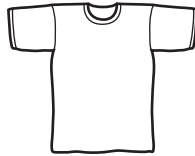
This is because steel is [1]

(c) This food box is made of plastic.



This is because plastic is [1]

(d) This T-shirt is made from cotton.

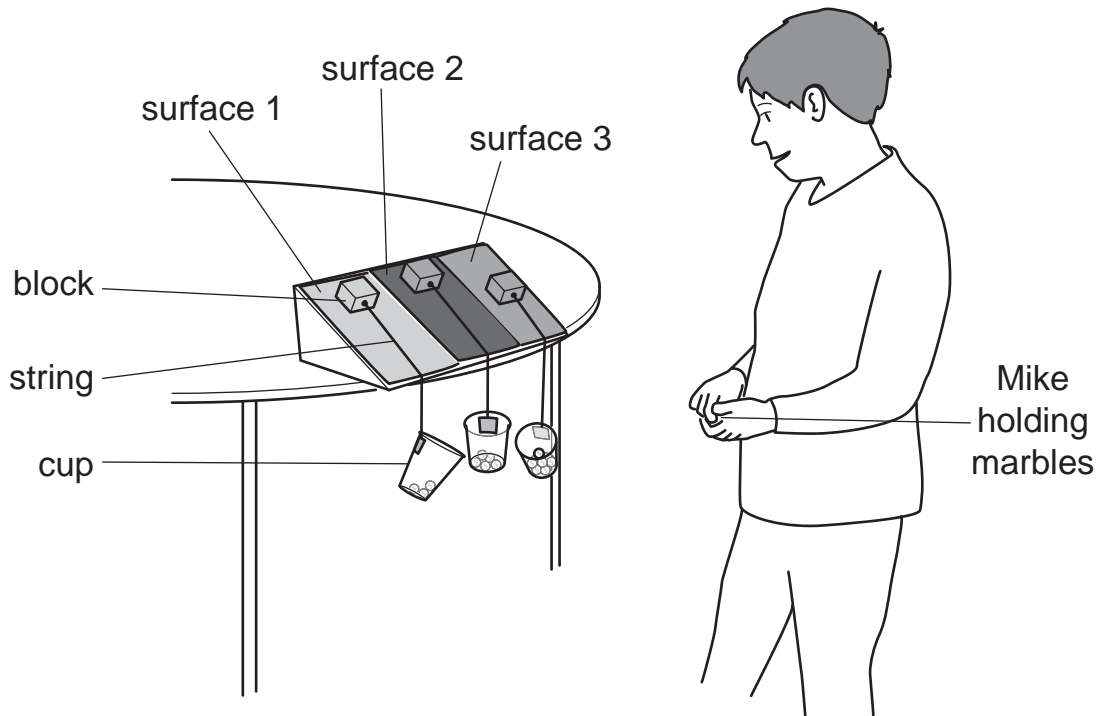


This is because cotton is [1]

(e) This cable is made using copper wire.



This is because copper is [1]

7 Mike investigates friction.

- he puts a block on three different surfaces
- he sticks a piece of string and a plastic cup to each block
- he puts one marble in each cup
- he adds more marbles until the blocks move.

(a) Here are Mike's results.

surface 1 = 5 marbles

surface 2 = 6 marbles

surface 3 = 2 marbles

Complete the table of his results.

| | |
|----------------|-------|
| surface | ..... |
| 1 | ..... |
| ..... | 6 |
| | |

[2]

(b) Complete the sentences.

Choose from the following.

1

2

3

5

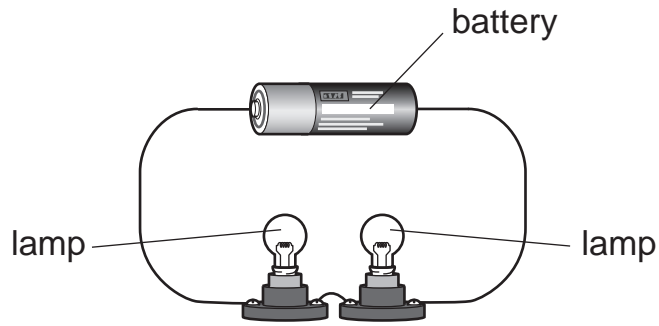
6

The surface with the **most** friction is surface

The **smoothest** surface is surface because
it takes marbles to move the block.

[2]

8 Mia makes a series circuit.



Mia makes different series circuits.

She uses the same size batteries.

She uses the same size lamps.

(a) Complete the table.

Choose from the following words.

dim

normal

bright

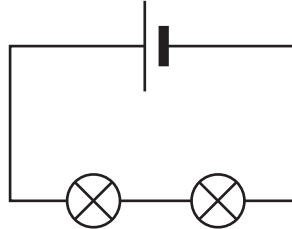
| number of batteries | number of lamps | brightness of lamps |
|---------------------|-----------------|---------------------|
| 1 | 2 | normal |
| 2 | 2 | ..... |
| 1 | 3 | ..... |

[2]

(b) Mia draws a circuit diagram.

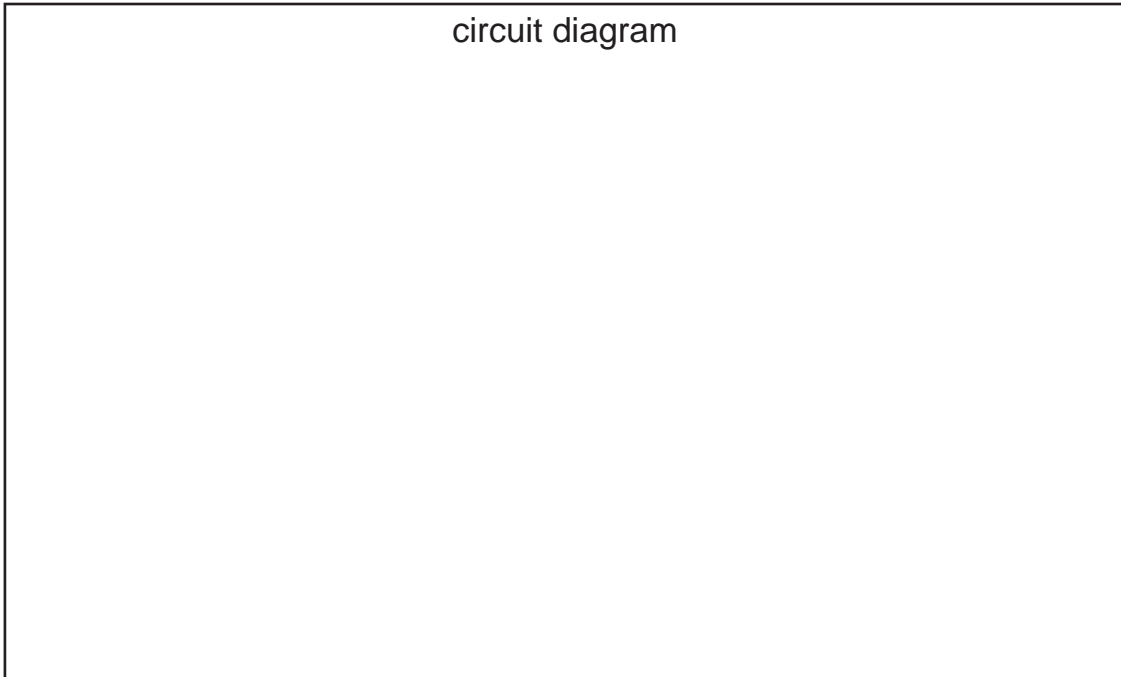
It has 1 battery and 2 lamps.

circuit diagram



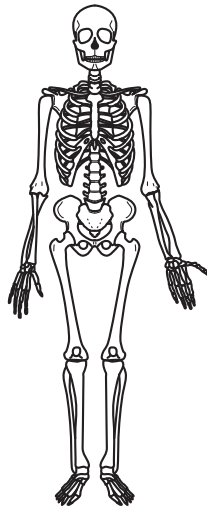
Draw a circuit diagram for 1 battery and 3 lamps.

circuit diagram



[1]

9 Humans have a skeleton inside their body.



(a) Complete the sentences.

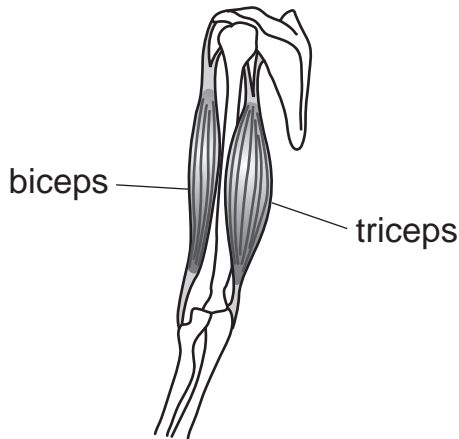
The protects the brain.

[1]

The protects the lungs.

[1]

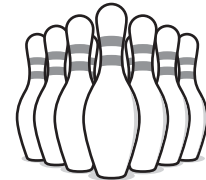
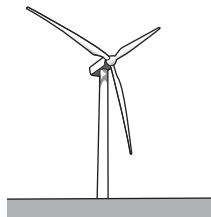
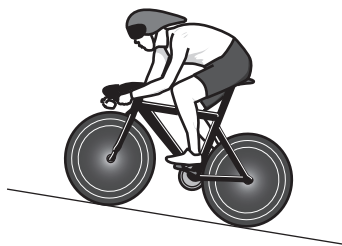
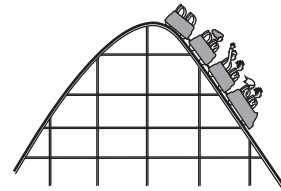
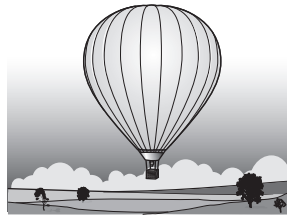
(b) Muscles are used to make bones move.



What happens to your biceps muscle when you bend your arm?

..... [1]

10 Here are some pictures.



(a) Circle the pictures that have energy because they are moving.

The first one has been done for you.

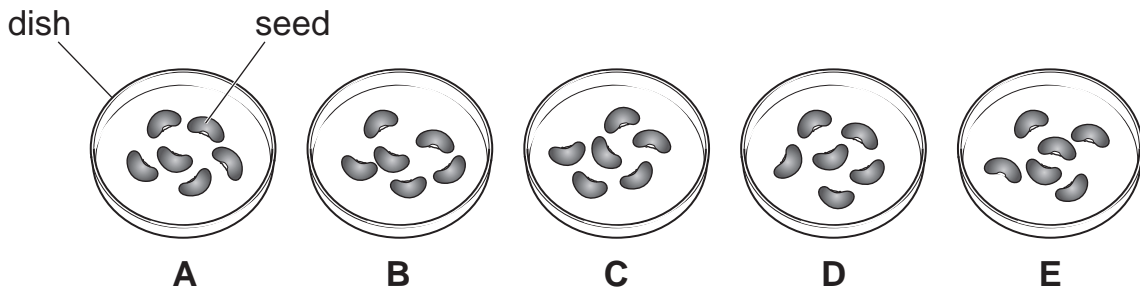
[2]

(b) Describe how the animal in the first picture can increase its movement energy.

..... [1]

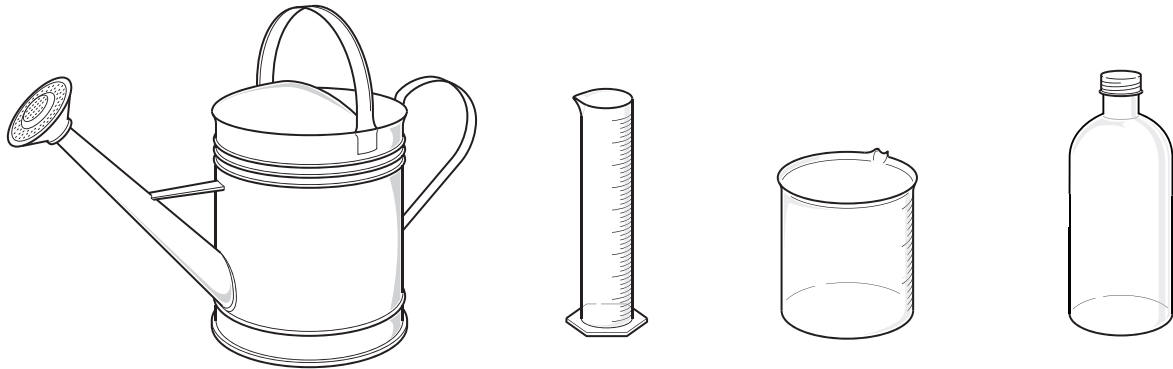
11 Jamila and Safia investigate the germination of seeds.

They put six seeds in each dish.



(a) Safia pours the same **volume** of water into each dish.

Circle the apparatus she uses to measure the volume accurately.



[1]

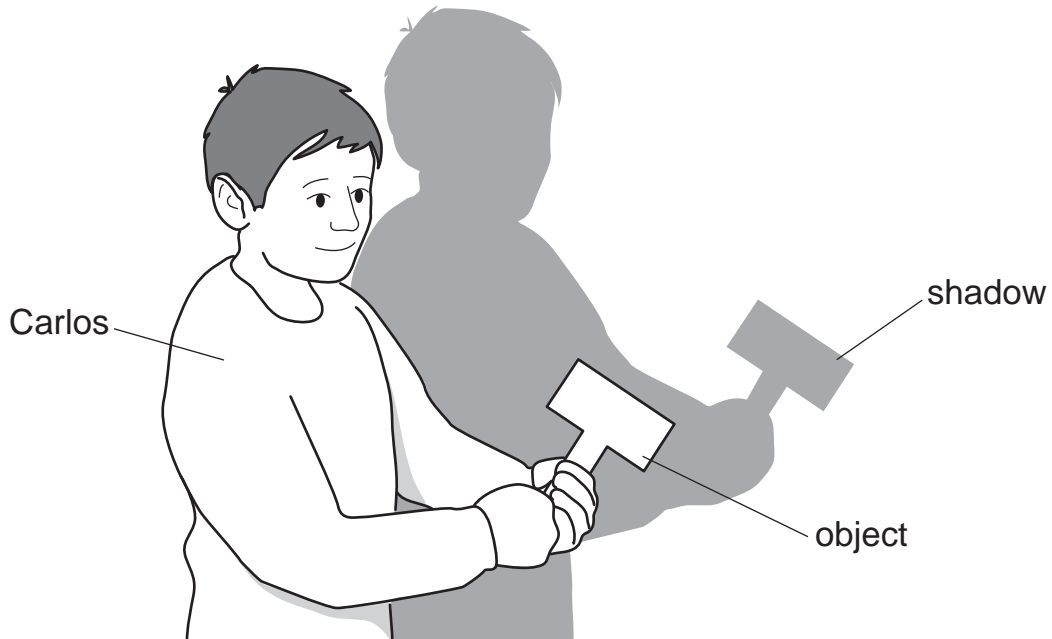
(b) Jamila puts the dishes in areas with different temperatures.

She measures the temperature of each dish.

What equipment does she use?

..... [1]

12 Carlos uses different materials to investigate shadows.



(a) Look at the shadow.

Circle the correct description of the object.

the object is opaque

the object is transparent

the object is transparent and opaque

[1]

(b) Carlos moves closer to the source of light.

What happens to the size of the shadow?

Circle the correct answer.

decreases

increases

stays the same

[1]

(c) Carlos stops moving.

The intensity of the light is increased.

What happens to the size of the shadow?

Circle the correct answer.

decreases

increases

stays the same

[1]

13 Humans can have positive and negative effects on the environment.

A new road is being built near your school.

Complete the table to show if the effects are positive or negative.

| reason | positive? (tick ✓) | negative? (tick ✓) |
|-----------------|-------------------------------|-------------------------------|
| creates jobs | | |
| removes trees | | |
| fills in a pond | | |

[2]

14 Aiko investigates the time it takes sugar cubes to dissolve in water.

This is what she does in her first experiment.

- adds 100 cm³ of water to a beaker
- adds one sugar cube to the water
- stirs the water and sugar cube with a glass rod
- measures the time it takes for the sugar cube to dissolve.

(a) What piece of equipment does she use to measure the time?

..... [1]

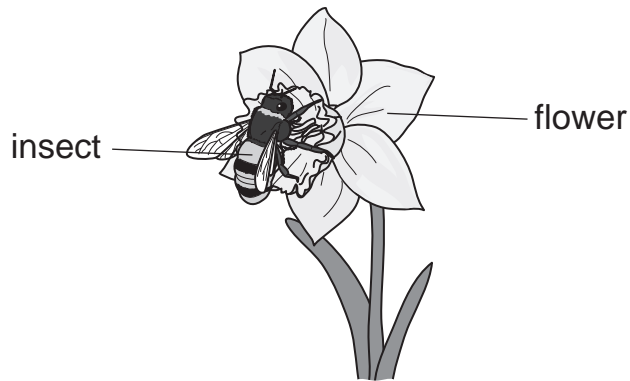
(b) In her second experiment she wants to use two sugar cubes instead of one.

She wants to do a fair test.

What volume of water should she use?

..... cm³ [1]

15 Many plants have flowers.



(a) Which **two** parts of the flower attract insects?

Circle the **two** correct answers.

carpel

nectary

petal

sepal

stigma

[1]

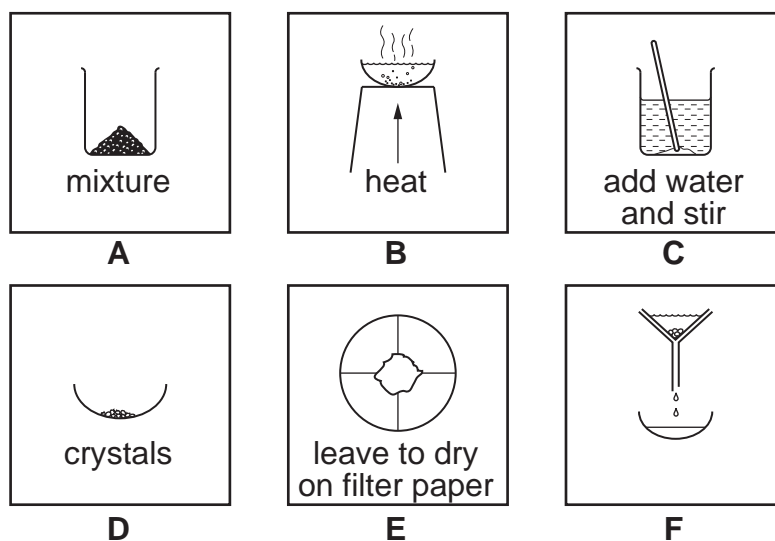
(b) Complete the sentence.

Pollen fertilises the ovum. This produces [1]

16 Gabriella wants to separate a mixture of salt and sand.

The diagram shows the steps she uses.

They are not in the correct order.



(a) Put the steps in the correct order.

Two have been done for you.

| | | | | | |
|---|--|--|---|--|--|
| A | | | E | | |
|---|--|--|---|--|--|

[2]

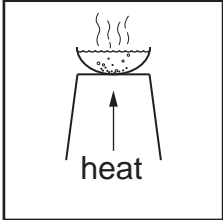
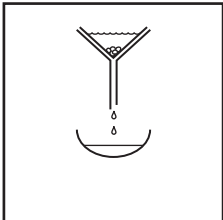
(b) Which solid substance is on the filter paper in step E?

.....

[1]

(c) Steps **B** and **F** are processes.

Draw a line between the **step** and the **process** that happens.

| step | process |
|---|--------------|
|  B | condensation |
|  F | dissolution |
| | evaporation |
| | filtration |

[2]

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* 8 5 2 8 0 9 1 1 8 5 *

SCIENCE

0846/02

Paper 2

October 2015

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.
You should show all your working in the booklet.
The total number of marks for this paper is 50.

This document consists of **18** printed pages and **2** blank pages.

1 Complete the sentences about food chains.

Choose from the following words.

consumer

predator

prey

producer

A food chain starts with a

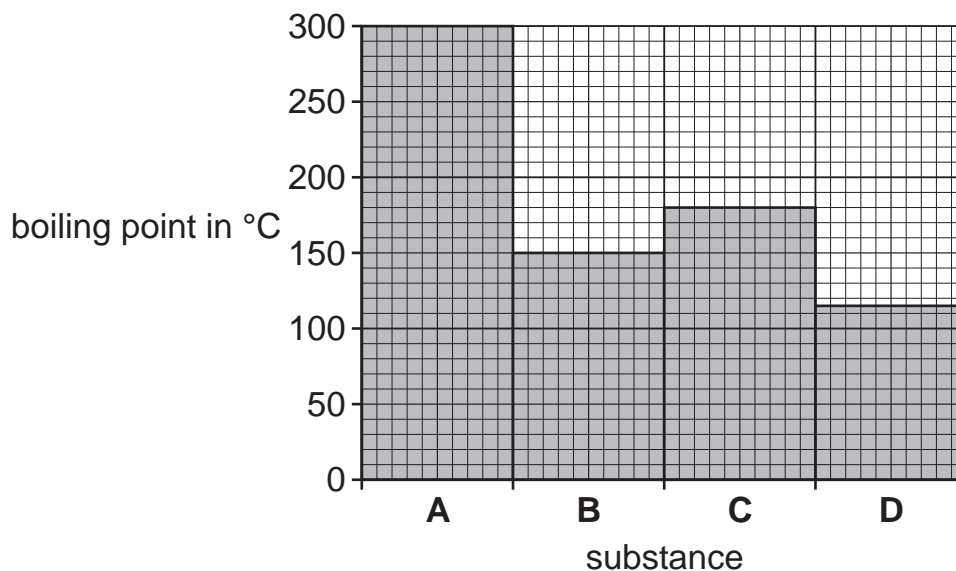
Any animal eaten by another animal is their

An animal that eats something else in the food chain is a

An animal that eats another animal is a

[3]

2 This bar chart shows the boiling points of some substances.



(a) What is the boiling point of substance **A**?

..... °C [1]

(b) Which substance has the lowest boiling point?

..... [1]

(c) What happens to a liquid when it boils?

..... [1]

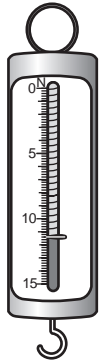
(d) Water is not shown on the bar chart.

What is the boiling point for water?

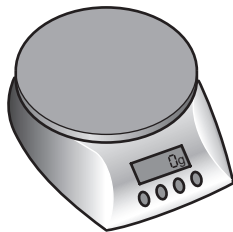
..... °C [1]

3 Oliver measures how loud some sounds are.

(a) Circle the apparatus he uses.



