



## Practice sheet

Name: \_\_\_\_\_

Subject: \_\_\_\_\_

**Science**

Class: \_\_\_\_\_

**5 ( A / B )**

Date: \_\_\_\_\_

### **Q1) April 2020 paper1 /Q16**

Blessy is investigating the time it takes to dissolve sugar cubes in water.

- Blessy measures 200 cm<sup>3</sup> of water.
- She puts the water into a beaker.
- She adds one sugar cube to the water.
- Blessy stirs the mixture with a glass rod.
- She measures the time it takes the sugar cube to dissolve.

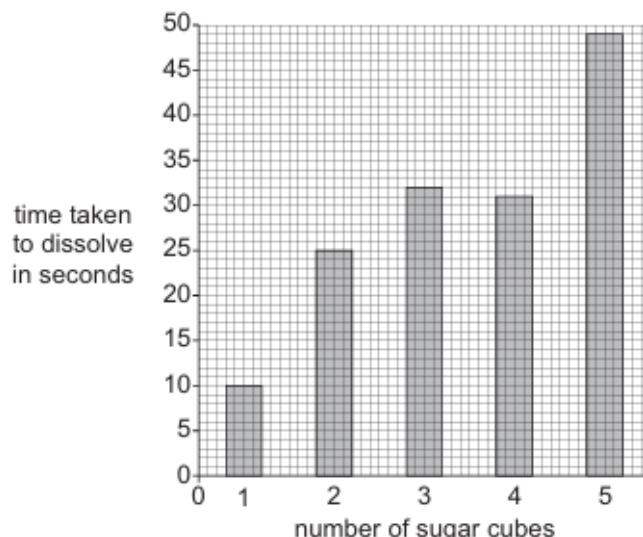
She repeats this experiment four more times.

Each time she uses a different number of sugar cubes.

**(a)** Blessy wants to do a fair test.

Write down one **factor** she must keep the same.

**(b)** Here are Blessy's results.



What is the time taken to dissolve

two sugar cubes: ..... seconds

three sugar cubes: ..... seconds

(c) Blessy predicts that it would take 55 seconds for 6 sugar cubes to dissolve.

She checks her prediction by doing the experiment with 6 sugar cubes three times.

Here are her results.

experiment with 6 sugar cubes	time to dissolve in seconds
1	55
2	46
3	48

Do these results support Blessy's prediction? .....

Explain your answer.

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

(d) It was a good idea for Blessy to check her prediction using three experiments rather than just one.

Explain why.

.....  
.....

## Q2) April 2019 paper 1 /Q2

Ice melts into liquid water.

(a) The melting of ice is a **reversible** process.

Explain why.

.....  
.....

(b) Complete the sentences.

The melting point of ice is ..... °C.

The boiling point of water is ..... °C.

### Q3) April 2019 paper 1/Q8

The table below shows some properties of six materials.

material	hardness (1 = soft and 10 = hard)	melting point (1 = low and 10 = high)	soluble in water	strength (1 = weak and 10 = strong)
A	9	10	yes	9
B	4	10	no	1
C	5	9	no	10
D	10	10	no	10
E	4	4	no	6
F	9	9	no	9

(a) Material E has a low melting point.

What is the meaning of the words melting point?

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

(b) A cutting tool needs to be very hard, have a high melting point and be very strong.

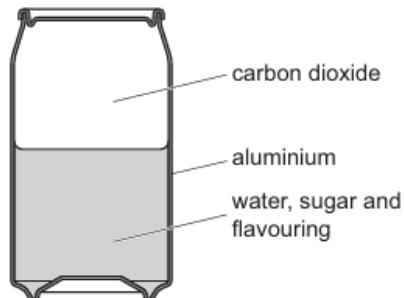
Which material is the best to make a cutting tool?

Circle the correct answer.

A      B      C      D      E      F

### Q4) April 2019 paper 1 / Q14

Look at the diagram of a fizzy drinks container.



(a) Which material shown in the diagram is a gas?

.....

(b) Aluminium is used to make the fizzy drinks container because of its properties.

One of these properties is that it does **not** corrode.

Write down two **other** properties.

1 .....  
2 .....

**Q5) April 2019 paper 1 / Q17**

Yuri investigates the evaporation of water.

