



Cambridge Primary Sample Test

For use with curriculum published in September 2020

Science Paper 2

Stage 5

35 minutes

Name

No additional materials are needed.

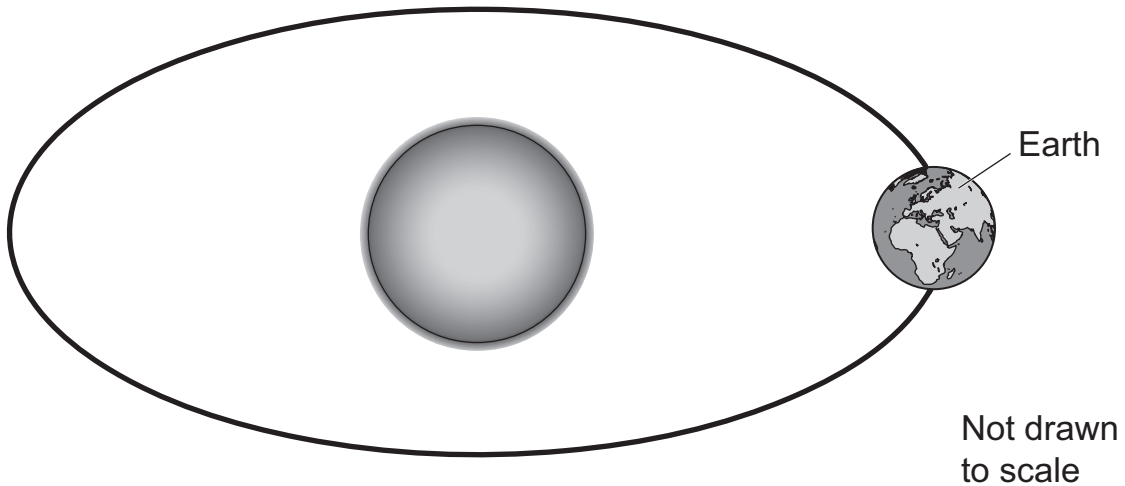
INSTRUCTIONS

- Answer **all** questions.
- Write your answer to each question in the space provided.
- You should show all your working on the question paper.

INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [].

1 The diagram shows the path of the Earth's orbit around the Sun.



(a) Complete the sentences.

The direction the Earth moves around the Sun is

The shape of the orbit is called

[2]

(b) How many **days** does it take the Earth to complete one full orbit of the Sun?

..... days

[1]

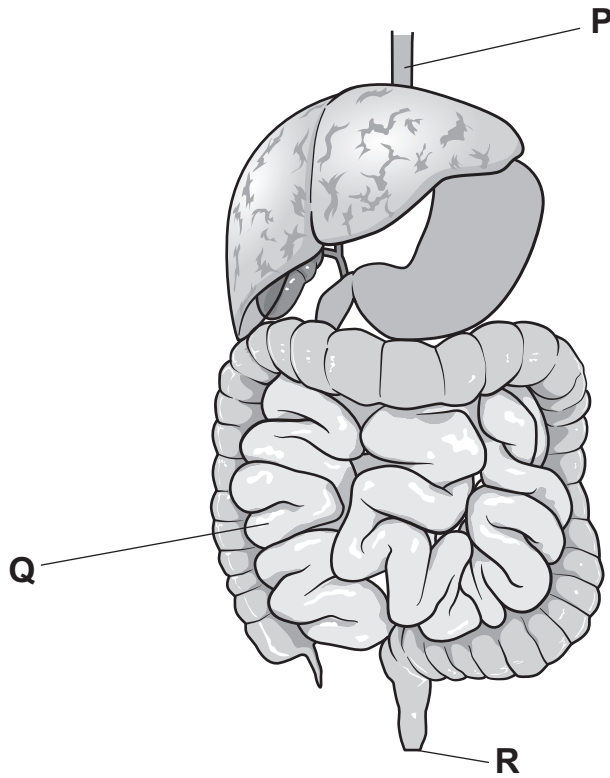
(c) The Earth is surrounded by a layer of air called the atmosphere.

Write down the name of **two** gases found in the atmosphere.

..... and

[1]

2 The diagram shows a model of the human digestive system.



(a) Write down the functions of **P**, **Q** and **R**.

P

.....

Q

.....

R

.....

[3]

(b) Why do humans need a balanced diet?