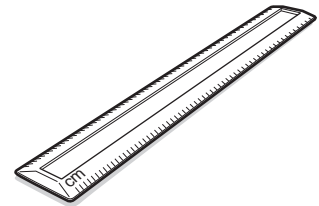
force meter



balance



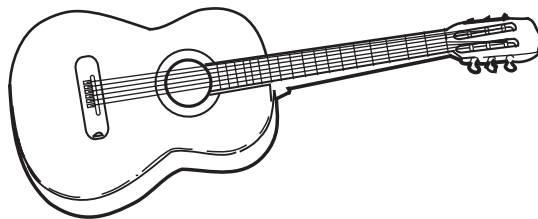
sound meter



ruler

[1]

(b) Oliver picks up a guitar.



guitar

What must he do to the guitar to produce a sound?

..... [1]

(c) There is a group of children playing violins.



The teacher wants them to produce a louder sound.

What **two** things would make this happen?

Tick (✓) the **two** correct sentences.

Play the violins harder.

Play the violins softer.

Have more violins playing.

Have less violins playing.

[1]

4 Keys can be used to identify plants.

Here is the key for some plants.



A



B



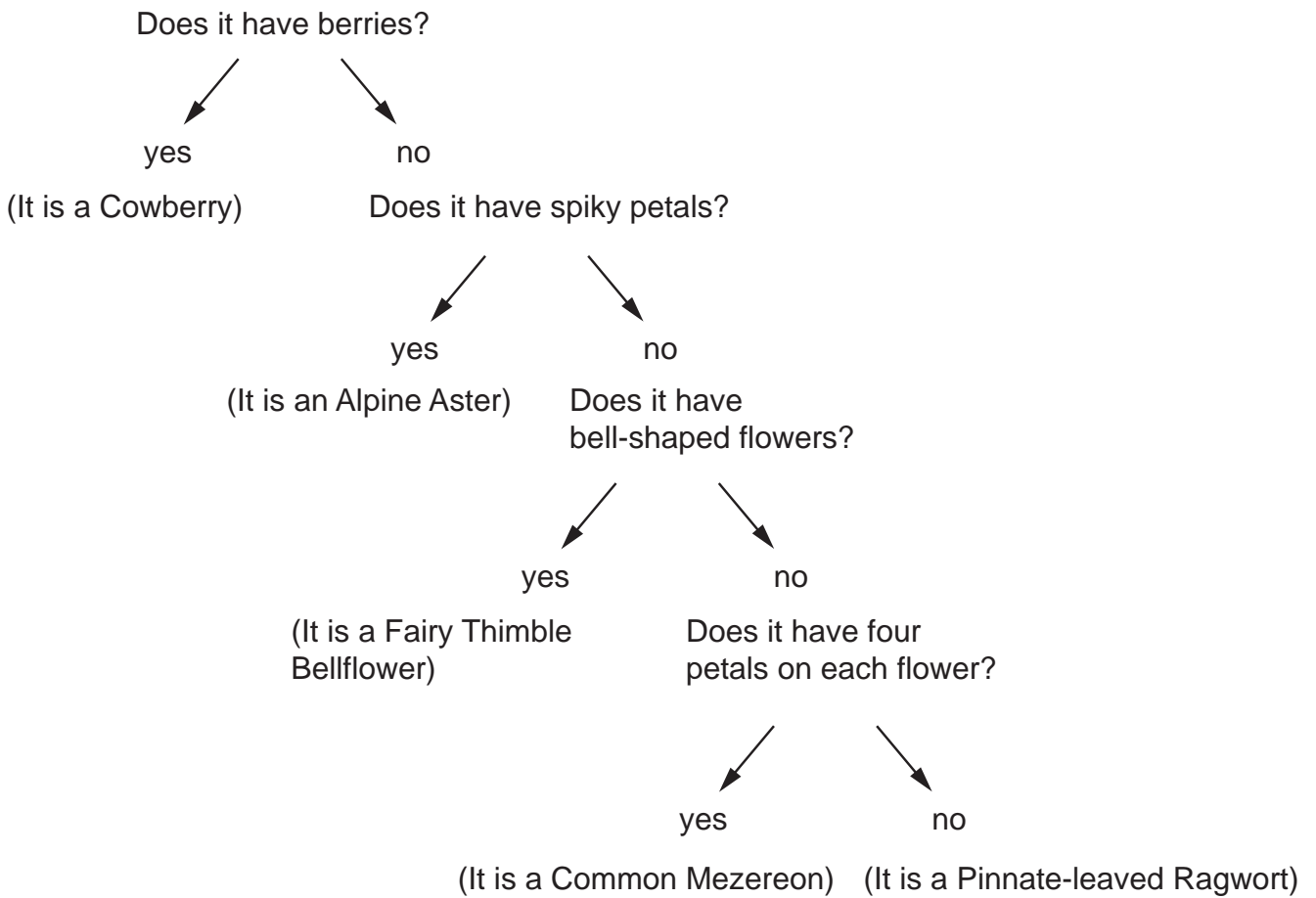
C



D



E



Use the key to identify the plants.

- A =
- B =
- C =
- D =
- E = [3]

5 Chen wants to separate a mixture of salt, sand and iron powders.

(a) First of all Chen decides to separate the iron from the mixture.

Put a circle around the method he uses.

evaporation

filtration

magnetic attraction

sieving

[1]

(b) Chen then decides to separate the sand from the salt and sand.

He adds water to the mixture and then stirs the mixture for two minutes.

Put a circle around the method he then uses to obtain the sand.

evaporation

filtration

magnetic attraction

sieving

[1]

(c) To finish the separation Chen gets salt from the salt solution.

Put a circle around the method he uses to obtain the salt.

evaporation

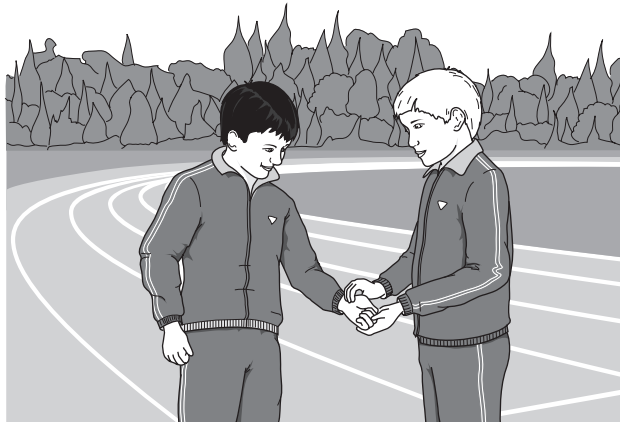
filtration

magnetic attraction

sieving

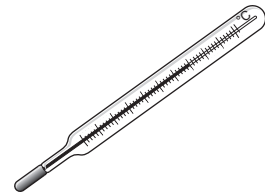
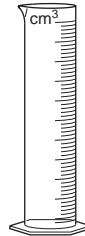
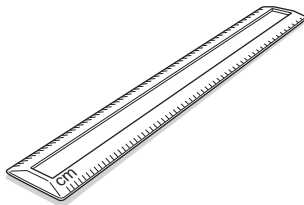
[1]

6 Pierre and Yuri investigate how exercise changes pulse rate.



(a) What equipment will they need to measure pulse rate?

Circle the correct equipment.



[1]

(b) Which unit is a correct measurement of pulse rate?

Circle the correct answer.

beats per minute

beats per second

minutes per beat

seconds per beat

[1]

(c) Pierre runs for 1 minute.

Complete the sentence using one of these words.

decrease

increase

stay the same

Pierre thinks his pulse rate will [1]

(d) What is the sentence above?

Circle the correct answer.

conclusion

method

prediction

result

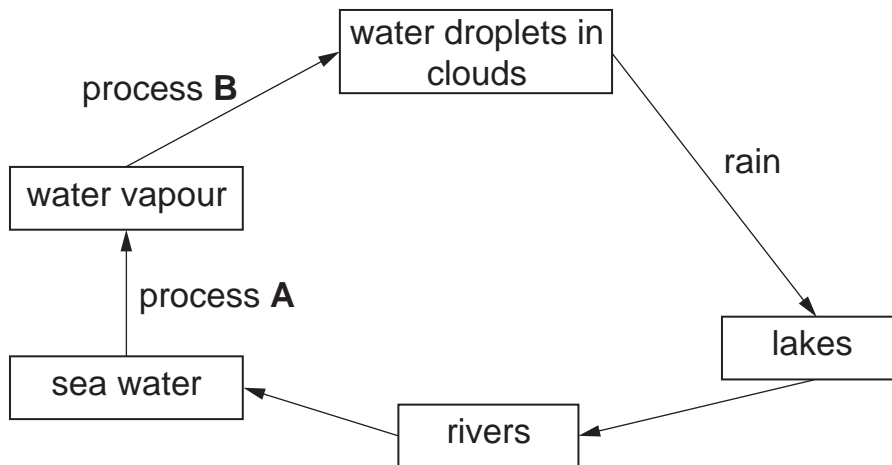
[1]

(e) Pierre runs for 1 minute again.

Why is it a good idea to repeat measurements?

.....
..... [1]

7 The flow chart shows part of the water cycle.



(a) What is the name of process **A**?

..... [1]

(b) What is the name of process **B**?

..... [1]

(c) Sometimes it is so cold that the water in a lake becomes ice.

What is the name of this process?

..... [1]

(d) Sea water is boiled in a beaker for a long time.

What would you see?

..... [1]

8 Lily wants to measure her mass.

She stands on the scales.



she puts her
hands down



she puts her
hands up

Tick (✓) the correct answer.

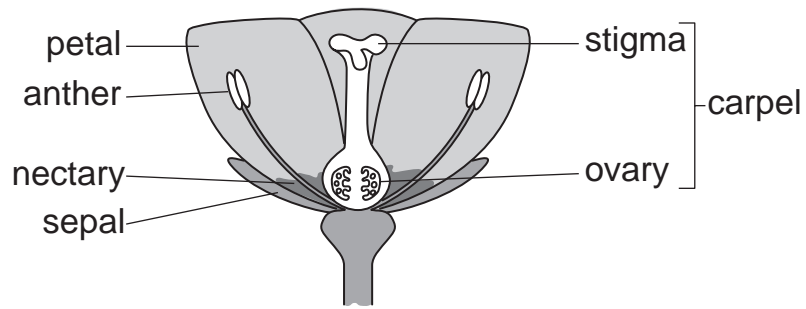
Lily's mass is **greatest** when her hands are up.

Lily's mass is **less** when her hands are up.

Lily's mass is the **same** when her hands are up or down.

[1]

9 Flowers have different parts.



(a) Why do flowers have petals?

..... [1]

(b) Circle the part of the flower which produces pollen.

anther carpel ovary

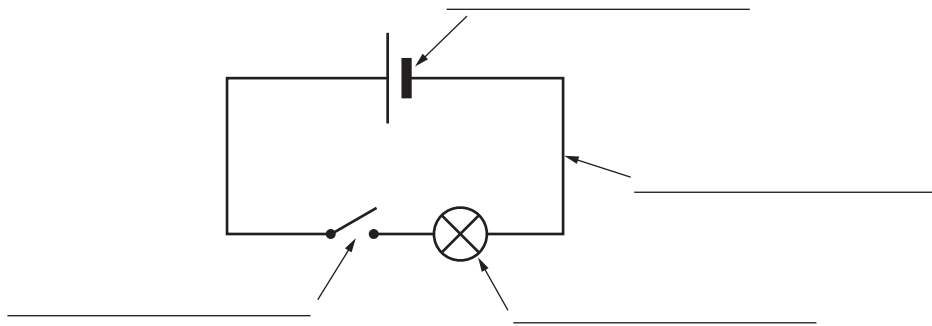
[1]

(c) Circle a female part of the flower.

nectary petal sepal stigma

[1]

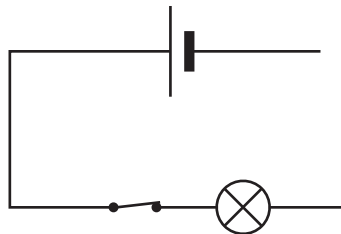
10 Rajiv finds an electric circuit diagram in a book.



(a) Label the circuit diagram.

[3]

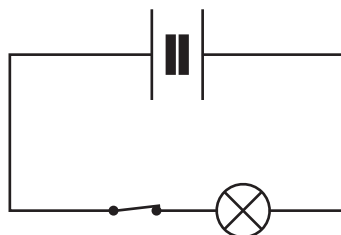
Rajiv builds this circuit.



(b) It does not work. Explain why.

..... [1]

(c) Rajiv now builds this circuit.

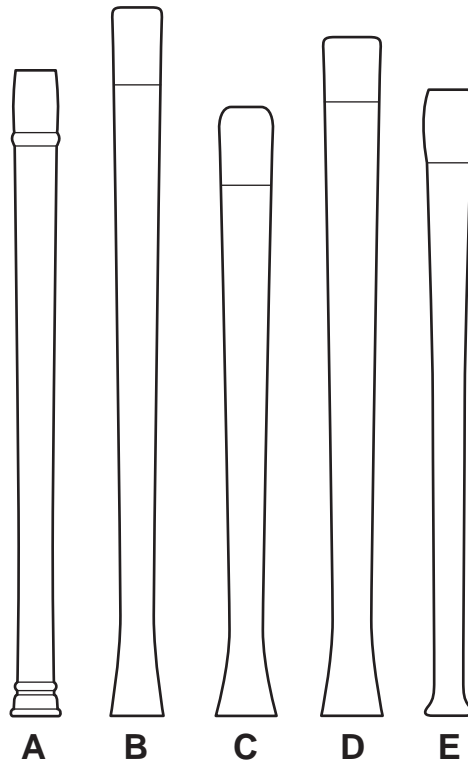


It does not work. Explain why.

..... [1]

11 Oliver and Carlos investigate sound.

They listen to the **pitch** made by different recorders.



(a) The recorders are different lengths.

What apparatus is used to measure the **length** of the recorders?

..... [1]

(b) Recorder **B** has the lowest pitch.

Predict which recorder will have the highest pitch.

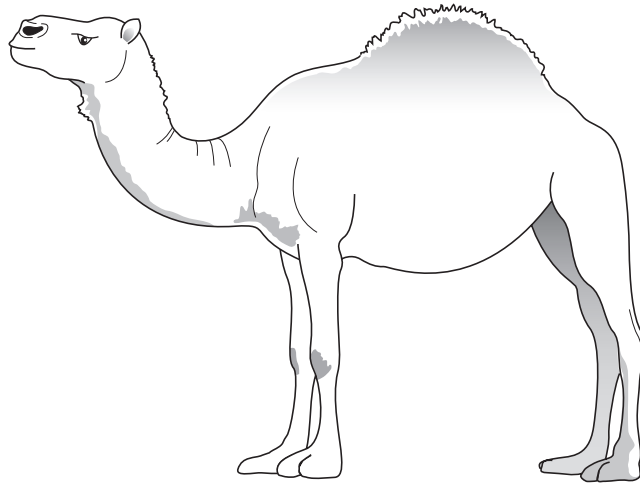
Circle the correct letter.

A **C** **D** **E** [1]

(c) Explain why you predicted this recorder.

.....
 [1]

12 Using the picture below list **three** features which help this animal to adapt to its environment.



- 1
- 2
- 3 [3]

13 Scientists explore the solar system.

Which scientist was one of the **first** to believe that the Sun was at the centre of our solar system?

Tick (✓) the correct scientist.

Edwin Hubble

Galileo Galilei

Isaac Newton

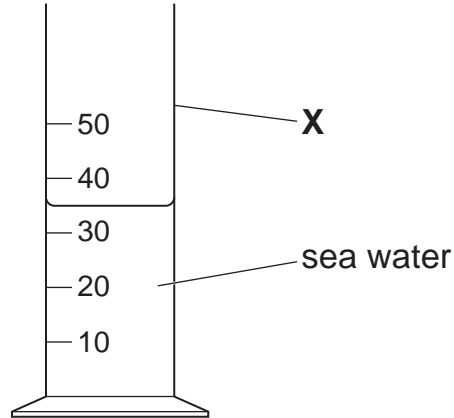
Leonardo da Vinci

[1]

14 Hassan lives by the sea.

He wants to find out how much salt is in seawater.

He measures a small volume of seawater using this apparatus.



(a) What is the name of apparatus **X**?

..... [1]

(b) What is the volume of seawater in apparatus **X**?

..... cm³ [1]

(c) Hassan then finds the mass of a clean glass dish.

What piece of apparatus should Hassan use to do this?

Circle the correct answer.

balance

beaker

ruler

thermometer

[1]

(d) Hassan pours all of the seawater into the glass dish.

He leaves the dish of seawater in the sun for one day.

What happens to the volume of seawater in the dish?

Circle the correct answer.

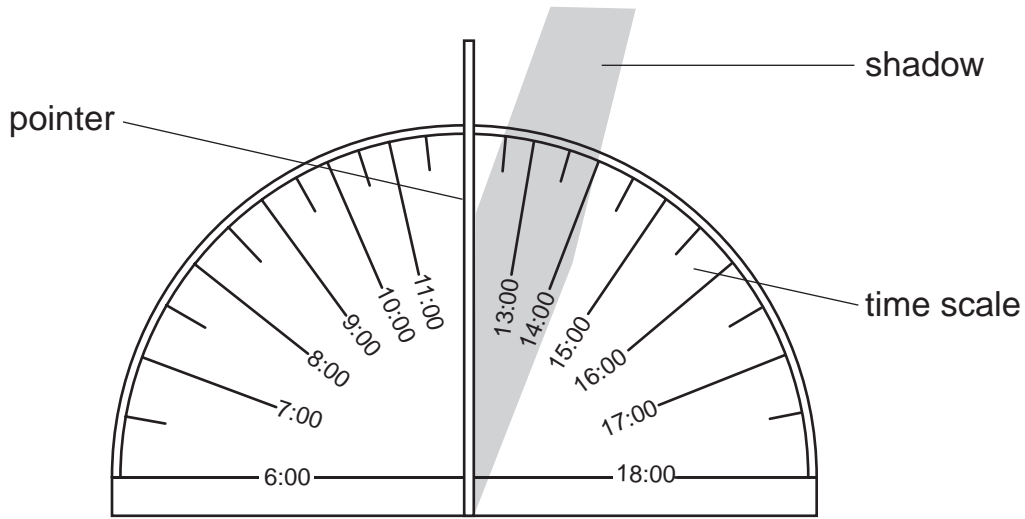
decreases

increases

stays the same

[1]

15 Priya and Mia make a sundial.



(a) The time is 14:00.

Describe how the sundial shows this time.

.....
..... [2]

(b) Why does the shadow change during the day?

Circle the correct answer.

- the Sun moves during the day
- the Earth spins on its axis during the day
- the Sun spins on its axis during the day

[1]

(c) Priya wants to make a sundial to show the time over 24 hours.

Mia says this is **not** possible.

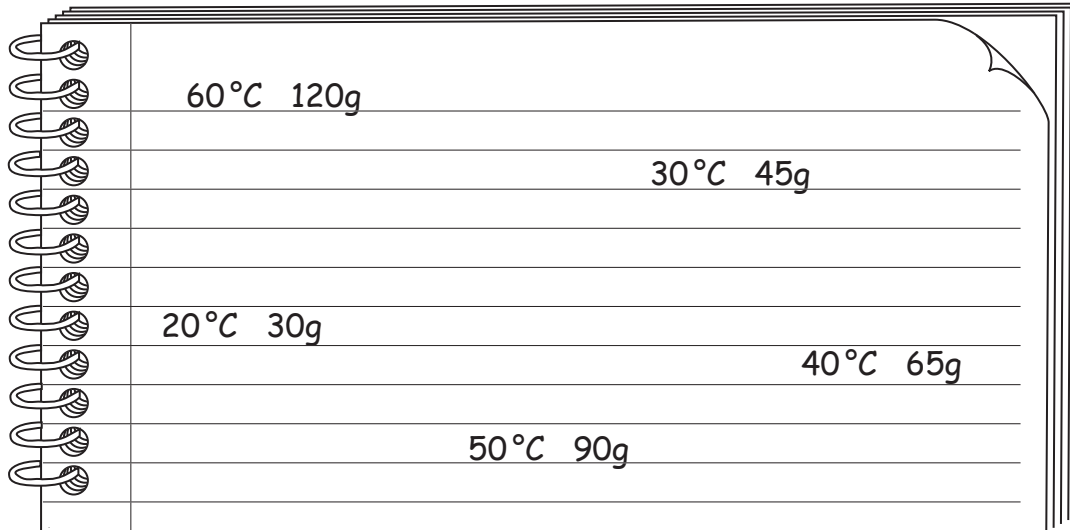
Explain why Mia is correct.

..... [1]

16 Aiko investigates how much of a solid dissolves in 100 cm^3 of water.

She writes down her results.

Here is a page from her note book.



The image shows a spiral-bound notebook page with a table of results. The table has two columns: temperature in degrees Celsius and mass in grams. The data points are as follows:

| | |
|------|------|
| 60°C | 120g |
| 30°C | 45g |
| 20°C | 30g |
| 40°C | 65g |
| 50°C | 90g |

Why is it a good idea for Aiko to put her results in a table?

..... [1]

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International Examinations

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Check Point Exams

2016





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Cambridge Primary Checkpoint

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SCIENCE

0846/01

Paper 1

April 2016

45 minutes

Candidates answer on the Question Paper.

Additional Materials: Pen Calculator
 Pencil
 Ruler

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.
You should show all your working in the booklet.
The total number of marks for this paper is 50.

This document consists of **22** printed pages and **2** blank pages.

- 1 The three states of matter are solid, liquid and gas.

The table shows the state of matter at room temperature, 25 °C, of some materials.

Complete the table.

Tick (✓) the correct boxes.

One has been done for you.

| material | solid | liquid | gas |
|-----------------|--------------|---------------|------------|
| water | | ✓ | |
| iron | | | |
| mercury | | | |
| oxygen | | | |
| carbon dioxide | | | |
| copper | | | |
| salt | | | |

[3]

2 Here is a forest habitat.



(a) Humans can have a **positive** effect on this habitat.

Circle the **best** way that humans can have a positive effect.

littering the forest

making paths through the forest

protecting the species in the forest

removing the fruits from the forest

[1]

(b) Human action can have other **positive** effects on the forest.