In his first experiment Yuri

- puts  $50\text{ cm}^3$  of water into a glass beaker
- puts the glass beaker into an oven for 24 hours
- measures the volume of water left in the beaker.

Yuri does this experiment at different temperatures.

Yuri predicts

**'As the temperature of the oven increases the volume of water left in the beaker decreases.'**

**(a)** Here are Yuri's results.

Complete the table.

temperature in $^{\circ}\text{C}$	volume of water in beaker at start in $\text{cm}^3$	volume of water left in beaker in $\text{cm}^3$	volume of water evaporated in $\text{cm}^3$
30	50	45	.....
40	50	40	.....
50	50	30	.....
60	50	10	.....
70	50	0	.....

**(b)** Do the results support Yuri's prediction?

.....  
Use the results from the table to explain your answer.

.....  
.....

**Q6) April 2019 paper 2 / Q8**

Blessy investigates some colourless liquids.

She boils the liquids for 15 minutes.

Look at her results.

liquid	temperature of boiling liquid in °C	other observations
A	107	liquid completely disappears
B	104	liquid disappears and leaves behind a white solid
C	100	liquid completely disappears
D	65	liquid completely disappears
E	160	liquid completely disappears

**(a) What is the name of the apparatus Blessy uses to measure the temperature?**

.....

**(b) Blessy must be careful doing the experiment since the liquids may be flammable.**

Explain why Blessy must be careful.

.....

**(c) Describe what happens to a liquid when it boils.**

.....

**(d) One of the liquids is pure water.**

Which one? .....

Explain your answer.

.....

**(e) One of the liquids is a solution.**

Which one? .....

Explain your answer.

### Q7) April 2023 paper 1 / Q2

Rajiv adds a piece of iron to copper sulfate solution.

A chemical reaction takes place and the mixture becomes warmer.

Iron is a grey solid and copper sulfate is a blue solution.

After five minutes the iron is covered by a pink solid because copper is made.

The solution changes colour to green because iron sulfate is made.

(a) Write down the name of **one reactant** in this chemical reaction.

.....

(b) Write down **one observation** that shows this chemical reaction takes place.

.....

(c) Describe **one measurement** Rajiv makes that shows a chemical reaction takes place.

.....

### Q8) April 2023 paper 2 / Q2

Chen finds information about the melting points and boiling points of some substances.

substance	melting point in °C	boiling point in °C
ethanol	-144	78
propanone	-95	56
salt solution	-6	106
water	0	100

(a) What is the meaning of the words **melting point**?

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

(b) Which substance has the greatest difference between its melting point and its boiling point?

.....

(c) Salt solution is a mixture of salt and water.

Describe the effect of adding salt to the boiling point of water.

.....

### Q9) October 2023 paper 1 / Q2

Baking soda is a white solid.

Vinegar is a colourless solution.

Chen adds baking soda to vinegar.

The mixture fizzes and bubbles and a colourless solution is made.

The temperature of the mixture goes down.

Two of the substances made are carbon dioxide and water.

(a) Chen concludes a chemical reaction has taken place.

Write down **two** observations that support his conclusion.

1 .....

2 .....

(b) Write down the names of the **reactants** in this reaction.

.....

(c) Which **product** is a colourless liquid?

.....

### Q10) October 2023 paper 1 / Q6

This question is about the properties of gases.

Look at the table that shows some properties of four gases.

gas	colour of gas	odour of gas
carbon dioxide	colourless	odourless
chlorine	pale green	like bleach
nitrogen	colourless	odourless
oxygen	colourless	odourless

(a) Write down **two other** properties of all gases.

1 .....

2 .....

(b) Blessy thinks that all gases are colourless.

Explain why Blessy is **not** correct.

Use information from the table in your answer.

.....

**Q11) October 2023 paper 2 / Q2**

Glucose dissolves in water to make glucose solution.

The table shows the maximum mass of glucose that dissolves in 100 g of water at different temperatures.

temperature in °C	maximum mass of glucose in g
10	40
20	47
30	54
40	61
50	67
60	75

**(a)** Describe the relationship between the temperature of the water and the maximum mass of glucose dissolved.

Explain your answer using ideas about particles.

description .....  
.....

explanation .....  
.....