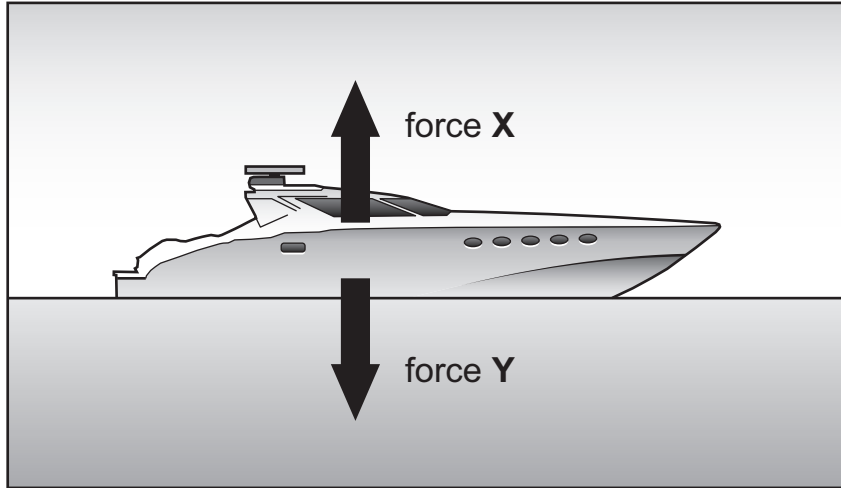
.....

..... [1]

3 A boat is floating on water.

The boat is **not** moving forward.

The diagram shows **two** forces acting on the boat.



(a) Name force **X** and force **Y**.

force **X**

force **Y**

[2]

(b) Force **X** is equal to force **Y**.

What happens to the boat if force **Y** is **bigger** than force **X**?

..... [1]

4 The particle model is used to describe solids, liquids and gases.

(a) The table shows properties of solids, liquids and gases.

Complete the table by putting ticks (✓) in the correct boxes.

property	solids	liquids	gases
fixed shape			
easily compressed			
able to flow			
particles in the model are touching			

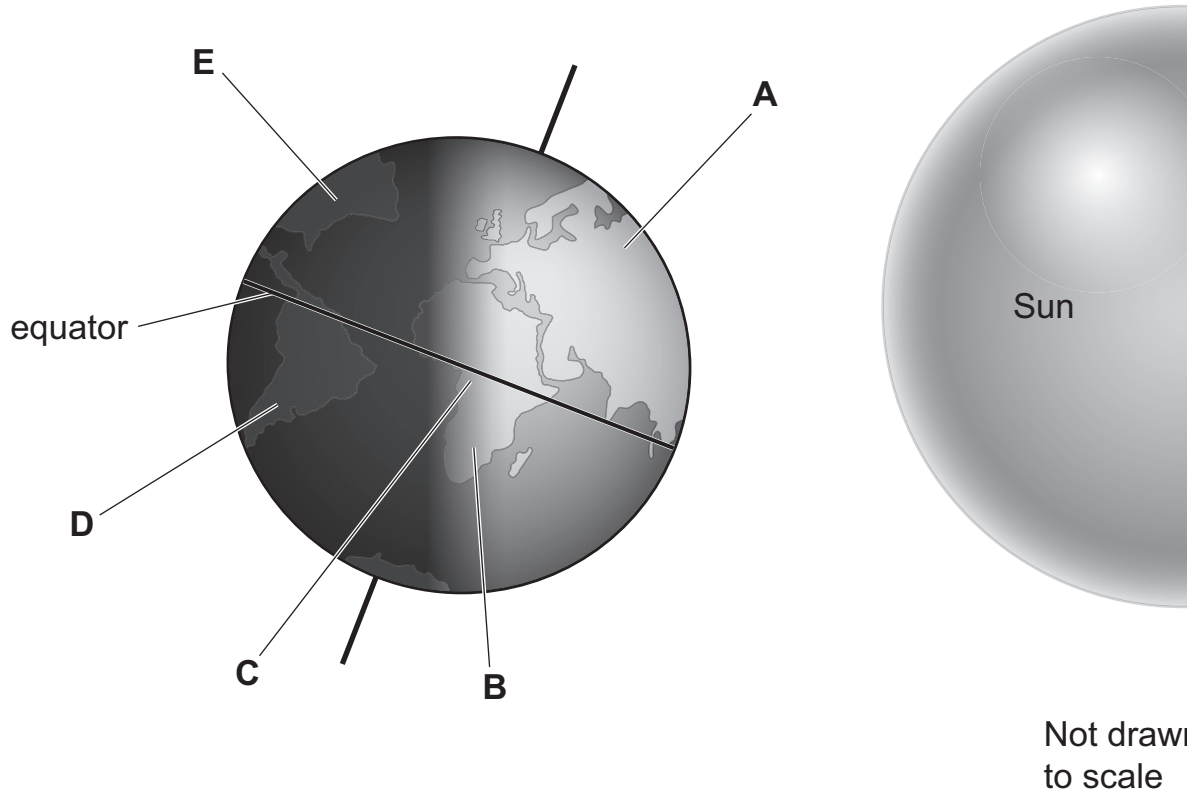
[3]

(b) A gas condenses.