Draw a line to connect the **action** to its **positive effect**.

action

positive effect

educating people

number of trees increases

planting new trees

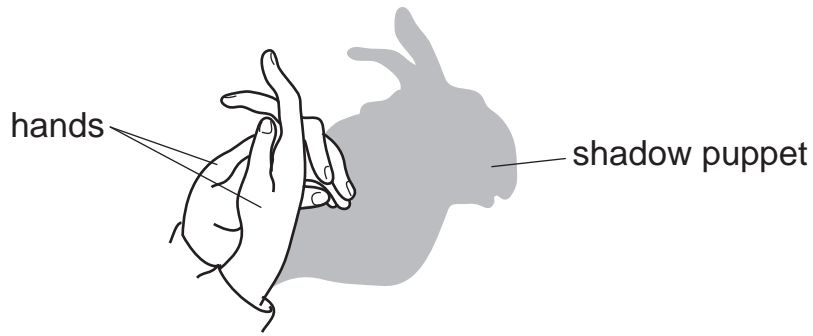
know how to care for the
environment

removing old dead trees

more space for new trees to grow

[2]

3 Hassan makes a shadow puppet with his hands.



(a) Describe how Hassan can make the shadow puppet a different size.

.....
..... [1]

(b) Complete the sentence.

Choose the **correct** word from the list.

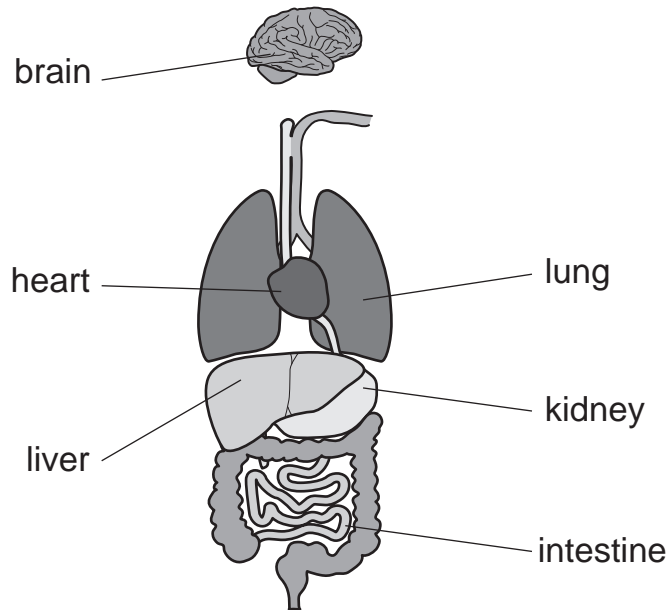
- flexible** **large** **opaque** **transparent**

Hassan makes a shadow puppet because his hands are

..... [1]

4 The body has many different organs.

Angelique labels this diagram of different organs in the body.



One of the labels is **wrong**.

Which label is **wrong**?

..... [1]

5 Oskar investigates what happens when four white solids are mixed with water.

- He puts 10 cm³ of water into a test tube.
- He measures the temperature of the water.
- He then puts 1.0g of solid into the same test tube.
- He stirs the solid and water for 1 minute.
- He then measures the temperature of the water again.

Here are his results.

| solid | temperature before in °C | temperature after in °C | appearance of the mixture |
|-------|--------------------------|-------------------------|---------------------------|
| A | 20 | 30 | colourless solution |
| B | 20 | 23 | blue solution |
| C | 20 | 17 | colourless solution |
| D | 19 | 19 | cloudy mixture |

(a) Match the piece of equipment needed to make the measurements.

Draw a line between the correct **piece of equipment** and the **measurement**.

piece of equipment

measurement

balance

10 cm³ of water

measuring cylinder

temperature of water

stop watch

1.0g of solid

thermometer

1 minute

[2]

(b) Which solids made the water warmer?

..... [2]

(c) Which solid did **not** dissolve in water?

..... [1]

6 This question is about sound.

Decide if these statements are **true** or **false**.

Tick (✓) the correct box next to each statement.

| | true | false |
|--|--------------------------|--------------------------|
| Sound can travel through air. | <input type="checkbox"/> | <input type="checkbox"/> |
| Sound travels as vibrations. | <input type="checkbox"/> | <input type="checkbox"/> |
| Sound travels at the same speed in all materials. | <input type="checkbox"/> | <input type="checkbox"/> |
| We hear sounds when vibrating air hits our eardrums. | <input type="checkbox"/> | <input type="checkbox"/> |

[2]

7 Class six have a quiz about organs in the human body.

Write the answer for each clue.

Clue 1: I pump blood around the body.

What organ am I?

Answer

Clue 2: I control all other organs.

What organ am I?

Answer

Clue 3: I get oxygen from the air and put it into the blood.

What organ am I?

Answer

Clue 4: If I stop working, waste builds up in the blood.

Your blood will need to be filtered by a machine.

What organ am I?

Answer

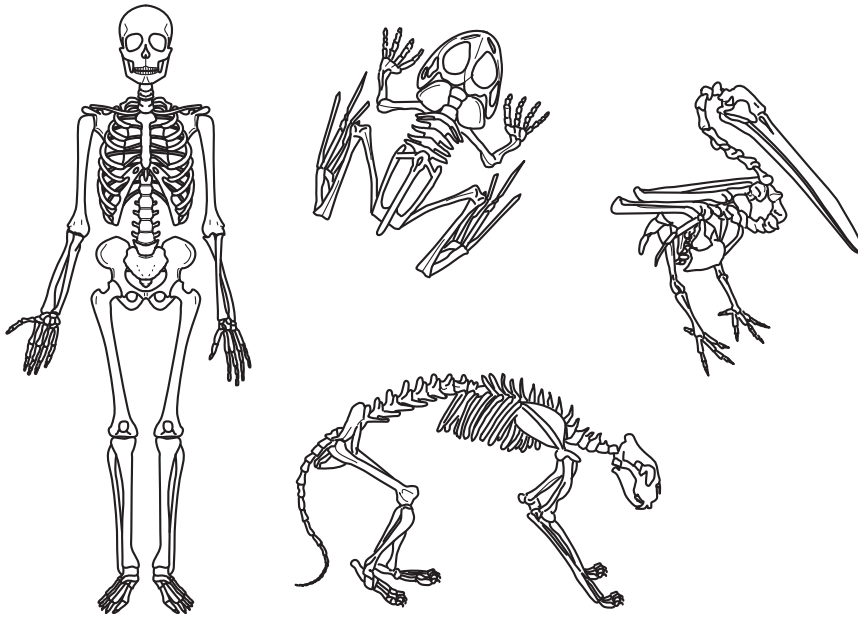
Clue 5: I hold food when it is broken down.

What organ am I?

Answer [3]

8 Many animals have skeletons.

Look at these animal skeletons.



(a) Are these statements **true** or **false**?

The first one has been done for you.

All the skeletons have a skull. **true**

All the skeletons protect the organs inside the body.

All the skeletons grow as the animals grow. [1]

(b) Are these statements **true** or **false**?

Two of the skeletons are human.

Only humans have muscles attached to the bones. [1]

9 (a) Which statements about a magnet are true?

Tick (✓) the box next to the **two** correct statements.

Like poles of two magnets attract.

Magnetism is a force.

Most magnets are made of iron.

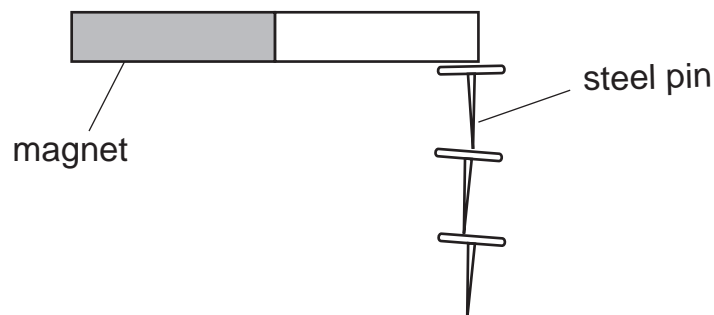
Most metals are attracted towards a magnet.

[2]

Mia has five magnets **A B C D E**.

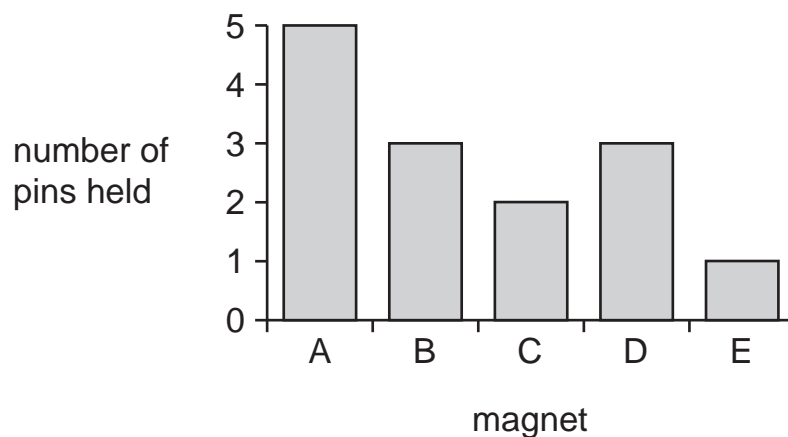
She wants to know how strong each of them is.

She hangs steel pins from each of the magnets as shown.



She hangs as many pins as the magnet can hold.

The results are shown in the bar graph.



Use the information in the graph to answer the questions below.

(b) Which magnet is the strongest?

Explain your answer.

.....
..... [2]

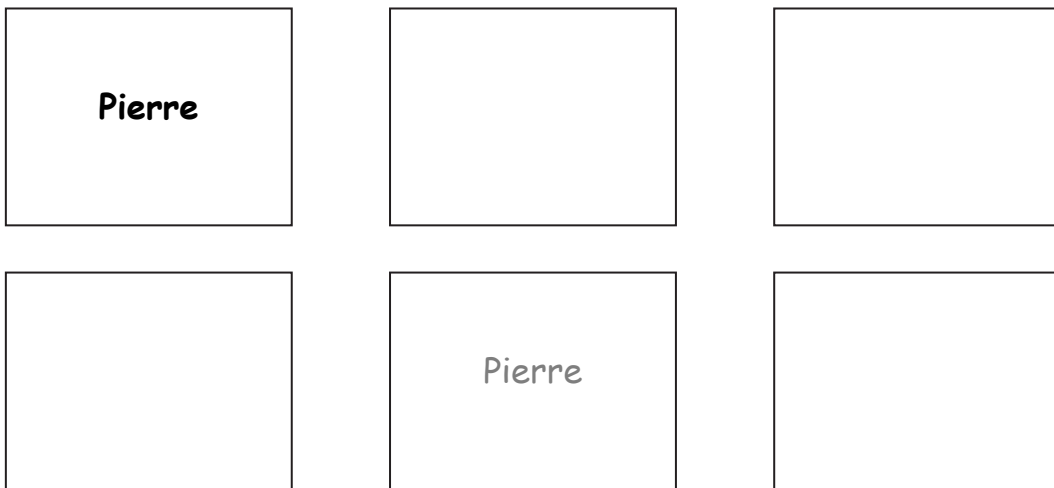
(c) State one thing that Mia must do to make sure that this is a **fair test**.
..... [1]

10 Pierre investigates different materials.

- He writes his name on a piece of paper.
- He puts different materials over his name.



Here are his results.



(a) How many of the materials are opaque?

Circle the correct answer.

- 1 2 3 4 5 6

[1]

(b) Pierre thinks that one of the materials is more transparent than the others.

Use his results to explain why.

.....

..... [1]

11 Which of these sentences about water are correct?

Tick (✓) the **two** correct boxes.

At sea level water boils at 90 °C.

Steam condenses to make water vapour.

The boiling of water is an irreversible process.

The freezing point of water is the same as the melting point of ice.

The melting point of ice is 0 °C.

Water evaporates to make ice.

[2]

12 Seeds can be dispersed in different ways.

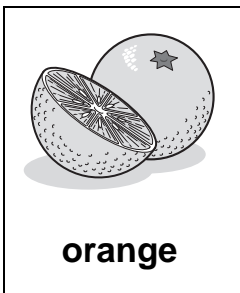
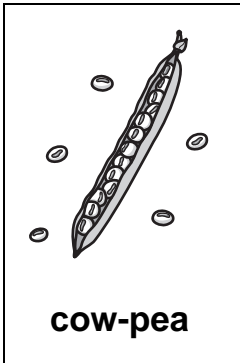
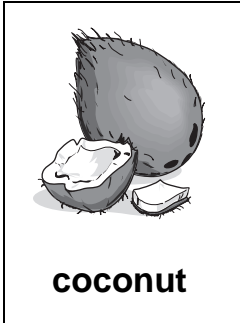
Choose the correct word for how each seed is dispersed.

animal

explosion

water

wind



[2]

13 Chen, Mike and Oliver write notes about the Earth and the Sun.

Look at their notes.

Chen

The Sun spins on its own axis.
It takes a year to orbit the Earth.

Mike

The Earth spins on its own axis.
It takes a year to orbit the Sun.

Oliver

The Earth spins on its own axis.
It takes a day to orbit the Sun.

Only one is correct.

Circle the name of the child who is correct.

Chen

Mike

Oliver

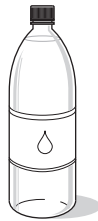
[1]

14 The table shows some properties of substances.

| material | does it dissolve in water? | colour | melting point |
|------------|----------------------------|------------|---------------|
| chalk | no | white | above 700 °C |
| fertiliser | yes | white | above 700 °C |
| plastic | no | colourless | 80 °C |
| pottery | no | white | above 700 °C |

(a) Complete the sentences about the uses of materials.

Use information from the table.



Plastic is used to make containers for cold water.

This is because plastic

[1]



Pottery is used to make cups for hot tea.

This is because pottery

[1]

(b) Safia separates a mixture of chalk and fertiliser.

Tick (✓) the method she uses.

add water, filter and evaporate the filtrate

evaporate the mixture and then condense the vapour

filter the mixture

use a magnet

[1]

(c) Aiko separates a mixture of iron powder and chalk.

Tick (✓) the method she uses.

add water, filter and evaporate the filtrate

evaporate the mixture and then condense the vapour

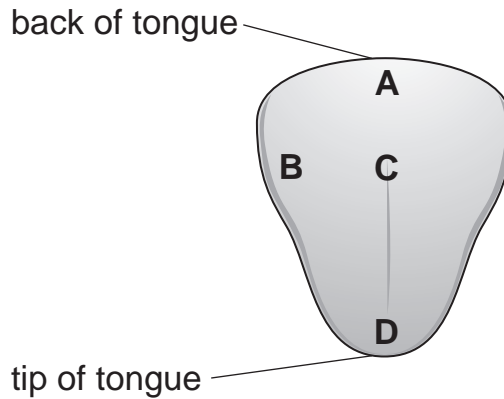
filter the mixture

use a magnet

[1]

15 Fatima and Jamila investigate the sense of taste.

Here are the areas of Jamila's tongue.



They use four different liquids.

Fatima puts a drop of each liquid onto different areas of Jamila's tongue.

Jamila puts a tick (✓) in the table when she can taste the liquid.

| type of liquid | area A | area B | area C | area D |
|----------------|--------|--------|--------|--------|
| bitter | ✓ | | | |
| salty | | | | ✓ |
| sour | | ✓ | | |
| sweet | | | | ✓ |

(a) Which area of the tongue can taste the **most** different types of liquid?

..... [1]

(b) Fatima predicts that **area C** has the fewest taste buds.

Describe how the results show that her prediction is correct.

.....
 [1]

(c) Jamila puts some sweet solution on the tip of her tongue.

Can she taste it?

Circle the correct answer.

yes

no

Explain your answer.

.....
..... [1]

16 Which scientist **first** explained how gravity works?

Tick (✓) the correct scientist.

Albert Einstein

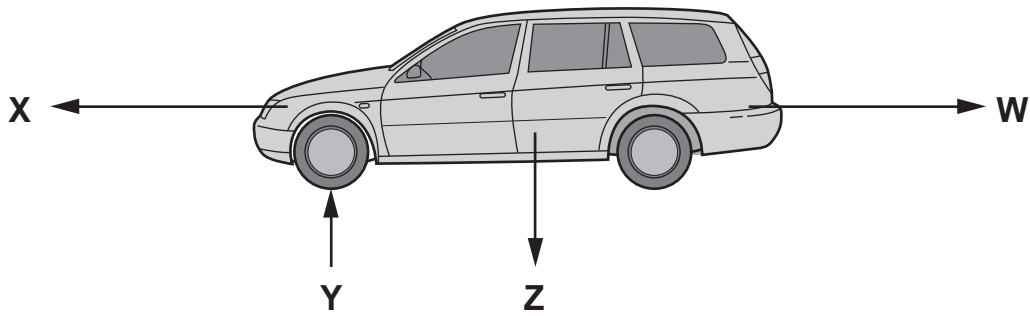
Galileo Galilei

Isaac Newton

Robert Hooke

[1]

17 Cars have different forces acting on them.



The car is moving in the direction of arrow **X**.

(a) Which letter shows the **weight** of the car?

Circle the correct answer.

X **Y** **Z** **W**

[1]

(b) Which letter shows the **air resistance**?

Circle the correct answer.

X **Y** **Z** **W**

[1]

18 Carlos adds some salt to a beaker of water.

He also adds some sand to another beaker of water.

Complete these sentences about adding salt and sand to water.

Choose from the words below.

condenses

evaporates

dissolves

insoluble

soluble

solute

solvent

(a) Salt in water to make a solution. [1]

(b) Water is the in this process. [1]

(c) Salt is the in the solution. [1]

(d) When all water from the salt solution
a white solid is left behind. [1]

(e) Sand does not make a solution when mixed with water because it is
..... [1]

19 Ahmed and Hassan investigate plant seeds.



- Ahmed walks in a forest.
- Hassan collects the soil from the bottom of Ahmed's shoe.
- They look at the soil they have collected.
- They repeat the investigation in different places.

(a) Ahmed always walks the same distance in each place.

Why does he do this?

..... [1]

(b) Write down **one** other factor they keep the same in each place.

..... [1]

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SCIENCE

0846/02

Paper 2

April 2016

45 minutes

Candidates answer on the Question Paper.

Additional Materials: Pen Calculator
 Pencil
 Ruler

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.
You should show all your working in the booklet.
The total number of marks for this paper is 50.

This document consists of **23** printed pages and **1** blank page.

1 Food chains show the feeding relationships in a habitat.

Draw a line from each **word** to the **description**.

| word | description |
|-------------|--|
| consumer | an animal that eats plants and other animals |
| predator | a green plant |
| prey | an animal eaten by another animal |
| producer | an animal that catches and eats another animal |

[2]

2 Mike investigates how well materials conduct electricity.

He connects different materials to an electrical circuit containing a lamp.

He looks at the brightness of the lamp.

Here are his results.

| material | brightness of lamp in circuit |
|-----------------|--|
| lead | lamp is very dim |
| brass | lamp is just brighter than when using lead |
| copper | lamp is bright |
| plastic | lamp does not work |
| silver | lamp is very bright |

(a) Brass conducts electricity.

Name **one** material that is a better conductor of electricity.

..... [1]

(b) Which material is the **best** conductor of electricity?

..... [1]

(c) Which material does **not** conduct electricity?

..... [1]

3 Class 6 have a quiz about the Earth and the Sun.


Answer the questions on the quiz.

Earth and Sun Quiz

(a) How many hours does it take for the Earth to spin on its axis?
..... [1]

(b) How many years does it take for the Earth to orbit the Sun?
..... [1]

(c) Why does the Sun appear to move across the sky during one day?
..... [1]



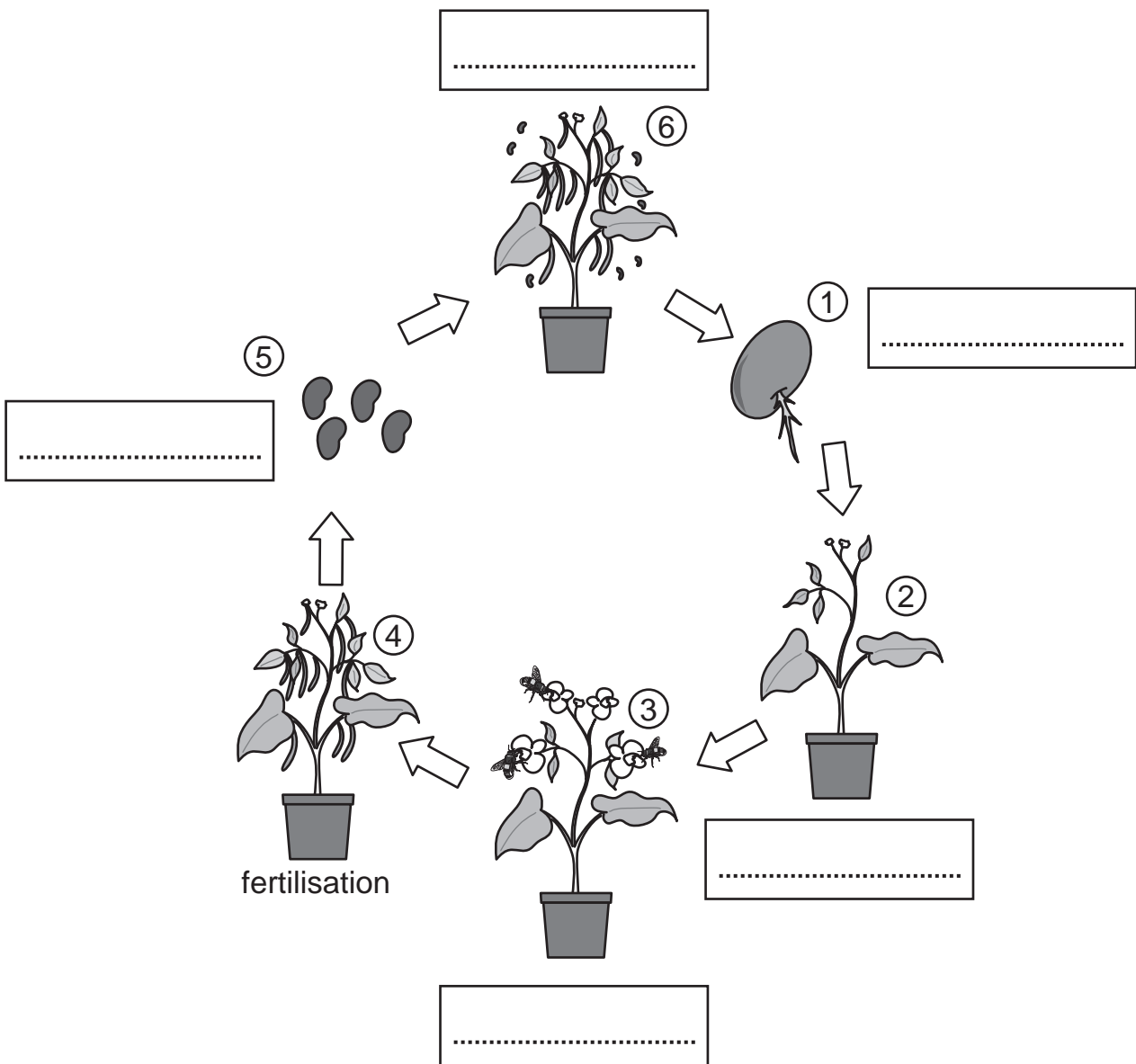
4 Flowering plants have a life cycle.

Complete the stages in the life cycle.

One has been done for you.

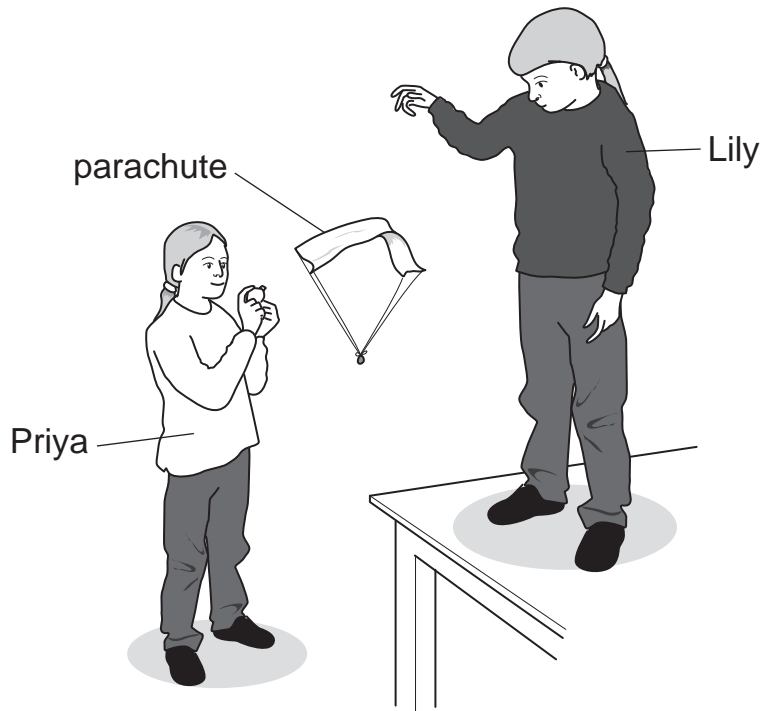
Choose from the following words.

germination **growth** **pollination** **seed dispersal** **seed production**



[2]

5 Priya and Lily investigate air resistance.



- Priya uses a stopwatch
- Lily drops parachutes.

Here is their prediction.

“We think bigger parachutes will fall more slowly.”

Their prediction is correct.

Complete the sentences.

Choose words from the list.

less

more

the same

The bigger parachutes have air resistance.

This makes the bigger parachutes fall with speed. [2]

6 Fizzy drink containers are made from metals.



(a) Which **two** properties of a metal make it a good material for fizzy drink containers?

Tick (✓) the **two** correct properties.

attracted to a magnet

good conductor of electricity

good conductor of heat

insoluble in water

not poisonous

[2]

(b) Fizzy drink containers are made of aluminium or steel.

They are recycled.

Steel is separated from aluminium.

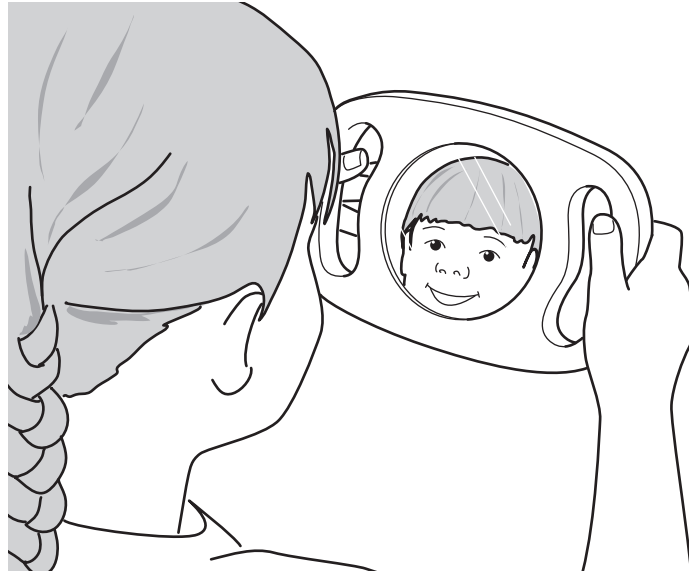
Describe how this can be done.

.....

Give a reason why this method would work.

..... [2]

7 Blessy looks at herself in a mirror.



Tick (✓) the **two** correct sentences about what Blessy sees.

Blessy can see something because light has entered her eyes.

Blessy has been reflected in the mirror.

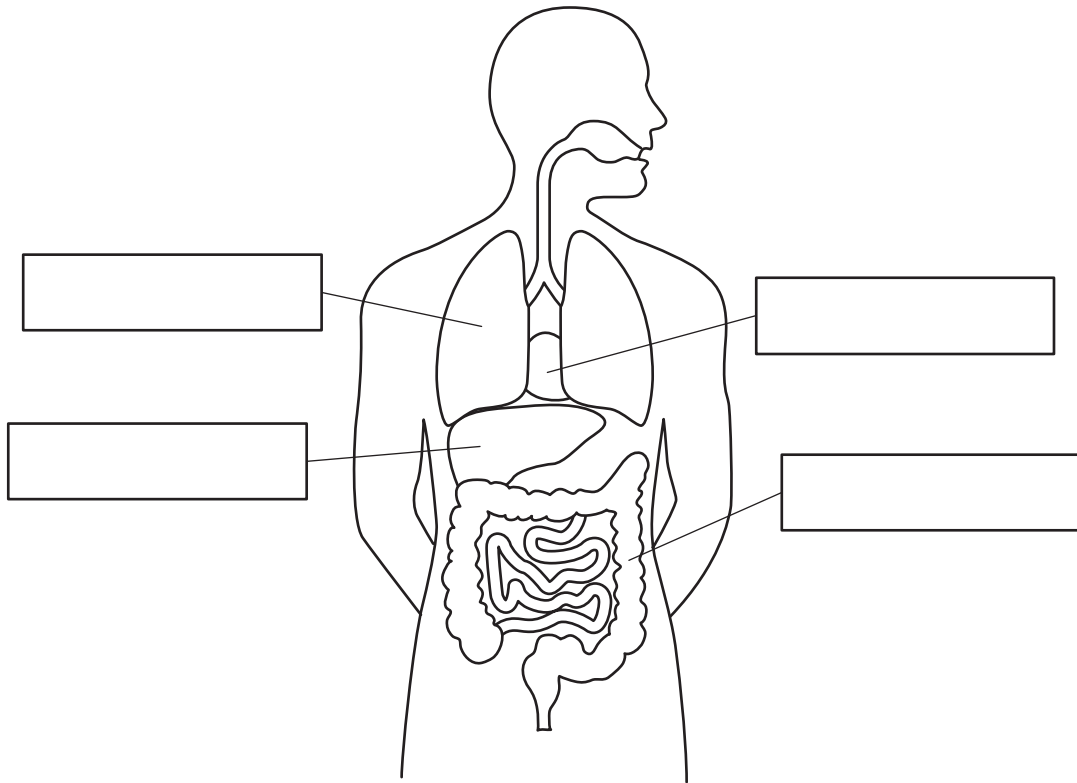
Blessy is behind the mirror.

The light from Blessy does not change direction.

The light from Blessy is reflected by the mirror.

[2]

8 The body has many different organs.



(a) Label the organs.

[3]

(b) Complete the table.

One has been done for you.

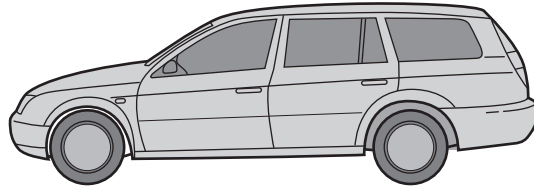
| organ | job |
|---------|-------------------------------|
| liver | stores and controls chemicals |
| stomach | ..... |
| brain | ..... |

[2]

9 Forces can do different things.

Cars have many forces acting on them.

The car moves forward.



A force makes the car move forward.

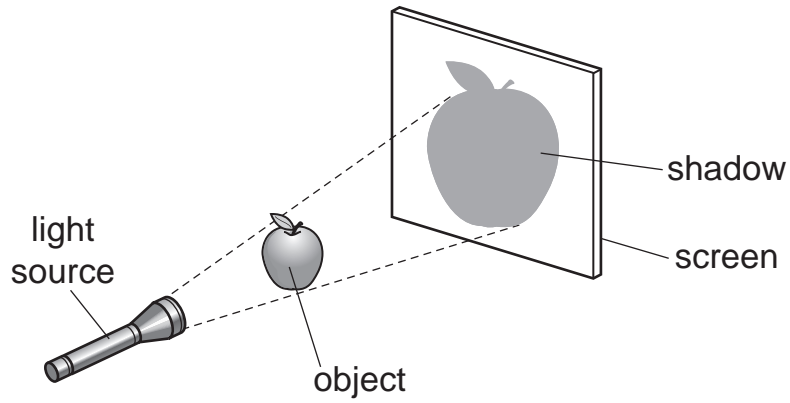
Draw an arrow (\rightarrow) on the car to show the direction of this force.

[1]

10 Youssef is investigating the size of shadows.

He uses a light source in a dark room.

He places an object between the light source and the screen.

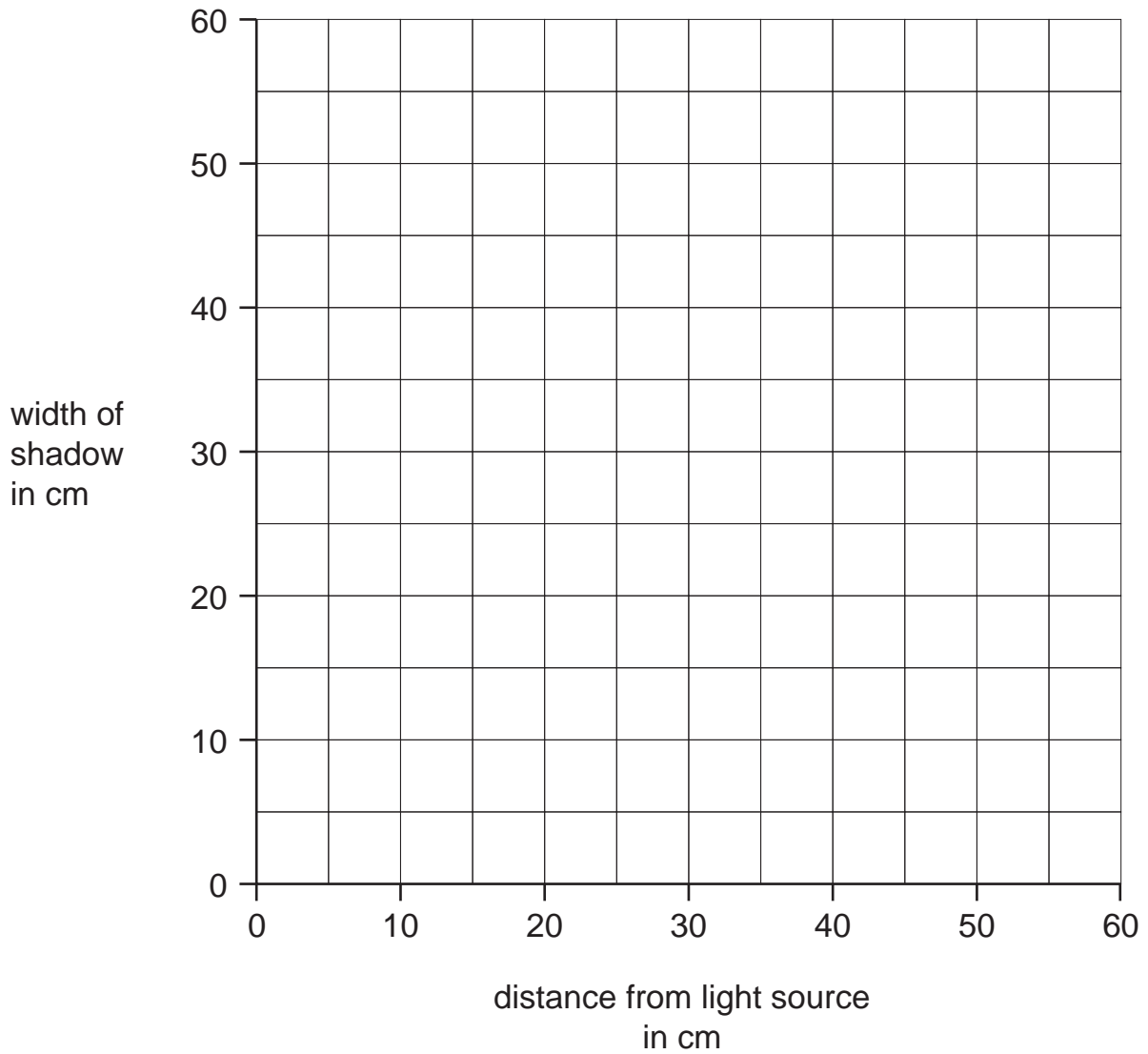


Here are Youssef's results.

| distance of object from light source in cm | width of shadow in cm |
|---|------------------------------|
| 20 | 60 |
| 30 | 40 |
| 40 | 30 |
| 50 | 25 |
| 60 | 20 |

(a) Use his results to plot a line graph.

Draw a line through the points.



[3]

(b) What is the width of the shadow when the object is 35 cm from the light source?

..... [1]

11 (a) Animals live in different habitats.

Look at the picture of each animal in the table.

Complete the table.

Choose from the following words.


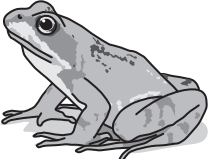

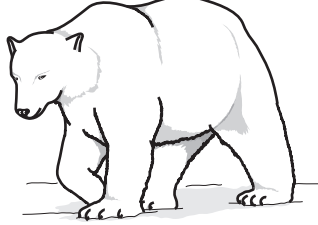

desert

pond

sea ice

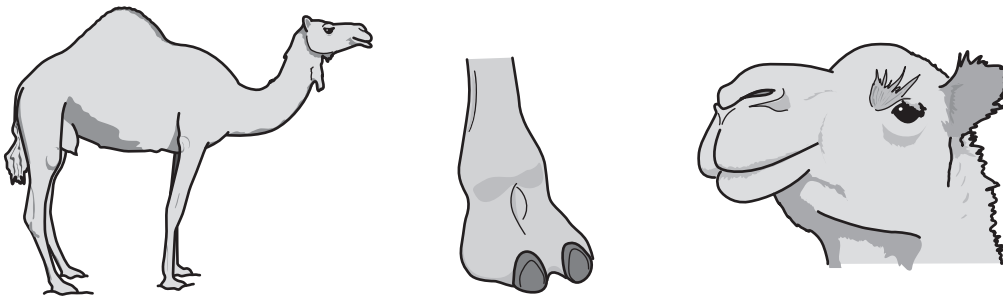
soil

tree

| | natural habitat |
|---|-----------------|
|  earthworm | |
|  frog | |
|  gerbil | |
|  polar bear | |
|  squirrel | |

[2]

(b) Camels live in hot deserts.



camel

Write down **two** ways a camel is adapted to living in the hot desert.

Complete the sentences.

- 1 The camel has
- It has this because
- 2 The camel has
- It has this because [2]

12 Mia has a mixture of three powdered solids.

Here are some properties of these solids

| solid | soluble or insoluble in water | colour |
|--------------------|--------------------------------------|---------------|
| chalk | insoluble | white |
| iron | insoluble | grey |
| potassium chloride | soluble | white |

(a) Mia wants to separate the iron from the mixture.

Describe how she can do this.

.....

Explain why this method works.

.....

..... [2]

(b) Mia now has only potassium chloride and chalk left.

She decides to add the mixture to water and filter the mixture.

Draw a labelled diagram to show how she filters the mixture.

[3]

(c) After filtering she has potassium chloride solution left.

Mia heats the solution for 15 minutes.

At the end only solid potassium chloride remains.

What has happened to the water in the solution?

..... [1]

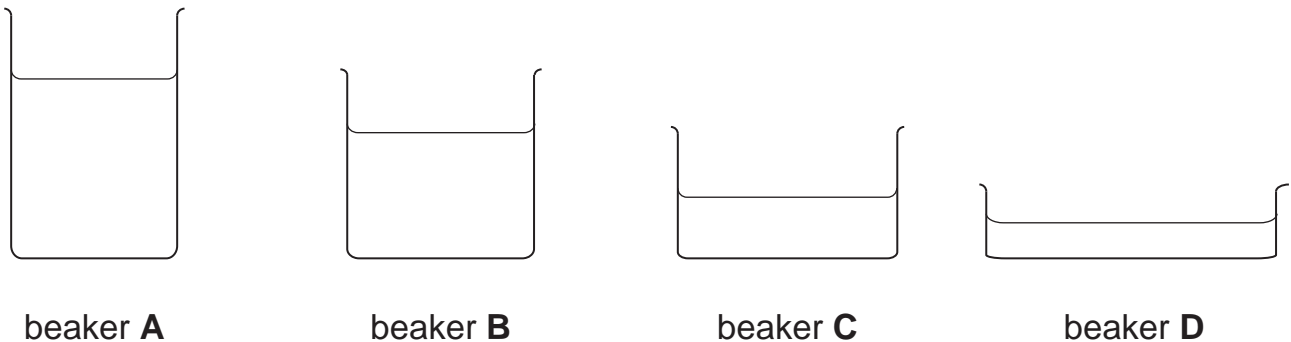
13 Gabriella investigates the evaporation of water.

She measures 100 cm^3 of water and puts this into a beaker.

She measures the time for all the water to evaporate.

Gabriella repeats the experiment three more times. Each time she uses a different beaker.

The surface area of the water increases from beaker **A** to beaker **D**.



Gabriella writes sentences in her book.

(a) Which of these sentences is a **prediction**?

Tick (✓) the correct box.

All four beakers start with the same volume of water.

Beaker **D** will take the shortest time for all the water to evaporate.

Evaporation is the process by which a liquid changes into a gas.

How many days will it take for all the water to evaporate from each beaker?

The water in the four beakers must be at the same temperature.

[1]

(b) Which of these sentences is a **piece of evidence** that Gabriella must collect?

Tick (✓) the correct box.

All four beakers start with the same volume of water.

Beaker **D** will take the shortest time for all the water to evaporate.

Evaporation is the process by which a liquid changes into a gas.

How many days will it take for all the water to evaporate from each beaker?

The water in the four beakers must be at the same temperature.

[1]

(c) Which **two** of these sentences will make the investigation a **fair test**?

Tick (✓) the **two** correct boxes.

All four beakers start with the same volume of water.

Beaker **D** will take the shortest time for all the water to evaporate.

Evaporation is the process by which a liquid changes into a gas.

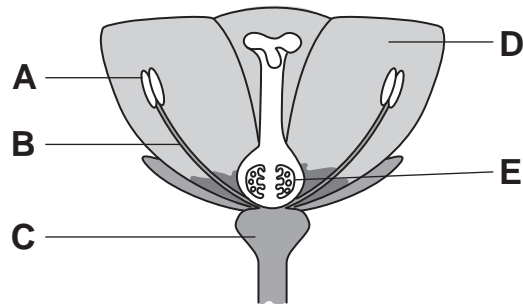
How many days will it take for all the water to evaporate from each beaker?

The water in the four beakers must be at the same temperature.

[2]

14 Many plants have flowers.

(a) Look at this flower.



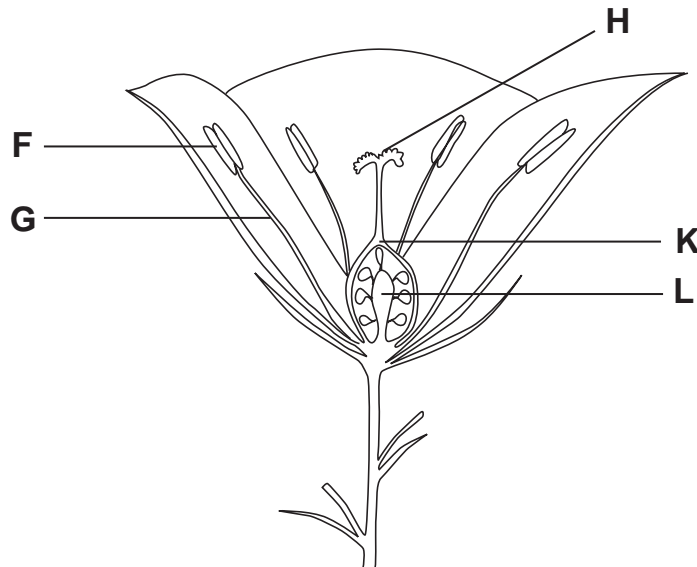
Which letter shows the **female** part of this flower?

Circle the correct answer.

A B C D E

[1]

(b) Look at this flower.



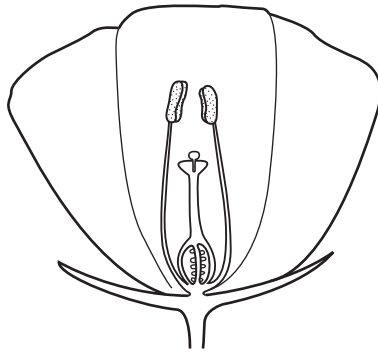
Which **two** letters show the **male** parts of this flower?

Circle the correct answer.

F and G G and H H and K K and L

[1]

(c) Look at this flower.



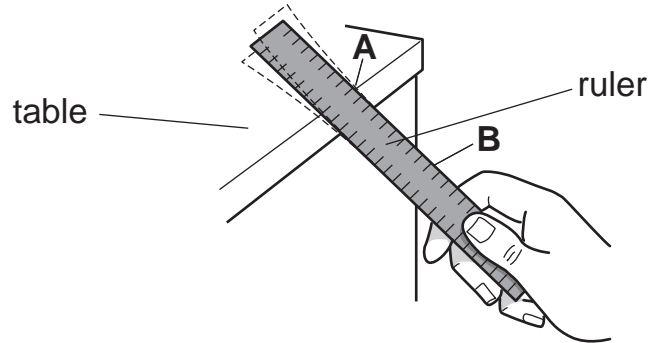
Draw the letter **X** on the flower to show where pollen is made.

[1]

15 Chen investigates sound.

Investigation 1

Look at the picture.