What happens to the particles when a gas condenses?

..... [1]

5 The diagram shows the Earth tilted on its axis.



A, B, C, D and **E** show different countries on the Earth.

Use the diagram to answer the questions.

(a) Which country is experiencing daytime **and** summer?

Circle the correct answer.

A **B** **C** **D** **E**

[1]

(b) Which country is experiencing night-time **and** winter?

Circle the correct answer.

A **B** **C** **D** **E**

[1]

6 Living things are adapted to different environments.

(a) Draw a line from each **adaptation** to the correct **reason** for that adaptation.

adaptation	reason
spines instead of leaves	to float on water
thick fur	to reduce water loss
large flat leaves	to keep cool in the desert
large ears	to keep warm in the Arctic

[2]

(b) Plants are adapted to disperse seeds in different ways.

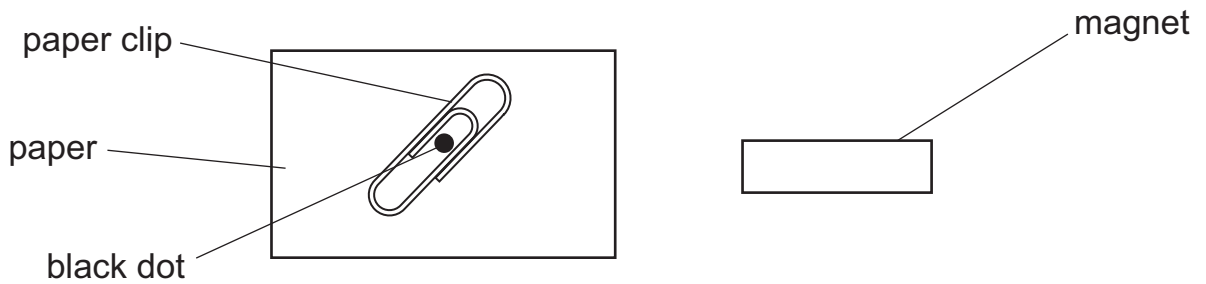
Complete the table to identify the type of seed dispersal for each description.

plant	description	type of seed dispersal
A	seeds are large and lightweight so they float	water
B	seeds have tiny hooks on them so they attach to things
C	seeds have wings and are lightweight so they move in air
D	seeds are found inside fruits so they are eaten

[3]

7 Ahmed investigates the strength of different magnets.

He uses this equipment.



Ahmed:

- draws a black dot on a piece of paper
- puts a paper clip over the black dot
- moves the magnet towards the paperclip until the paper clip starts to move
- measures the distance between the magnet and the centre of the black dot
- repeats this with different magnets.

Here are his results.

magnet	distance between magnet and centre of black dot in mm
A	36
B	32
C	24
D	22
E

(a) The diagram shows the position of magnet **E** when the paper clip starts to move.



Measure the distance between magnet **E** and the centre of the black dot.

Write your answer in the table.

[1]

(b) Which magnet is closest to the black dot before the paper clip starts to move?

..... [1]

(c) Which magnet is the strongest?