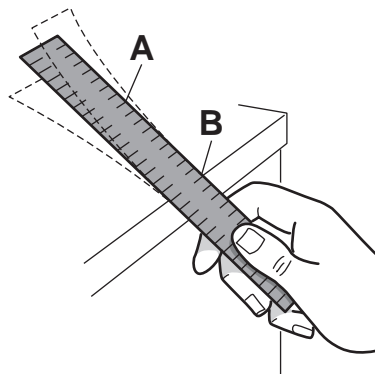


Chen hits his ruler on a table at point **A**.

He leaves the ruler on the table and listens to the sound it makes.

Investigation 2

Look at the new picture.



Chen hits the ruler on the table at point **B**.

He leaves the ruler on the table and listens to the sound it makes.

(a) Complete the sentence.

The ruler makes a sound because it [1]

(b) What happens to the **pitch** of the sound?

Tick (✓) the correct answer.

pitch is higher in investigation 1

pitch is lower in investigation 1

pitch is the same in both investigations

[1]

(c) Chen hits the ruler on the table with more force.

What happens to the **loudness** of the sound?

Tick (✓) the correct answer.

decreases

increases

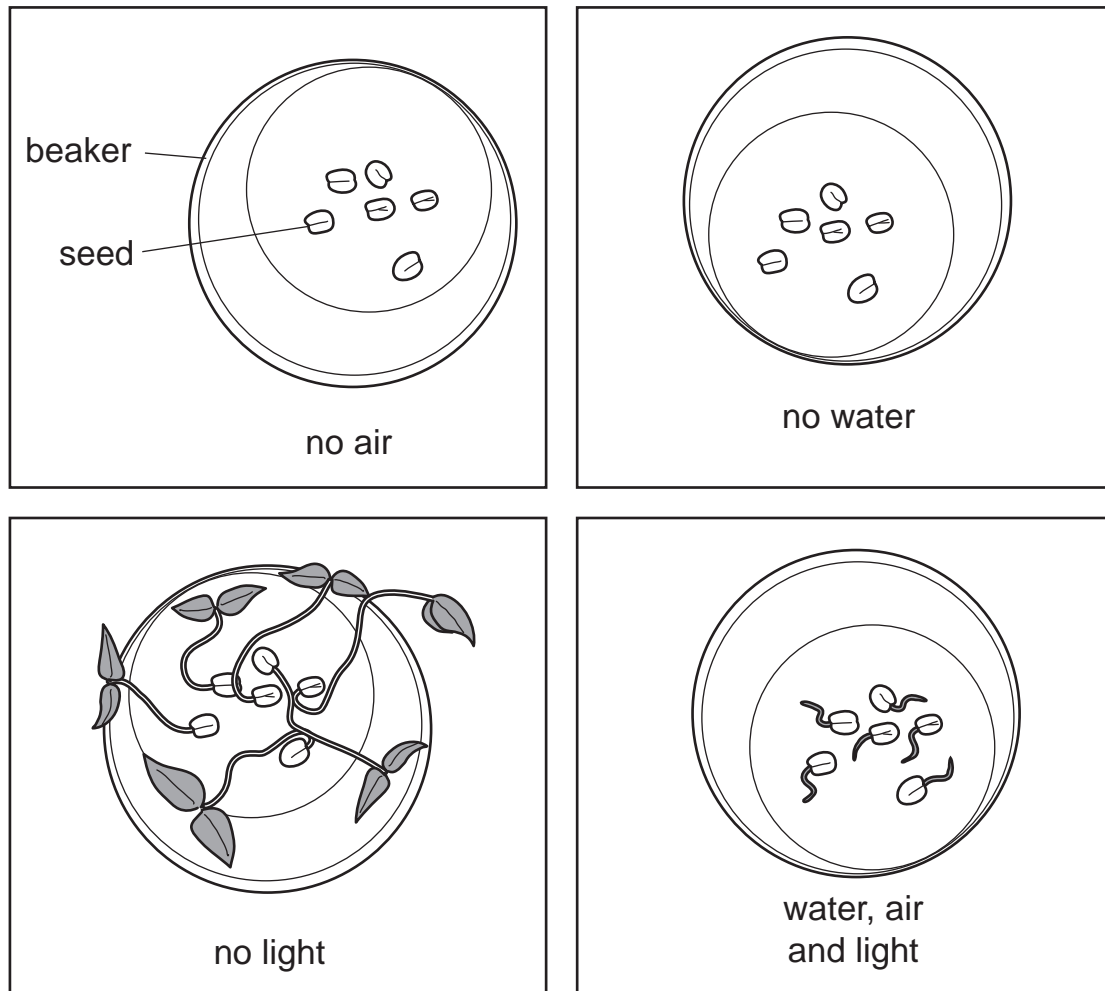
stays the same

[1]

16 Oliver investigates germination of seeds.

He tries to grow seeds in different conditions.

Look at his results.



Oliver makes the investigation a **fair test**.

(a) He uses the same **type** of seeds in each beaker.

What **other** condition does he keep the same?

Complete the sentence.

He uses the same of seeds in each beaker. [1]

(b) One of the beakers is labelled **no light**.

Describe how Oliver makes sure that no light reaches the seeds.

..... [1]

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Check Point Specimen

2012



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SCIENCE

0846/01

Paper 1

For Examination from 2012

SPECIMEN PAPER

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.

Write in dark blue or black pen.

Answer **all** questions.

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

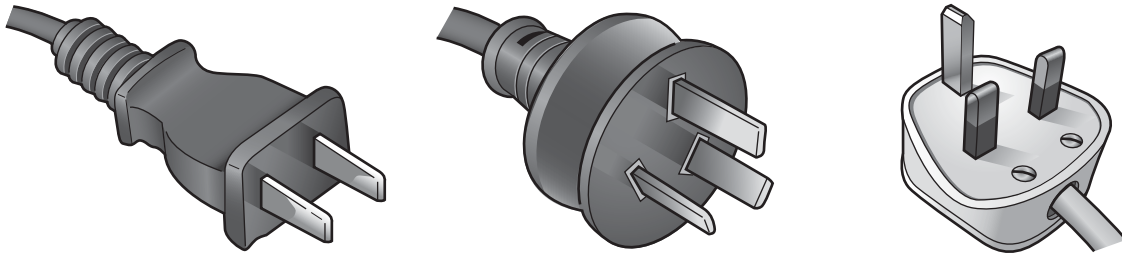
You should show all your working in the booklet.

| For Examiner's Use | |
|--------------------|--|
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| 14 | |
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| 17 | |
| 18 | |
| 19 | |
| 20 | |
| Total | |

This document consists of **20** printed pages.



1 (a) Look at the diagrams of the electric plugs.



Which metal is used for the wire inside these electrical plugs?

..... [1]

(b) Use **one** word to complete this sentence.

People often wear rubber boots when they use electrical tools. This is because rubber is a good electrical

[1]

2 Complete these sentences.
Choose words from the list.

- an echo a pulse a reflection vibrations waves**

(a) Sound is created by

[1]

(b) Sound travels as

[1]

(c) A reflected sound is called

[1]

3 Zara is investigating different materials.

First she wants to find out which is the hardest rock. She scratches each rock with a different object. She records whether her scratch made a mark.

This table shows her results.

| Type of Rock | fingernail | coin | matchstick | plastic knife |
|--------------|------------|---------|------------|---------------|
| Marble | no mark | mark | no mark | no mark |
| Sandstone | no mark | mark | no mark | mark |
| Talc | mark | mark | mark | mark |
| Granite | no mark | no mark | no mark | no mark |

(a) Which is the hardest rock she tested?

..... [1]

(b) What evidence in the table shows that talc is the softest rock she tested?

..... [1]

(c) She does another test. She finds that both sandstone and talc are permeable.

What does *permeable* mean. Tick (✓) **one** box.

has a smooth texture

is hard and shiny

lets water soak through

stops water getting through

[1]

4 Animals and plants have different habitats.

(a) What is a *habitat*?

Tick (✓) **one** box.

how they breathe

how they feed

what they eat

where they live

[1]

(b) Write **two** things a habitat must provide for an animal or plant.

1

2

[2]

5 Manuela is measuring the temperature of water in a beaker with a thermometer. She heats the water until it boils.

For
Examiner's
Use

(a) She continues to heat the water. The water keeps on boiling.

What happens to the temperature of the water while it boils?
Underline your answer.

goes down

goes up

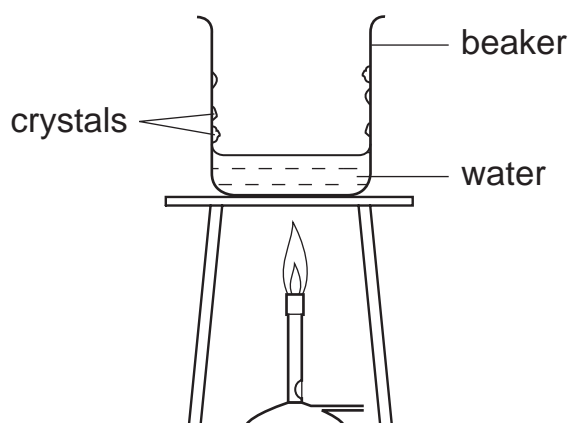
stays the same

[1]

(b) Why does the water level in the beaker drop as she continues her investigation?

..... [1]

(c) She notices white crystals forming on the inside wall of the beaker.



Where have the white crystals come from? Tick (✓) **one** box.

from chemicals washed out of the glass

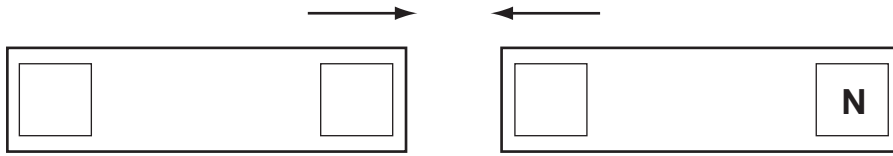
from the melting glass

They have condensed from gases in the room.

They were dissolved in the water.

[1]

6 Magnets have two poles, N and S.
These two magnets attract each other.



(a) Write the correct poles on the diagram. One has been done for you. [1]

(b) Name **one** metal that magnets attract.

..... [1]

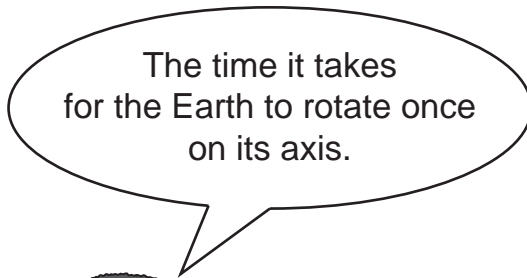
(c) Sometimes magnets repel each other.

What does *repel* mean?

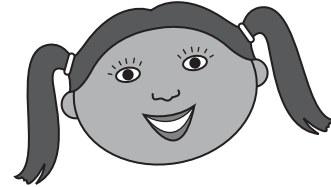
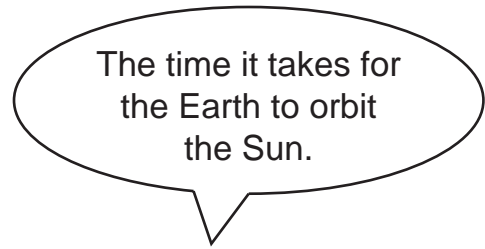
..... [1]

7 Four students are discussing the time periods, day and year.

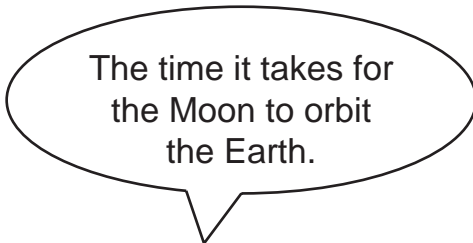
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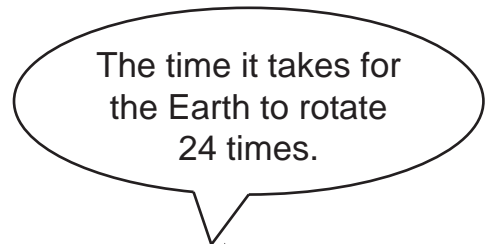
A



B



C



D

Which student makes the correct statement about:

(a) a year? [1]

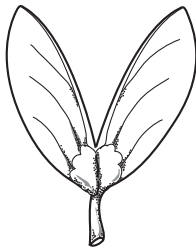
(b) a day? [1]

8 All flowering plants produce seeds.

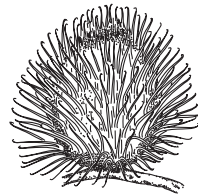
(a) Why do plants need to produce seeds? Underline the correct word.

fertilisation **germination** **growth** **reproduction** [1]

(b) Which seed can be spread by attaching to an animal's fur?
Tick (✓) **one** box.









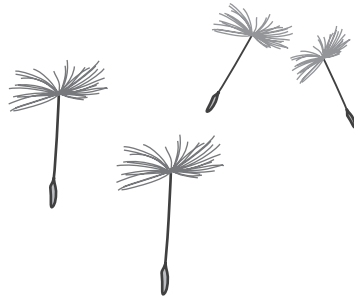
[1]

(c) What is the process called when seeds are spread away from a plant?

..... [1]

(d) Which statement **best** describes how these seeds are spread?
Tick (✓) **one** box.

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Examiner's
Use



Animals spread the seeds in their droppings.

Birds shake out the seeds.

Water carries the seeds.

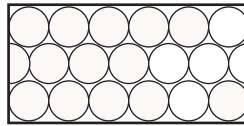
Wind blows the seeds.

[1]

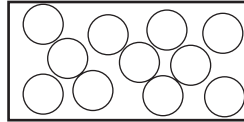
9 The diagrams show the arrangement of particles in solids, liquids and gases.

(a) Draw lines to match each word with the correct diagram.

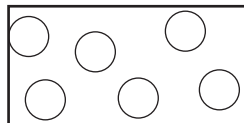
gas



solid



liquid



[1]

(b) The table shows some properties of a solid, liquid and gas.

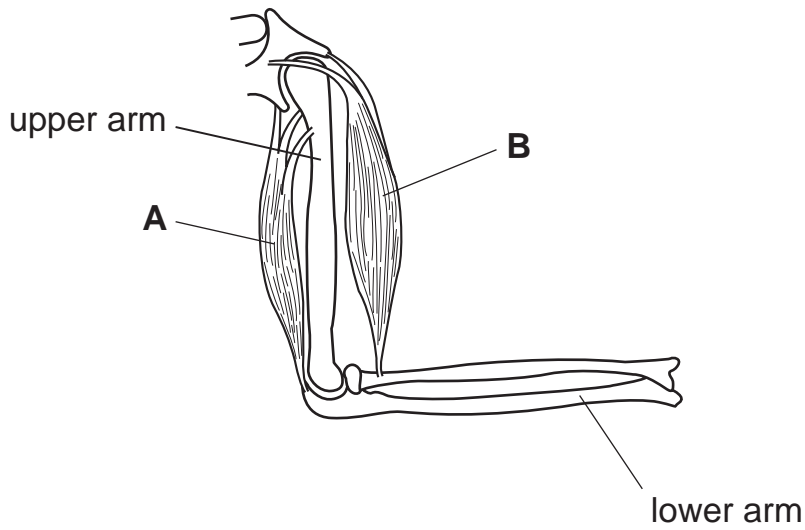
Tick (✓) the box to show if the property is of a solid, liquid or gas.

| properties | solid | liquid | gas |
|---|-------|--------|-----|
| Particles have lots of room to move around. | | | |
| It is runny and flows downwards. | | | |
| It can be cut and shaped. | | | |

[3]

10 This drawing shows bones and muscles in the human arm.

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Use



(a) What must the muscles do to raise up the lower arm?
Tick (✓) **one** box.

Both muscles **A** and **B** contract (shorten).

Both muscles **A** and **B** relax.

Muscle **A** contracts (shortens) and muscle **B** relaxes.

Muscle **B** contracts (shortens) and muscle **A** relaxes.

[1]

(b) Name **one** organ in the human body that is made from muscle.

..... [1]

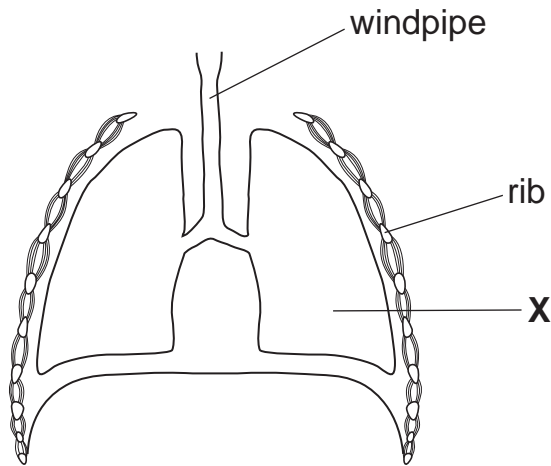
11 Hendrik is about to stand on a pillow made from very soft foam.



(a) Draw an arrow showing the direction of the push force from Hendrik on the pillow. [1]

(b) What might happen to the pillow when Hendrik stands on it?
..... [1]

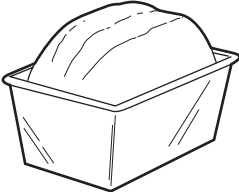
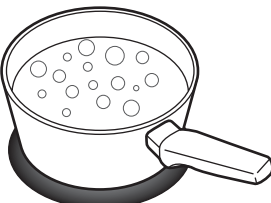

12 Look at the diagram.



What is the name of the organ X?
..... [1]

13 Tick (✓) to show if the change is reversible or non-reversible.

For
Examiner's
Use

| process | reversible | non-reversible |
|--|------------|----------------|
|  baking bread | | |
|  boiling water | | |
|  dissolving salt | | |

[1]

- 14** Ruth and Anna test the grip of different shoes of the same size. They put each shoe on a table and attach a forcemeter to measure the force needed to move the shoe.



- (a)** Draw an arrow on the diagram to show the direction of the force that makes the shoe move.

[1]

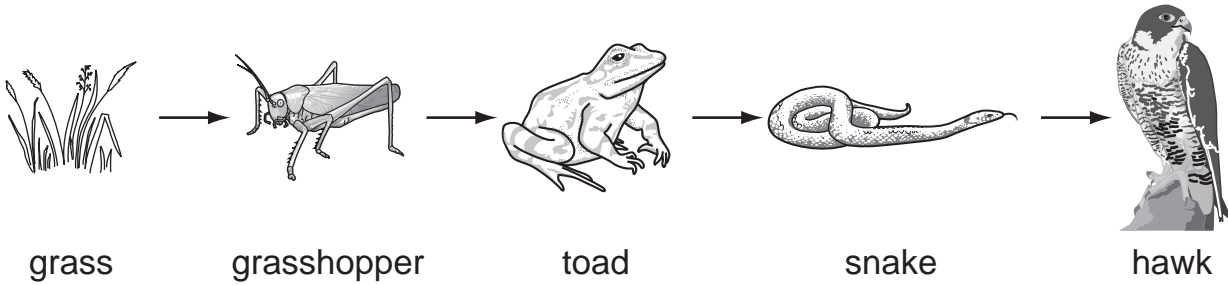
- (b)** They record the forces needed to make each shoe move.

| shoe | force in Newtons |
|------|------------------|
| A | 0.5 |
| B | 2.1 |
| C | 1.4 |

Which shoe has the best grip?

..... [1]

15 Seth and Alex investigate food chains.
Look at the one they have drawn.



(a) How many consumers are there?

..... [1]

(b) Name the predator of the snake.

..... [1]

16 All living things have seven life processes.

Fill in the missing **two** life processes.

Nutrition

Movement

.....

Reproduction

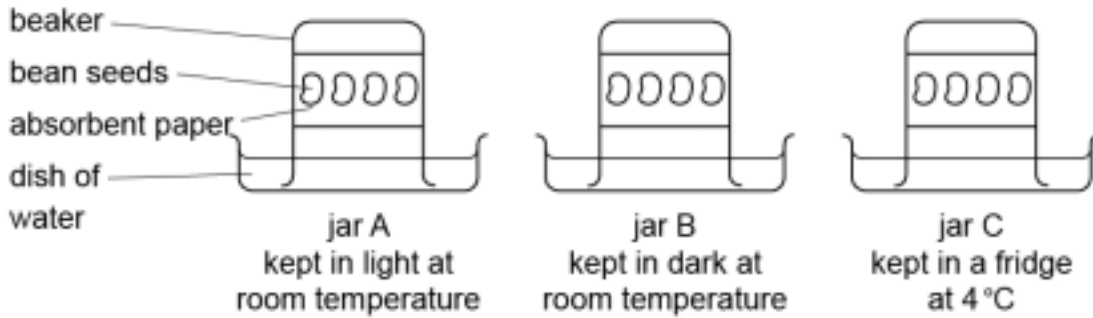
.....

Sensitivity

Respiration

[2]

17 Adam and Mary investigate some factors that affect germination of bean seeds. They set up their experiment as shown in these diagrams.



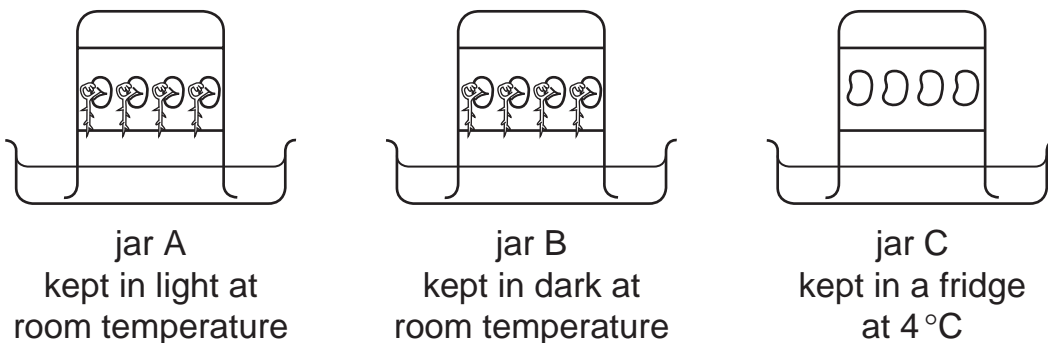
(a) Write **one** factor they vary in their experiment.

..... [1]

(b) Write **one** factor they keep the same in their experiment.

..... [1]

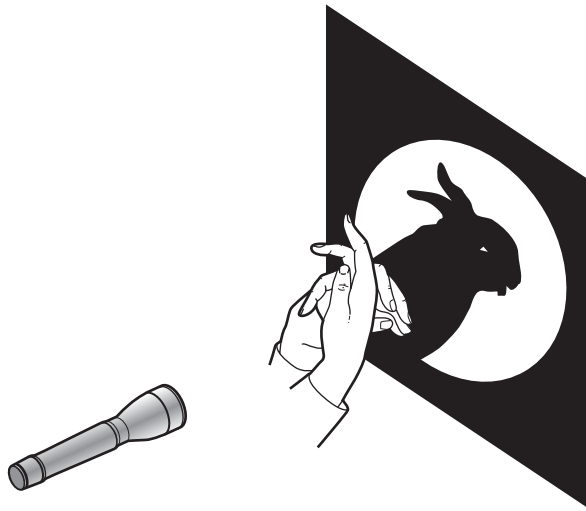
(c) After one week, they look at their bean seeds and record their results in these drawings.



They write a conclusion from their results. Complete their conclusion.

Beans need to germinate. [1]

- 18 Nadia is in a dark room with a torch.
She makes shapes with her fingers to make shadows on the wall.



- (a) Explain why her hand makes a dark shadow.

..... [1]

- (b) How can Nadia change the **size** of the shadow of her hand on the wall?
Tick (✓) **one** box.

make the room darker and lighter

move her hand closer to or further from the torch

put different coloured gloves on her hand

use a bigger or smaller torch

[1]

19 Petrus takes a cold glass of cola from the fridge.

He puts 3 cubes of ice into it.

He leaves the glass on a table in a warm room for 5 minutes.

He notices that the ice cubes have become smaller.

(a) Why have the ice cubes become smaller?

..... [1]

(b) The outside of the glass is now wet.

What is the reason for this?

Tick (✓) **one** box.

Water vapour from the air has condensed on the outside of the glass.

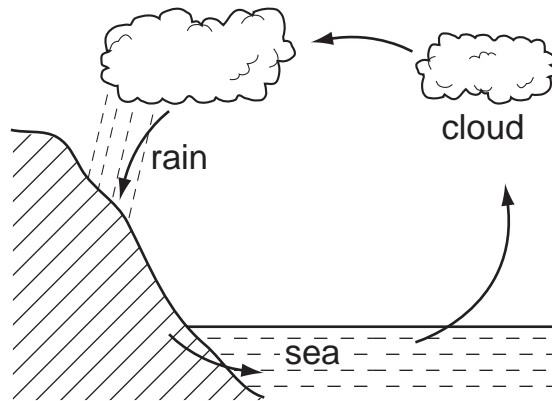
Water has condensed from inside the glass and gone into the air.

Water vapour has evaporated from the air and turned into a liquid.

The cola has evaporated and left water outside the glass.

[1]

20 In the water cycle, water can be a solid, liquid or gas.



(a) Choose words from the list to complete these sentences.

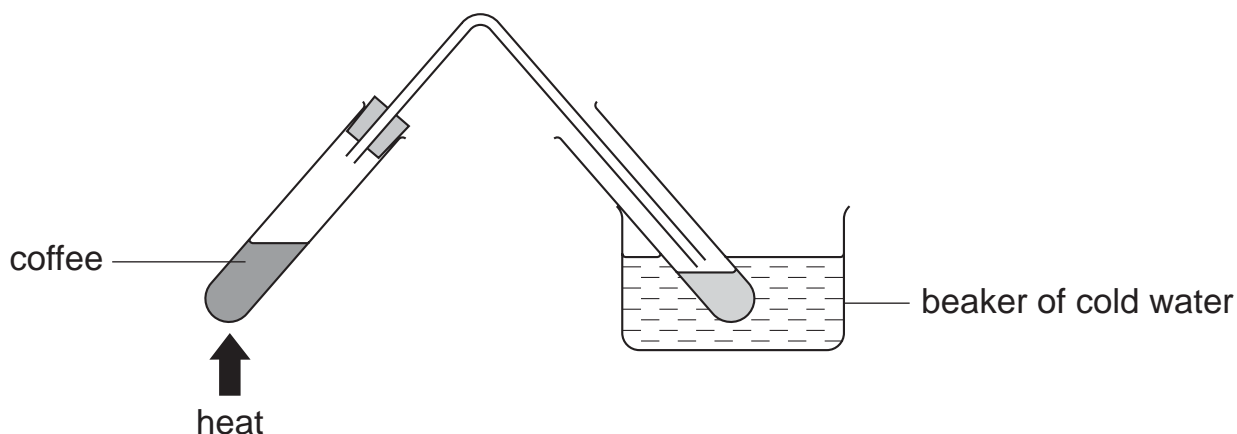
condenses dissolves evaporates floats solidifies

Salt is dissolved in sea water. When the water
from the sea, the salt is left behind. [1]

(b) Name the process that happens when liquid water forms in clouds.
..... [1]

21 Pierre heats some black coffee sweetened with sugar, using this apparatus.

The coffee boils.



(a) A liquid collects in the test tube standing in the beaker.

What is the name of the liquid?

Tick (✓) the correct box.

concentrated coffee solution

dilute coffee solution

dilute sugar solution

water

[1]

(b) Why is the test tube that collects the liquid standing in a beaker of cold water?

..... [1]

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SCIENCE

0846/02

Paper 2

For Examination from 2012

SPECIMEN PAPER

45 minutes

Candidates answer on the Question Paper.

Additional Materials: Pencil
Pen
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the space at the top of this paper.

Write in dark blue or black pen.

Answer **all** questions.

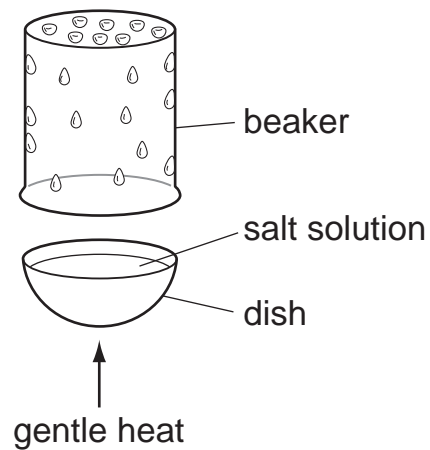
The number of marks is given in brackets [] at the end of each question or part question.

You should show all your working in the booklet.

| For Examiner's Use | |
|--------------------|--|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |
| 17 | |
| 18 | |
| 19 | |
| Total | |

This document consists of **19** printed pages and **1** blank page.

1 Sue heats a salt solution as shown in the diagram.



(a) What substance is given off when the salt solution is heated gently?

..... [1]

(b) What is the name of the process taking place in the beaker?

..... [1]

(c) Sue now removes the beaker and continues to heat the salt solution.

(i) What will be left in the dish when she has finished heating?

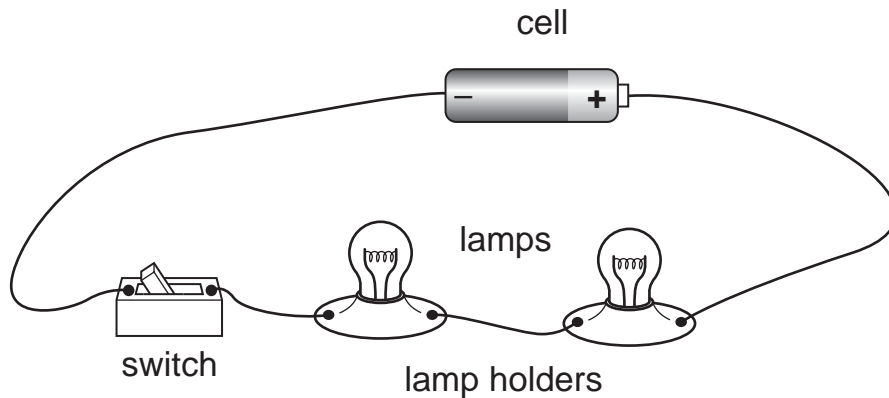
..... [1]

(ii) How can a salt solution be obtained from what is left in the dish?

..... [1]

- 2 Sofia investigates electrical circuits to see how they behave. The first working circuit she builds is shown in the picture.

For
Examiner's
Use



What happens to the brightness of the lamps if

- (a) Sofia adds another lamp?

..... [1]

- (b) Sofia now replaces one of the wires with a wire that is 5 times longer?

..... [1]

- (c) Sofia now replaces the wire with one the same length but much thicker?

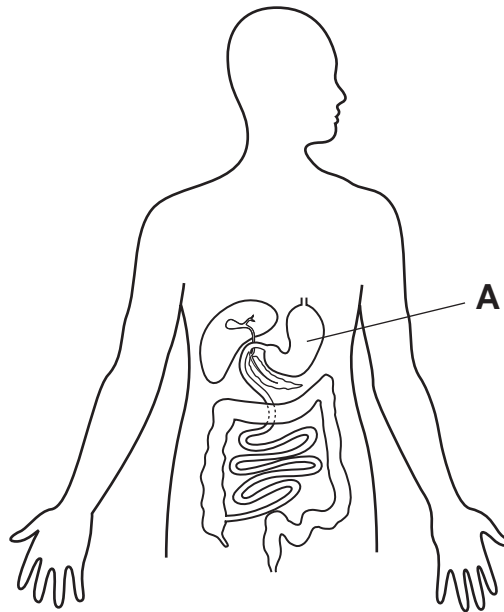
..... [1]

- (d) Sofia removes one of the lamps from its holder?

..... [1]

3 The diagram shows a human body and part of one of its major organ systems.

For
Examiner's
Use



(a) Which organ system is shown?
Circle the correct answer.

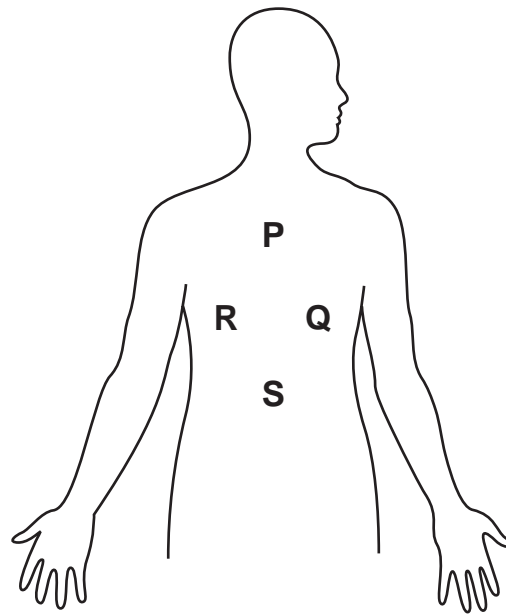
circulatory **digestive** **nervous** **reproductive** [1]

(b) Name the organ labelled **A**.

..... [1]

(c) Look at the diagram.

For
Examiner's
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(i) Which letter shows the position of the heart?

..... [1]

(ii) What is the function of the heart?

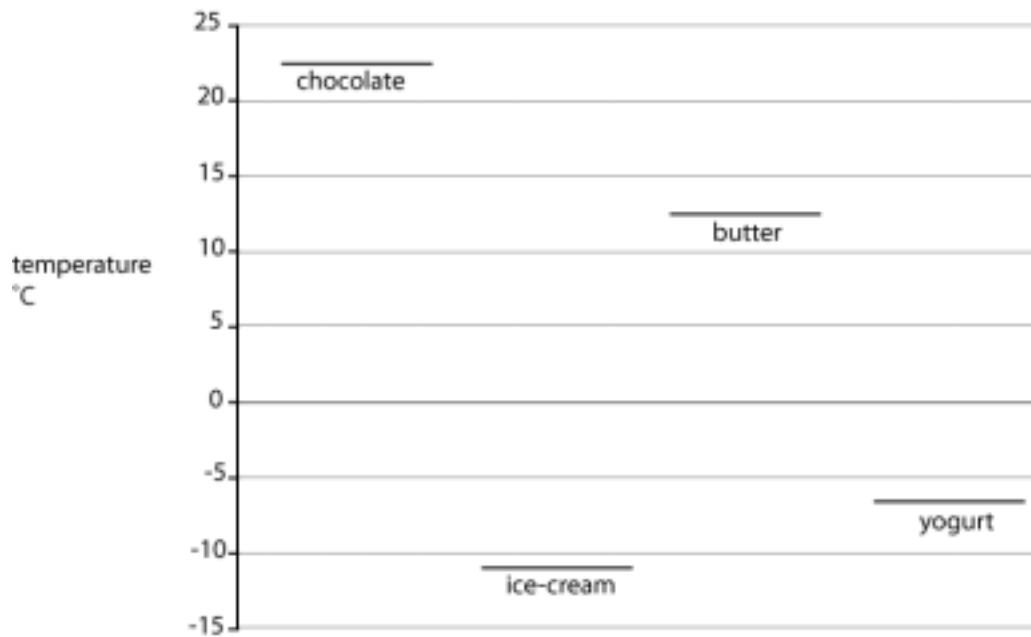
..... [1]

(d) What does the excretory system do?

..... [1]

4 The scale shows the temperature at which some foods melt.

For
Examiner's
Use



(a) Which food melts at the lowest temperature?

..... [1]

(b) What is the melting point of chocolate?

..... [1]

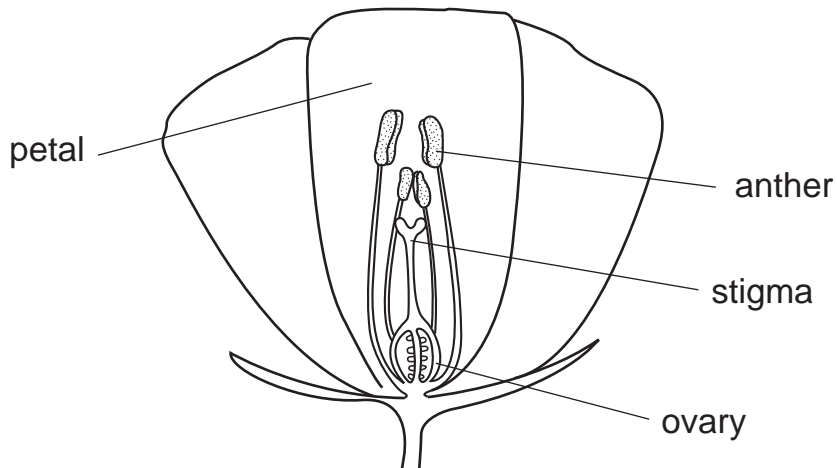
(c) The temperature in the kitchen is **20** °C.
The temperature inside a fridge is **5** °C.
Mark these temperatures on the diagram.

Which food needs to be kept in the **fridge** to stop it from melting?

..... [1]

5 The diagram shows the cross-section of a flower.

For
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Use



(a) Name the labelled part of the flower which

(i) attracts insects. [1]

(ii) contains pollen. [1]

(iii) is sticky and catches pollen. [1]

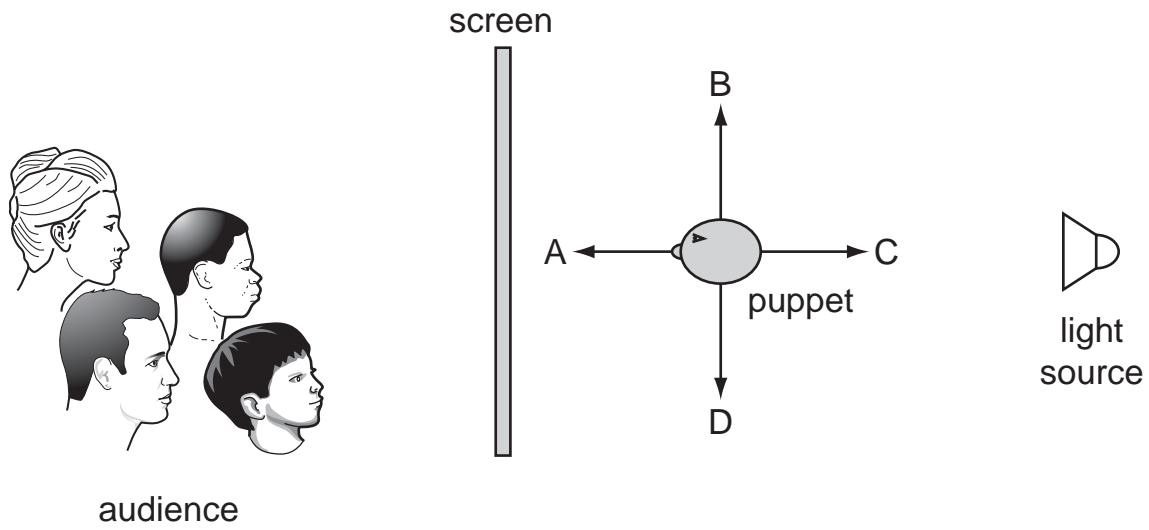
(b) Insects are often attracted to flowers because they are brightly coloured.

Name **one** other thing that attracts insects to flowers.

..... [1]

- 6 A shadow play is a puppet show that uses light and shadow to tell a story. The diagram shows how it works.

For
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- (a) How does the puppet make a shadow on the screen?

..... [1]

- (b) The puppet is moved to make a bigger shadow.

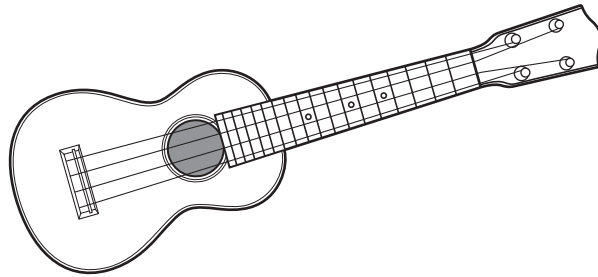
Which letter shows the direction of the movement?

..... [1]

- (c) What word describes materials that do **not** let light through?

..... [1]

7 Nisreen is playing the guitar which is a musical instrument.



She plucks a string to make a sound.

(a) What is the word used to describe the movement of the string?

..... [1]

(b) She plays a higher note.

Which word describes how high or low a note is?

Tick (✓) the correct box.

loudness

pitch

insulation

volume

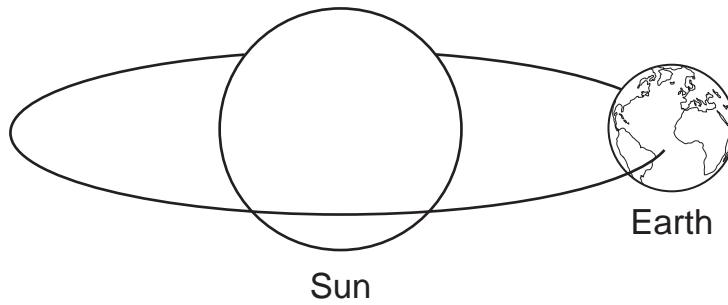
[1]

(c) Write **two** ways she could make a higher note on the guitar.

1

2 [2]

8 Look at the diagram of the Sun and the Earth.

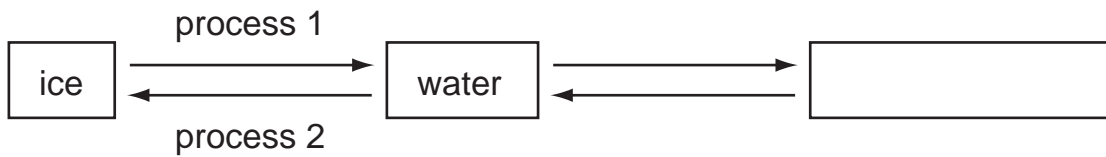


Complete these sentences.

(a) The Earth rotates on its axis once every hours. [1]

(b) The Earth's orbit around the Sun takes days. [1]

9 Water can exist in three different forms.



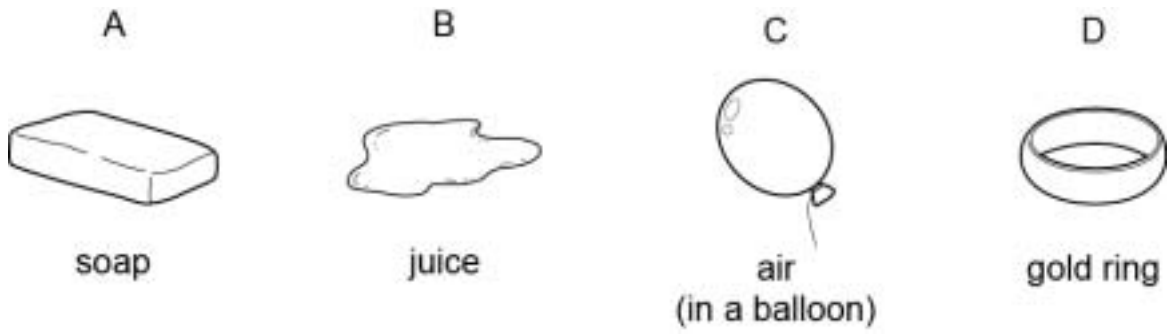
(a) Complete the diagram by writing the missing word in the box. [1]

(b) What is the name of process 2 shown in the diagram when water turns into ice?

..... [1]

10 Sort these materials into solids, liquids and gases.

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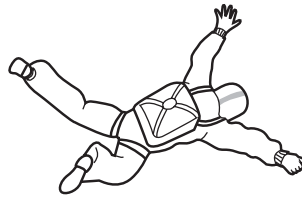


Write the letters in the correct place in the table.

| solid | liquid | gas |
|-------|--------|-----|
| | | |

[1]

- 11 A skydiver has jumped out of an aircraft but has not yet opened her parachute.



Which of these statements best describes what is happening?
Tick (✓) the correct statement.

- She is pushed towards the Earth by the force of gravity.
- She is pulled towards the Earth by the force of gravity.
- She is pulled towards the Earth by air resistance.
- She is pushed towards the Earth by air resistance.

[1]

- 12 Which of the following are examples of forces?

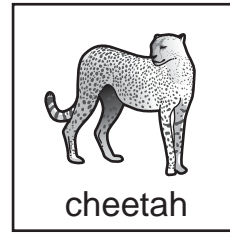
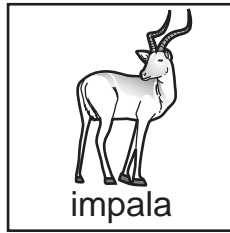
Tick (✓).

- a horse pulling a cart
- the mass of a van
- a magnet attracting a nail
- striking a match
- a jug of boiling water

[2]

13 The pictures show three living organisms in a food chain.

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(a) Draw arrows to complete this food chain. [1]

(b) Which organism is the producer?
..... [1]

(c) Which organism is the predator?
..... [1]

- 14 (a) Eating a varied diet is very important to keep our bodies healthy. Look at the diets of Sadiq and Fatima. Who has the healthier diet? Tick (✓) the correct box.