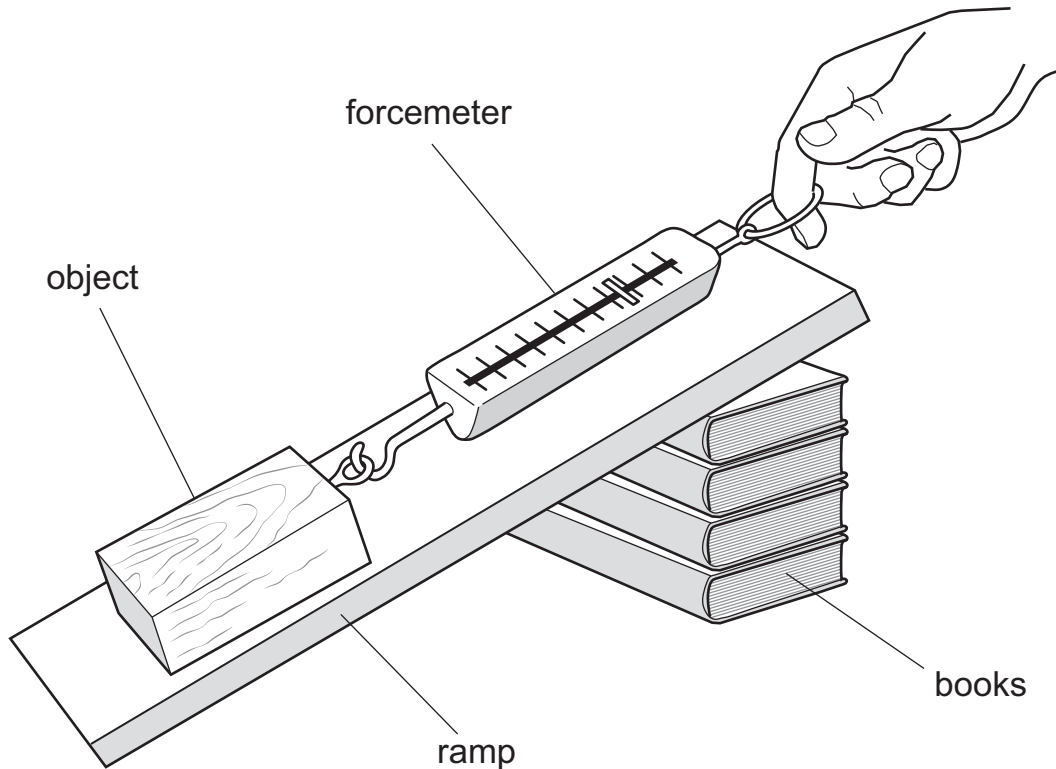
..... [1]

(d) Suggest **one** way Ahmed improves his investigation to get more reliable results.

..... [1]

8 Blessy investigates the force needed to pull an object up a ramp.

The diagram shows the equipment Blessy uses.



Blessy uses the forcemeter to measure the force needed to pull the object up the ramp.

She changes the height of the ramp and repeats the investigation.

Here are her results.

height of ramp in cm	force needed to pull object in N
2	1.2
4	2.0
6	2.2
8	3.6
10	4.4

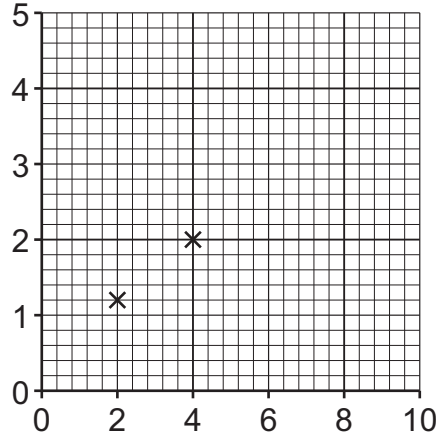
(a) What is the **independent** variable in this investigation?

..... [1]

(b) Complete the line graph.

- label each axis
- plot the last **three** points
- draw a **straight** line of best fit.

.....



.....

[3]

(c) Describe the pattern in the results.

.....
 [1]

(d) Complete the sentence.

The result that does **not** fit the pattern is N. [1]

9 (a) Class 5 is doing a quiz about dissolving solids.

Complete the quiz.

For each answer write **true** or **false**.

The first one has been done for you.

Quiz
1. Dissolving is a reversible process. True
2. A solution is a liquid that dissolves a solid.
3. A solvent is a solid that dissolves in a liquid.
4. Water is a liquid used to dissolve solids.
5. A mixture is made when a solid dissolves in a liquid.

[2]

(b) Describe how to separate a solid from the liquid it is dissolved in.

.....
.....
.....
.....

[2]

10 The table shows the lowest pitch and highest pitch of five musical instruments.

musical instrument	pitch in units	
	lowest	highest
clarinet	230	880
guitar	40	990
oboe	220	880
trombone	110	440
tuba	55	220

(a) Which musical instrument has 220 units as its **lowest** pitch?

..... [1]

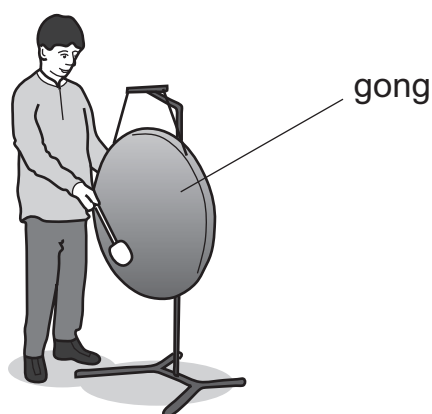
(b) What is the **highest** pitch of the trombone?

..... units [1]

(c) Which musical instrument has the largest difference in pitch?

..... [1]

(d) Look at the picture of a gong.



Complete the sentences.

When the gong is hit hard it makes a sound.

When the gong is hit with less force it makes a sound.

[1]

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