Sadiq



Fatima

| Sadiq | Fatima |
|--|---|
| eats sweets and chocolate drinks fizzy drinks enjoys eating meat | enjoys eating fruit enjoys eating meat drinks plenty of water |

[1]

- (b) What we eat can be damaging to our teeth. Tick (✓) **two** foods which can lead to tooth decay.

meat

sugary foods

salt

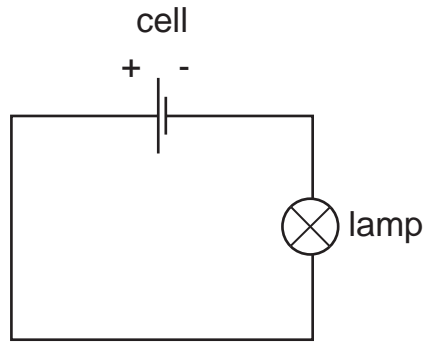
fizzy drinks

bread

pasta

[1]

15 Usha sets up this circuit.



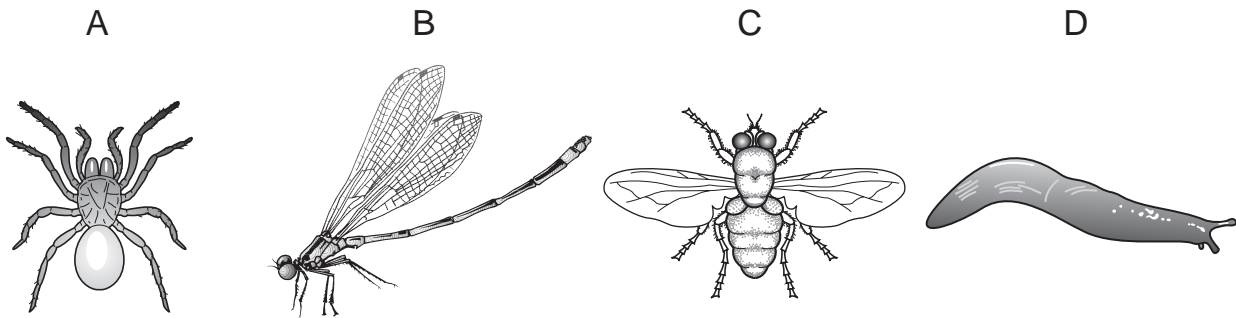
She describes how her circuit works.

Tick (✓) **one** box in each row to say whether each statement is **true** or **false**.

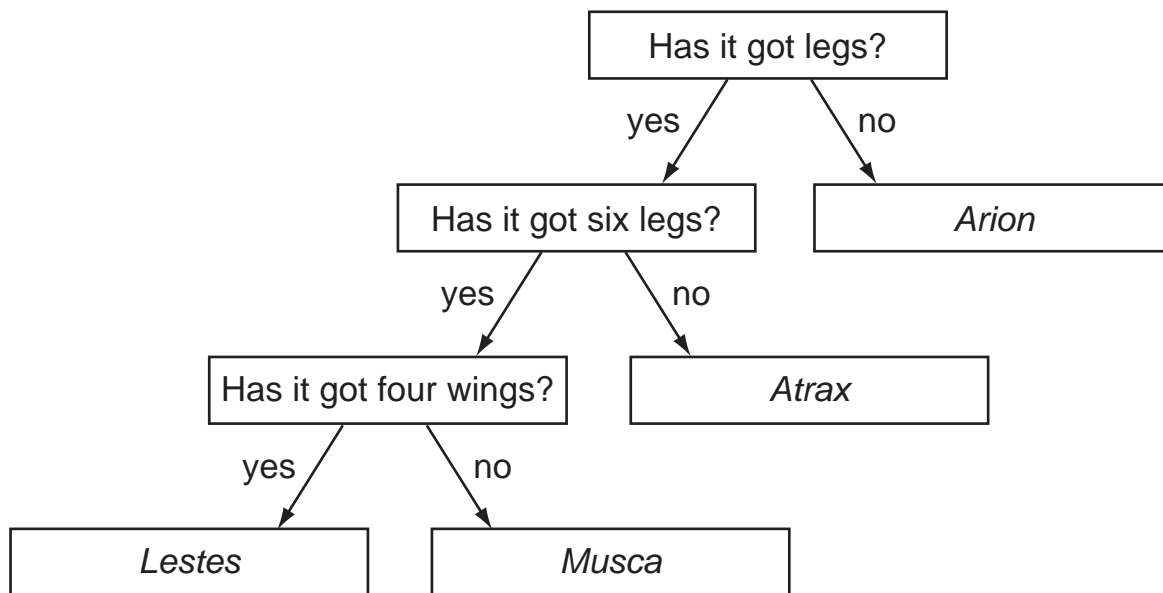
| statement | true | false |
|--|------|-------|
| Electric current keeps flowing from the cell around the circuit. | | |
| If there is a gap in the circuit after the cell, it will still work. | | |

[1]

16 Class 6 were on a field trip.
They observed many animals.
Back in school they used a key to identify four of the animals.



Use the key to identify the scientific names of these animals.



Draw lines to match each letter to the scientific animal name.

| | |
|----------|---------------|
| A | Musca |
| B | Lestes |
| C | Arion |
| D | Atrax |

[3]

17 Mixtures of two different solids can be separated by different methods.

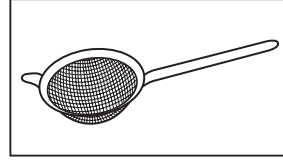
Draw a line from each **mixture** to **how it can be separated**.

mixture

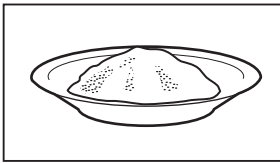


mixed nuts

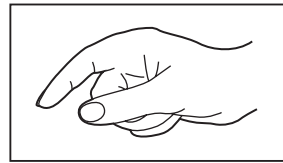
how it can be separated



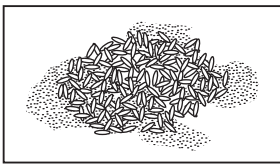
sieve



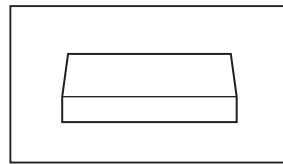
iron powder and salt



fingers



rice and flour



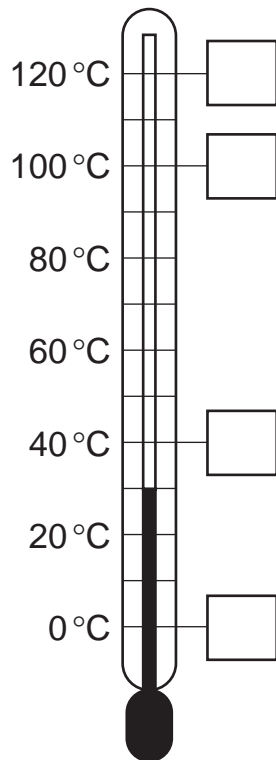
magnet

[2]

For
Examiner's
Use

18 The diagram shows a thermometer.

For
Examiner's
Use



(a) Write the letter **A** in the box next to the boiling point of water. [1]

(b) Write the letter **B** in the box next to the melting point of ice. [1]

19 The table shows some materials found in Mr Patel's house.

Tick (✓) the materials which come from living things.

| materials | made from living things |
|------------------|--------------------------------|
| gold | |
| wood | |
| diamonds | |
| silk | |
| wool | |
| slate | |

[2]

For
Examiner's
Use

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International Examinations

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Check Point Specimen

2014-2017





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SCIENCE

0846/01

Paper 1

For Examination from 2014

SPECIMEN PAPER

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

Answer **all** questions.

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

You should show all your working in the booklet.

The total number of marks for this paper is 50.

This document consists of **18** printed pages and **2** blank pages.

- 1 All living things have different life processes.

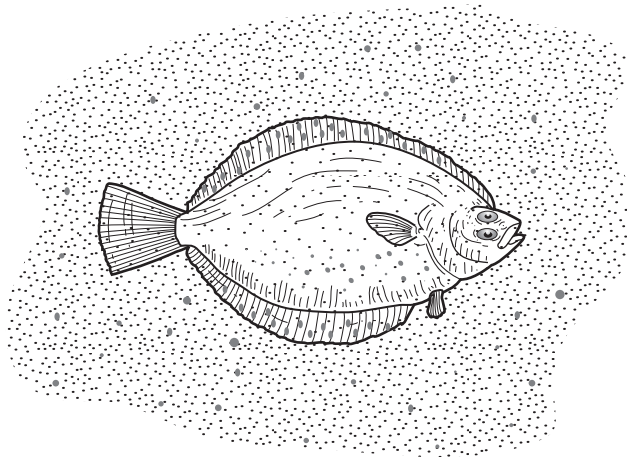
Write down the **life process** in the table next to the **definition**.

The first one has been done for you.

| definition | life process |
|---------------------------|--------------|
| responding and reacting | sensitivity |
| producing young/offspring | ..... |
| turning food into energy | ..... |

[2]

- 2 A flounder is a flatfish that lives on the bottom of the sea.



- (a) Name **one** feature that you can see in the drawing which makes the fish suited to living on the sea-bed.

Explain how this feature is useful.

Feature

Explanation

[2]

- (b) These fish can be caught by fishermen with a rod and line **or** by dragging large nets across the sea-bed.

Which of these methods is most likely to conserve **this** variety of fish?

Explain your answer.

method

explanation [1]

3 The Earth rotates on its axis.

- (a) Write down how long the Earth takes to make **one** complete rotation on its axis.

..... [1]

- (b) Which of these sentences is true?

Tick (✓) **one** box.

The Sun does not move.

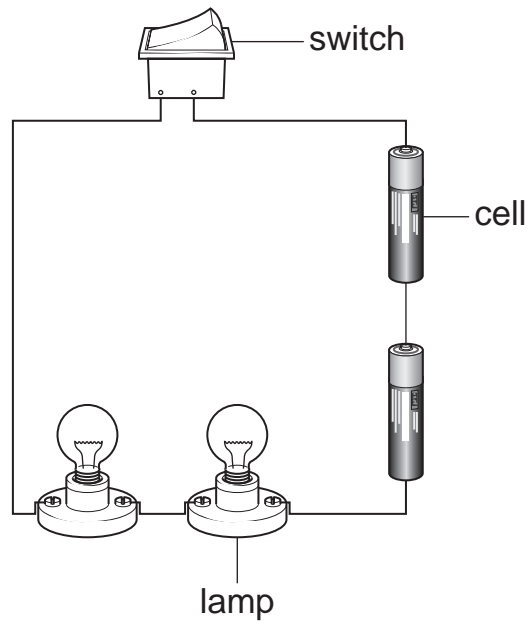
The Sun goes round the Moon.

The Sun orbits the Earth.

The Sun travels round the Earth.

[1]

4 Kofi has built an electrical circuit.



(a) The lamps are **off**.

What does Kofi do to turn the lamps **on**?

.....

[1]

(b) In the space below draw the circuit diagram for this electrical circuit.

Use circuit symbols.

[2]

5 Complete these sentences.

Cables and wires need to be **good** electrical conductors.

They are made of

For safety, wires are covered with materials that do not conduct electricity.

The wires are covered with

Any material that is a non-conductor is an [3]

6 Rosie is playing a drum.



(a) She increases the pitch of the note made.

What does Rosie have to do to increase the pitch?

Tick (✓) **one** box.

tighten the drum skin

slacken the drum skin

strike the drum harder

strike the drum softer

[1]

(b) Which of these statements is true?

Tick (✓) the **correct** box beside each sentence.

| | true | false |
|--|--------------------------|--------------------------|
| Sound can travel around corners. | <input type="checkbox"/> | <input type="checkbox"/> |
| Sound can spread out in all directions. | <input type="checkbox"/> | <input type="checkbox"/> |
| Sound cannot travel through solids. | <input type="checkbox"/> | <input type="checkbox"/> |
| Sound can travel through liquids. | <input type="checkbox"/> | <input type="checkbox"/> |
| Sound can travel in a vacuum. | <input type="checkbox"/> | <input type="checkbox"/> |

[3]

7 Elena is investigating the melting point of different salt solutions.

- she makes a salt solution using 10 cm³ of water with a known mass of salt
- she puts the salt solution into a freezer and leaves it to freeze
- she takes the frozen salt solution out of the freezer
- she measures the temperature when the frozen salt solution melts
- she repeats each experiment.

Here are her results.

| mass of salt used in g | melting point in °C | |
|------------------------|---|--|
| | first set of results for the experiment | second set of results for the experiment |
| 1 | -2 | -2 |
| 2 | -4 | -4 |
| 3 | -6 | -6 |
| 4 | -7 | -5 |
| 5 | -9 | -9 |

(a) What happens to the frozen salt solution when it melts?

..... [1]

(b) What is the melting point of pure water?

..... °C [1]

(c) Complete the sentence about the pattern shown by the results.

The the mass of salt in the solution the

..... the melting point. [1]

(d) One temperature in the second set of results does not fit the pattern.

Which temperature?

..... °C [1]

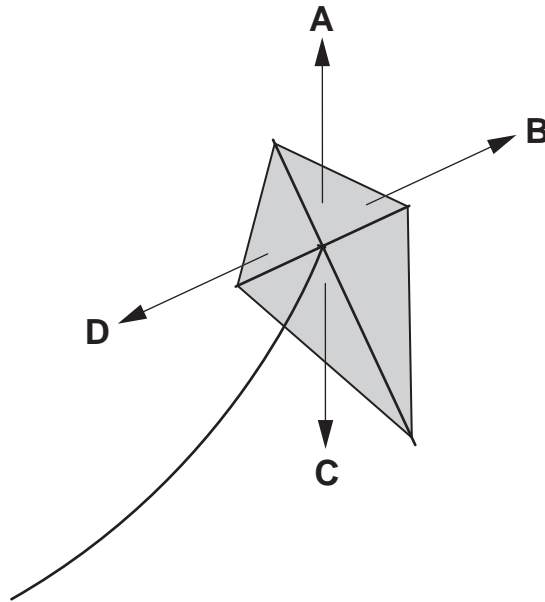
(e) Why did Elena collect two sets of results?

..... [1]

8 Samir is flying a kite.

There is a strong wind blowing.

The picture shows the forces on the kite.



(a) Which letter shows the gravitational force on the kite?

.....

Which letter shows the pulling force Samir exerts?

.....

Which letter shows the pulling force of the wind?

.....

[2]

(b) Which **two** forces balance?

Circle the correct answer.

A and C

B and C

C and D

D and A

[1]

(c) The strength of the wind increases.

The kite stays in the same place.

What happens to the pulling force that Samir exerts?

.....

[1]

9 All animals eat to give them energy.

(a) Here is some information about a food chain in the sea.

Penguins eat fish.
Fish eat green plants called plankton.

Use the information to draw a food chain in the boxes.



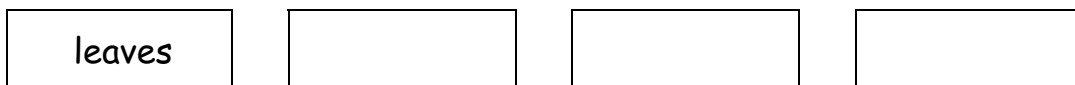
[1]

(b) Here is some information about a food chain in a woodland.

Owls eat small birds.
Small birds eat insects.
Insects eat tree leaves.

Use the information to complete this food chain.

Draw arrows to show the direction that energy is flowing.



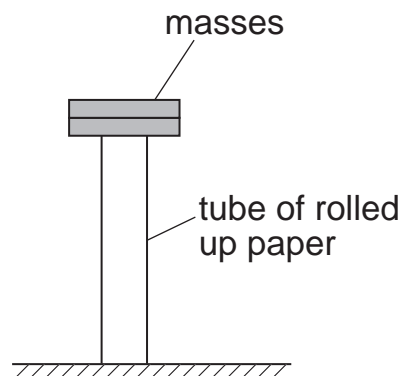
[2]

10 Gaynor knows that birds have hollow bones like a tube.

This helps birds to fly.

She is investigating how the diameter of hollow tubes changes the strength of the tube.

Here is her apparatus.



Here are her results.

| diameter of tube in mm | mass at breaking in g |
|---------------------------|--------------------------|
| 4 | 100 |
| 8 | 150 |
| 12 | 200 |
| 16 | 250 |
| 20 | 200 |
| 24 | 200 |

(a) Which diameter tube is the strongest?

..... mm [1]

(b) Gaynor says her results are not very useful.

The investigation can be improved by using different materials for the tubes.

Write down two **other** ways Gaynor can improve her investigation.

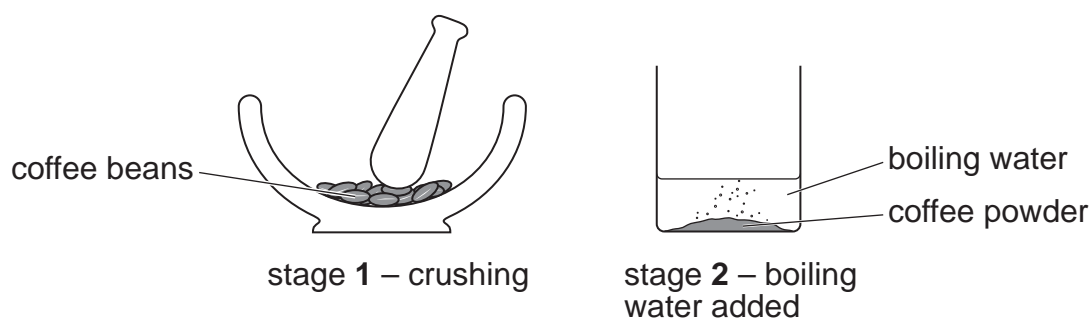
1.

2. [2]

(c) Why can hollow bones help birds fly?

..... [1]

11 Chen crushes some coffee beans into a powder and adds boiling water.

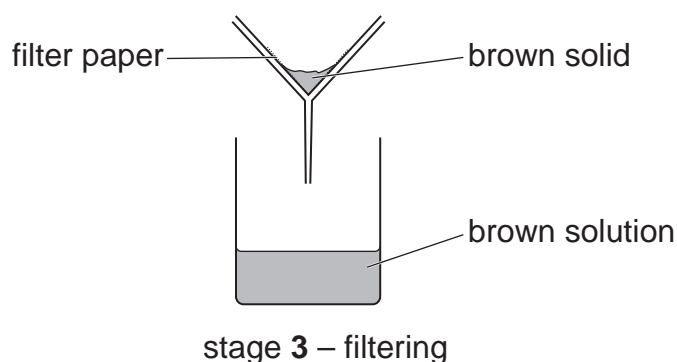


(a) Why does the water turn brown in stage 2?

.....

[1]

(b) Chen then filters the mixture of coffee and water.



Some brown solid is left on the filter paper.

Circle the statement that explains this.

all of the coffee powder is soluble

some of the coffee powder is insoluble

all of the coffee powder is insoluble

some of the coffee powder is frozen

[1]

(c) Use these words to complete the sentences about stage 3.

filtrate

mixture

residue

solvent

The brown solid on the filter paper is the

The brown solution in the beaker is the [2]

(d) Chen heats the brown solution.

Half of the water evaporates.

What happens to the colour of the brown solution?

Tick (✓) **one** box.

goes colourless

becomes a lighter brown

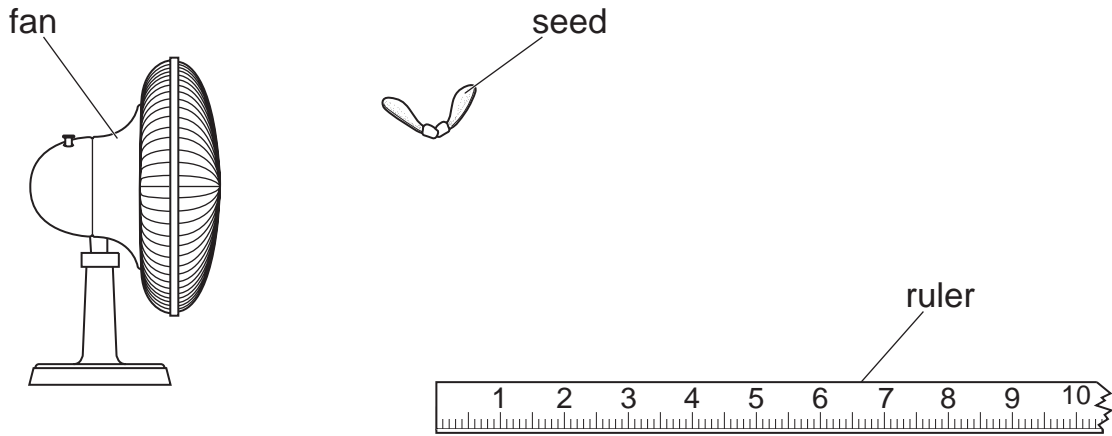
stays the same colour

becomes a darker brown

[1]

12 Sara and Juan are investigating the distance seeds can be dispersed.

Here is the equipment they use.



Sara drops a seed near the fan.

Juan measures the distance the seed moves.

They repeat the test for five more seeds.

(a) They want to make it a fair test by always using the same size seed.

What two **other** factors do they keep the same?

1.
2.

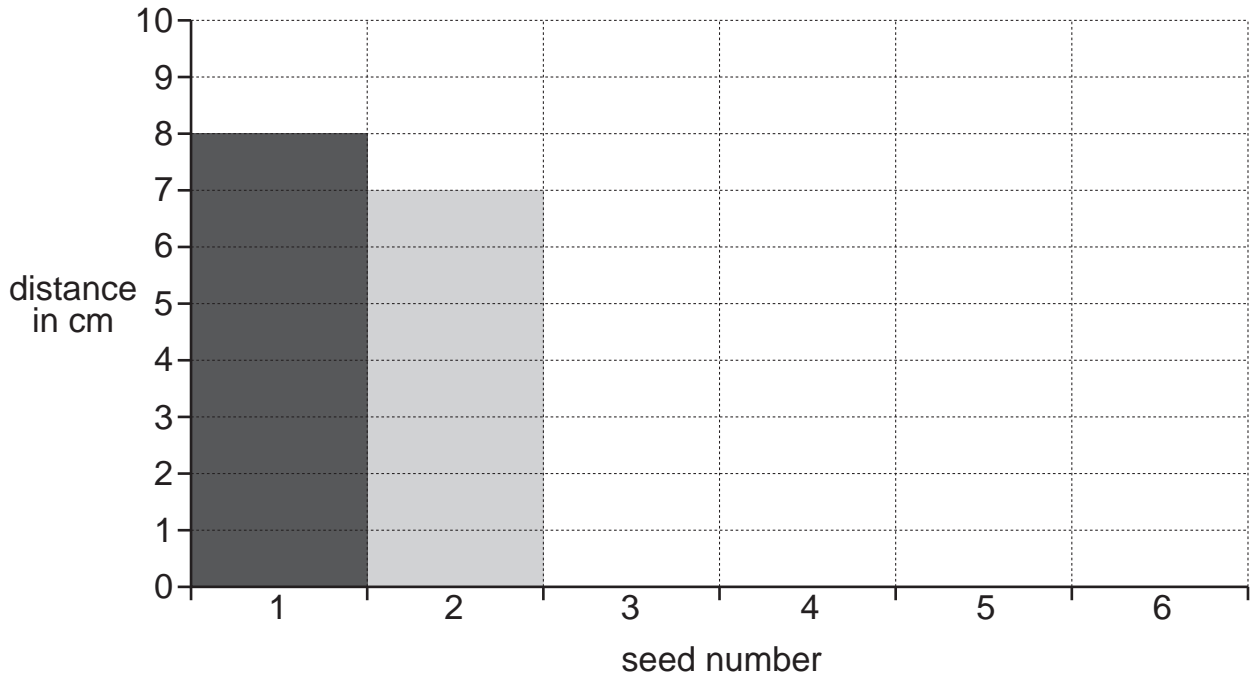
[2]

Here are their results.

| seed number | distance in cm |
|-------------|----------------|
| 1 | 8.0 |
| 2 | 7.0 |
| 3 | 8.5 |
| 4 | 8.0 |
| 5 | 4.5 |
| 6 | 9.0 |

(b) Plot their results on a bar chart.

The first two have been done for you.



[3]

(c) Sara thinks one of the results may be wrong.

Which one is it?

Seed number

[1]

(d) These seeds have all been dispersed by the same method.

Circle the correct method.

animal dispersal

explosive dispersal

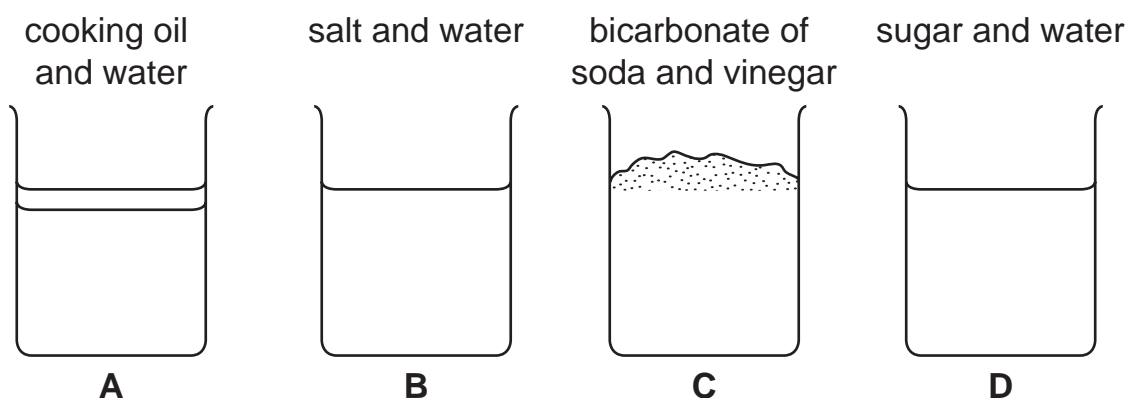
self dispersal

water dispersal

wind dispersal

[1]

13 Gennaro makes the following mixtures in his kitchen.



(a) Complete the table to say what happens to each of the mixtures.

Tick (✓) the **correct** box for each mixture.

| mixture | chemical reaction | makes a solution | does not react or make a solution |
|---------|-------------------|------------------|-----------------------------------|
| A | | | |
| B | | | |
| C | | | |
| D | | | |

[2]

(b) Which is irreversible?

..... [1]

(c) Why is it irreversible?

..... [1]

(d) Write down how he could get salt back from B.

.....
 [1]

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SCIENCE

0846/02

Paper 2

For Examination from 2014

SPECIMEN PAPER

45 minutes

Candidates answer on the Question Paper.

Additional Materials:

Pen
Pencil
Ruler

Calculator

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.

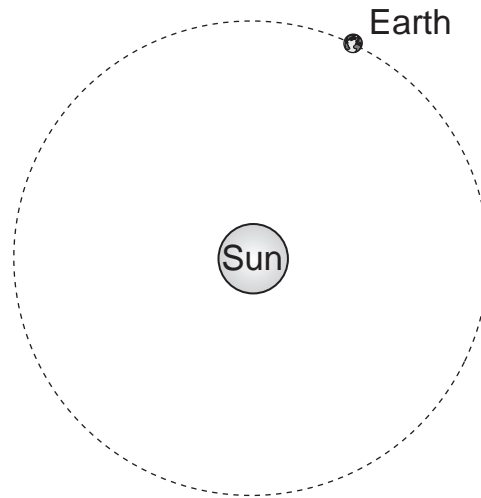
Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.
You should show all your working in the booklet.

The total number of marks for this paper is 50.

This document consists of **16** printed pages.

1 The diagram shows the Sun and Earth.



**NOT TO
SCALE**

Tick (✓) the **two** correct sentences.

The Sun takes 1 year to orbit the Earth.

The Earth takes 1 year to orbit the Sun.

The Earth takes 24 hours to orbit the Sun.

The Earth spins on its axis once every 24 hours.

The Earth spins on its axis once every year.

[2]

2 (a) Some things are living things.

Others have never lived.

Write down each word in the correct box in the table.

kangaroo rat rock sand seaweed

| living things | things that have never lived |
|---------------|------------------------------|
| | |
| | |
| | |
| | |
| | |

[1]

(b) Which of the following observations would help to identify a living thing?

Tick (✓) the **two** correct answers.

it grows

it feels warm

it can get smaller

it makes young ones

[1]

3 Here are some substances that are solids, liquids or gases.

butter chocolate ice orange juice steam water

| solid | liquid | gas |
|--------------|---------------|------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

(a) Write down the substances in the correct column, **solid**, **liquid** or **gas**. [1]

(b) When ice is warmed, it changes.

Write down the name of this process.

..... [1]

(c) If water was cooled to 0°C it changes.

Write down the name of this process.

..... [1]

(d) What will happen to water if it boils?

..... [1]

4 (a) Draw a line to connect the **term** to the correct **meaning**.

| term | meaning |
|-------------|---------------------------------------|
| producer | an animal that eats another animal |
| predator | a green plant that makes its own food |
| prey | an animal that is eaten |

[2]

(b) What is a consumer?

Circle the correct answer.

a plant that eats another plant

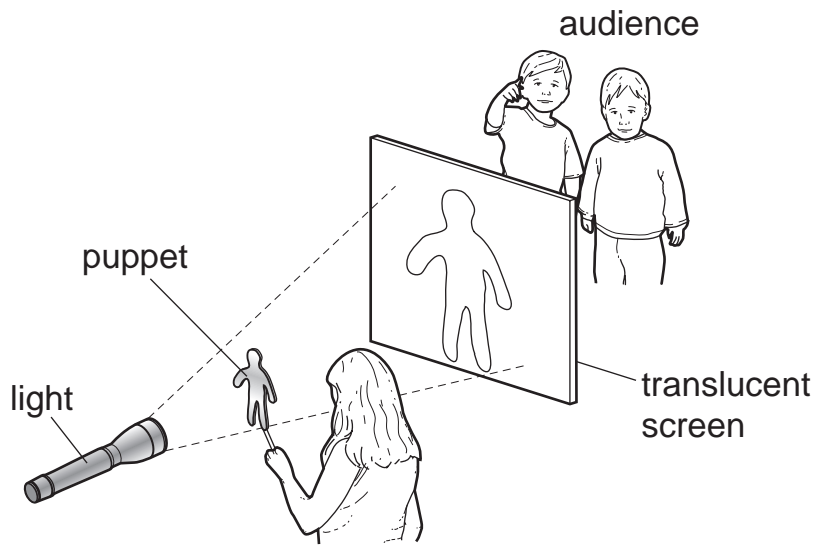
a plant that eats an animal

an animal that eats a plant

a plant that eats plants and animals

[1]

5 Here is a diagram of a puppet show.



(a) Complete this sentence.

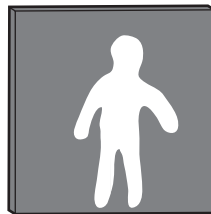
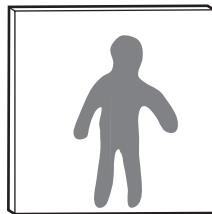
The puppet makes an image called a on the screen. [1]

(b) What must the girl do to the puppet to make this image smaller?

.....
 [1]

(c) What do the audience see?

Tick (✓) **one** box.



[1]

(d) What would the audience see if the screen were opaque?

..... [1]

6 The table shows the boiling points of some liquids.

| liquid | boiling point in °C |
|--------|---------------------|
| A | 105 |
| B | 78 |
| C | 100 |
| D | 96 |
| E | 1064 |

(a) Which liquid has the **lowest** boiling point?

..... [1]

(b) Which liquid is pure water?

..... [1]

(c) Complete the sentences about boiling and freezing.

During boiling liquid changes into a

During freezing liquid changes into a [2]

7 Suzy is growing sunflower seeds.

She thinks that seeds will grow better in a bigger pot

- she puts one seed into each of four different sized pots
- she puts them in the same warm place and waters them regularly
- after four days the seeds begin to grow
- she measures the height of the shoot every day.

What does Suzy do to make it a fair test?

Tick (✓) **one** box.

measure the shoots

put the pots in the same place

measures each shoot on a different day

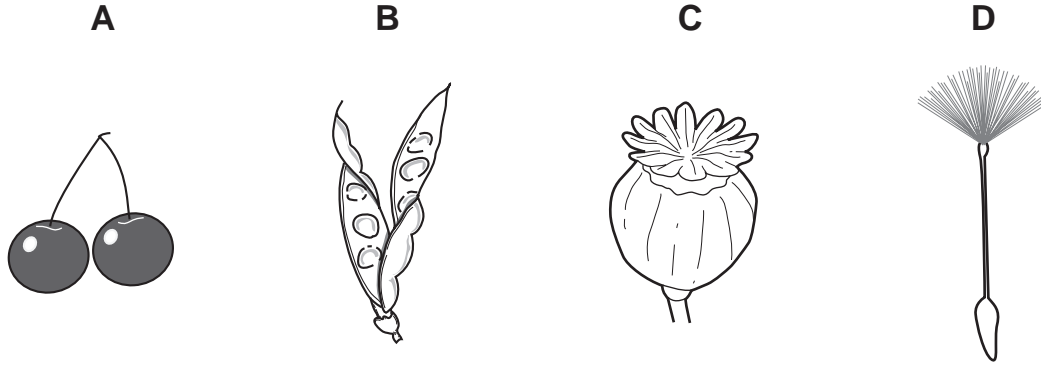
uses four different pots

[1]

8 Seeds are dispersed from plants so they have a better chance to grow.

Here are some diagrams of fruits containing seeds.

Use these examples to answer the questions.



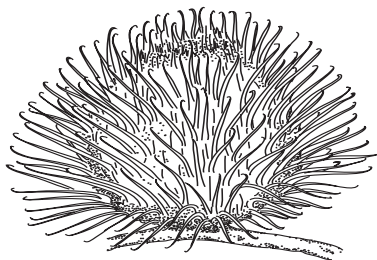
(a) Which **two** fruits from **A, B, C** or **D** dry to release the seeds?

..... and [1]

(b) Which fruit **A, B, C** or **D** is dispersed by the wind?

..... [1]

(c) This diagram shows another fruit.



Describe how this fruit is dispersed.

.....

 [2]

9 Maria is investigating what happens when indigestion tablets are added to water.

- she measures 100 cm³ of water and puts this into a beaker
- she adds a 1 g indigestion tablet to the water
- she measures the change in temperature of the water.

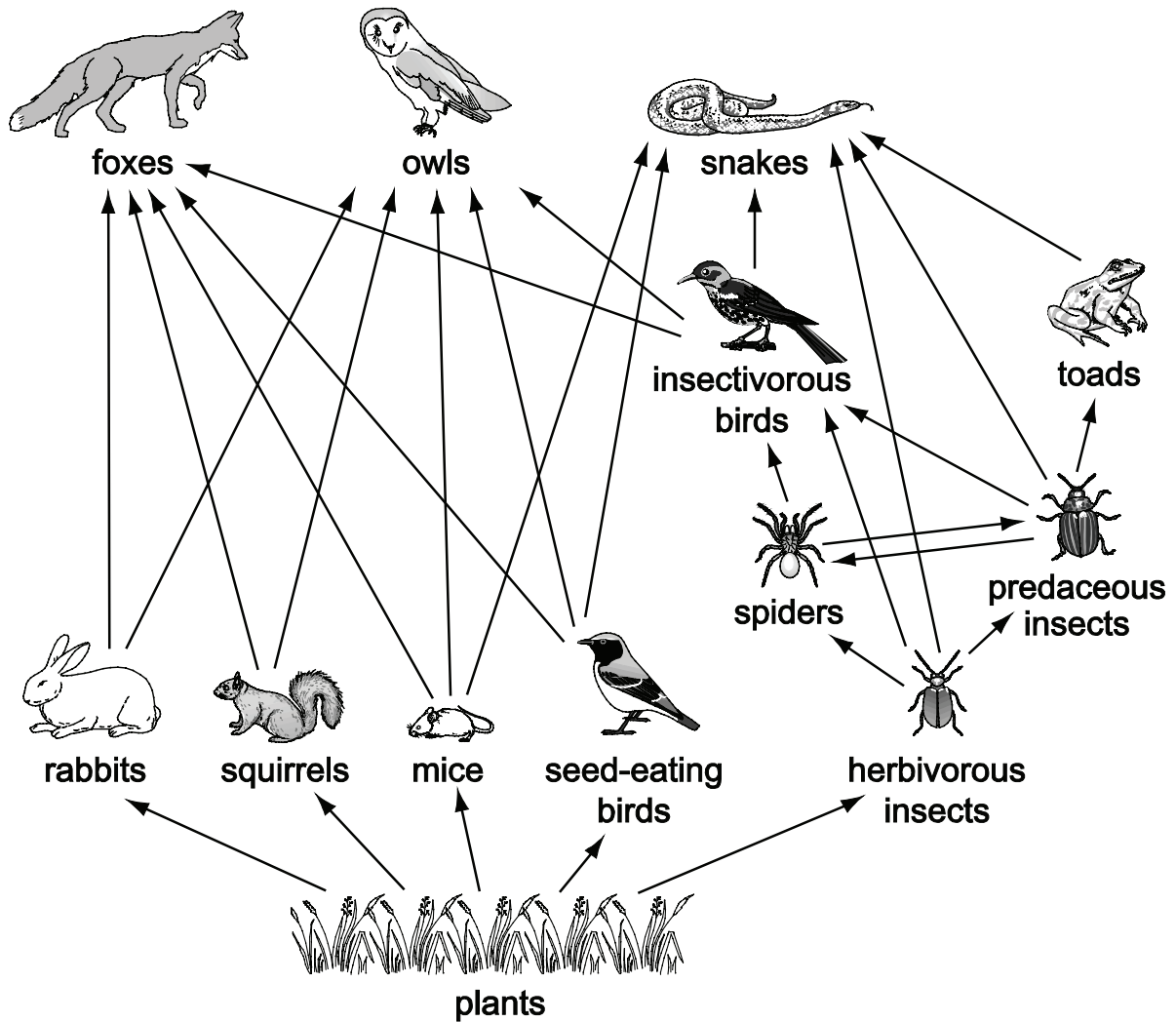
Draw a line from each **measurement** to the piece of **equipment** needed to make the measurement.

| measurement | equipment |
|--------------------------|--------------------|
| mass of tablet | ruler |
| temperature of the water | thermometer |
| volume of water | beaker |
| | measuring cylinder |
| | balance |

[3]

10 Animals survive by living in food chains.

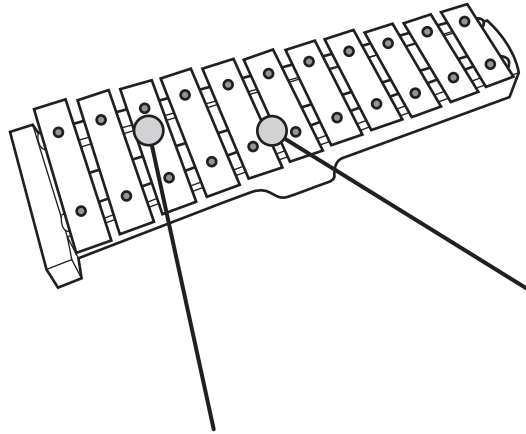
Look at the food web below.



- (a) What is the main food source for **toads**?
 [1]
- (b) Which **three** animals eat **seed-eating** birds?
 [2]
- (c) Write down **one** of the food chains for **mice**.
 [1]

11 A music studio is next to a quiet room in a library.

Erik practises the glockenspiel in the studio.



(a) Erik strikes the glockenspiel with a hammer.

What causes the sound?

..... [1]

(b) Erik makes a high pitched sound on the glockenspiel?

What does Erik do to make the pitch higher?

..... [1]

(c) Sometimes the sounds are too loud in the library and Aravinder complains.

He collects data, using a decibel meter, and records the loudness of the sound in decibels (dB).

| | | | | | | |
|------------------------------------|-------|-------|-------|-------|-------|-------|
| time | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 |
| decibel meter reading in dB | 22 | 24 | 67 | 87 | 43 | 22 |

At what time is the sound from the studio the loudest?

..... [1]

(d) Describe what happens to the sound level between 10:00 and 15:00.

..... [1]

(e) Aravinder suggests the wall between the library and the studio is lined with foam.

Why is the foam useful?

..... [1]

12 Nara puts 2g of chalk and 3g of sugar into 30cm³ of water and stirs the mixture.

She then filters the mixture.

A white solid is left on the filter paper.

She dries this solid and measures the mass of the solid.

(a) What is the white solid left on the filter paper?

..... [1]

(b) Write down the name of the liquid that passes through the filter paper.

..... [1]

(c) What is the mass of the solid that is left on the filter paper after Nara dries it?

..... g [1]

13 Blood is pumped to and from parts of the body.

(a) Which **two** of these are correct for blood flow from the pump?

Tick (✓) **two** boxes.

| from | → | to | |
|-----------|---|-----------|--------------------------|
| the body | → | the heart | <input type="checkbox"/> |
| the lungs | → | the body | <input type="checkbox"/> |
| the heart | → | the lungs | <input type="checkbox"/> |
| the heart | → | the body | <input type="checkbox"/> |

[2]

(b) Name two substances that the blood carries to be **used** by the cells in the body.

- 1
- 2 [2]

(c) Name **one** substance carried by the blood to the lungs so it can be removed from the body.

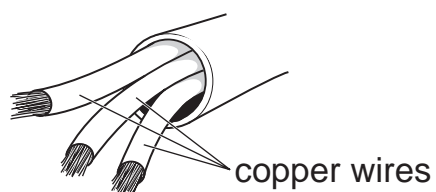
..... [1]

14 Some of the properties of copper are shown in the table.

| property |
|-------------------------------|
| good conductor of electricity |
| good conductor of heat |
| high boiling point |
| high melting point |
| hard |
| shiny |

(a) Why is copper used to make electrical wires?

Choose from **the table**.

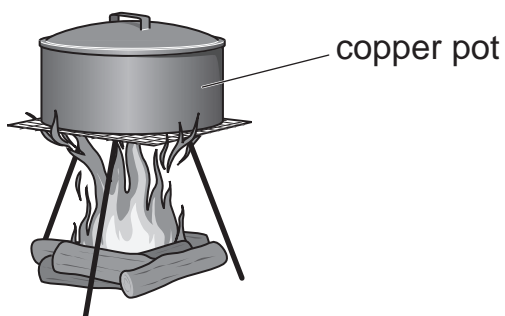


.....

[1]

(b) Why is copper used to make cooking pots and pans?

Choose the best two reasons from **the table**.

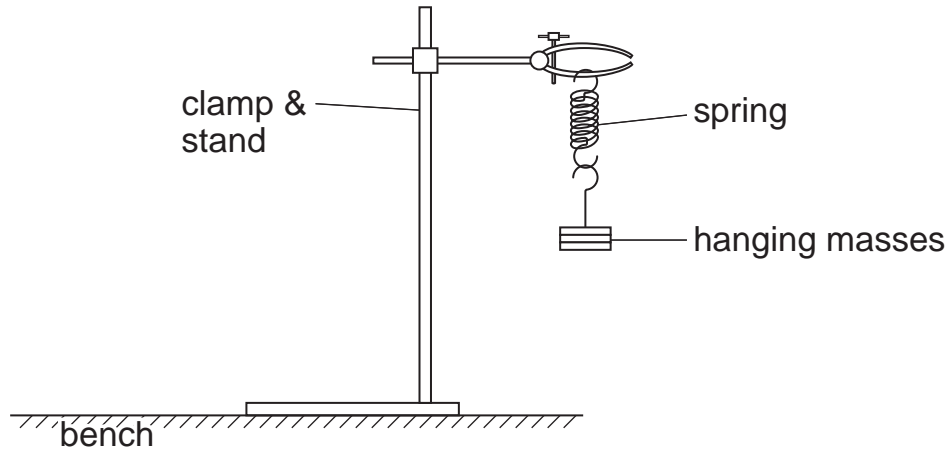


1

2

[2]

- 15 Joshi is investigating how much a spring stretches when different masses are added.



- (a) What could he use to measure how much the spring stretches?

..... [1]

- (b) Before his experiment Joshi thinks that the spring will stretch more if he adds **more** masses to the spring.

What type of statement is this?

Circle the correct answer.

conclusion **measurement** **method** **prediction** [1]

- (c) When doing his investigation what must Joshi do to keep himself safe?

..... [1]

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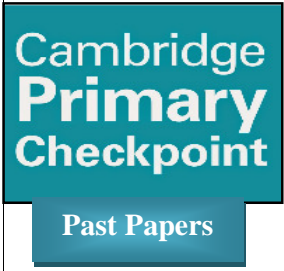
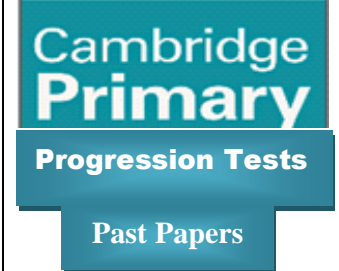
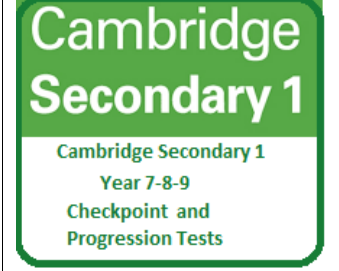
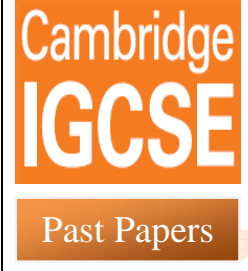
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