**(b)** Identify the **solvent** and the **solute** in the glucose solution.

The solvent is .....

The solute is .....;

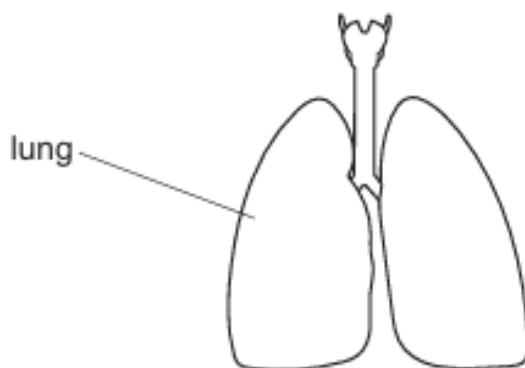
**(c)** Dissolving glucose in water is a physical change.

Explain why dissolving is a physical change.

.....  
.....

**Q12) October 2023 paper 2/ Q1**

The picture shows part of an organ system in the human body.



**(a) Name this organ system.**

.....

**(b) Which gas moves from the lungs into the blood?**

.....

**(c) Look at the picture of an animal.**



Suggest why this animal is likely to have lungs similar to humans.

Tick (✓) **one** box.

the animal is a reptile

the animal is an invertebrate

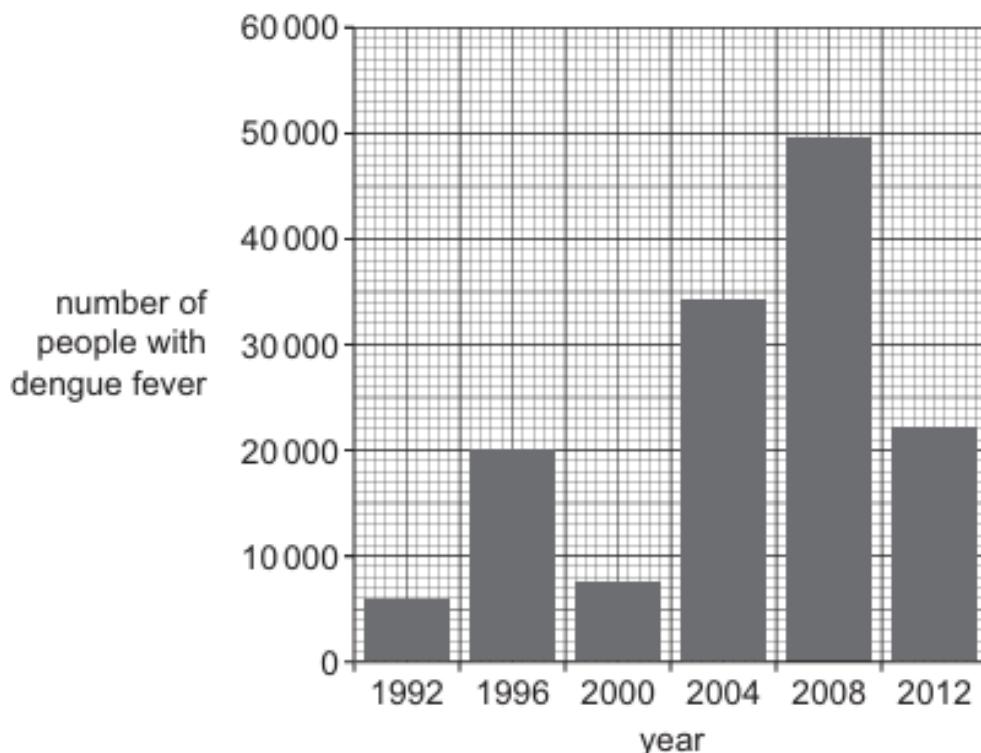
the animal is a mammal

the animal is a vertebrate

**Q13) October 2023 paper 2 / Q9**

Dengue fever is a disease caused by an infection with a virus.

The chart shows the number of people with dengue fever in a country.



**(a)** Which year had the highest number of people with dengue fever?

.....

**(b)** How many people had dengue fever in 1996?

.....

**(c)** The disease is transmitted when people are bitten by insects.

Circle the name that describes an insect that transmits disease.

**bacteria**

**consumer**

**predator**

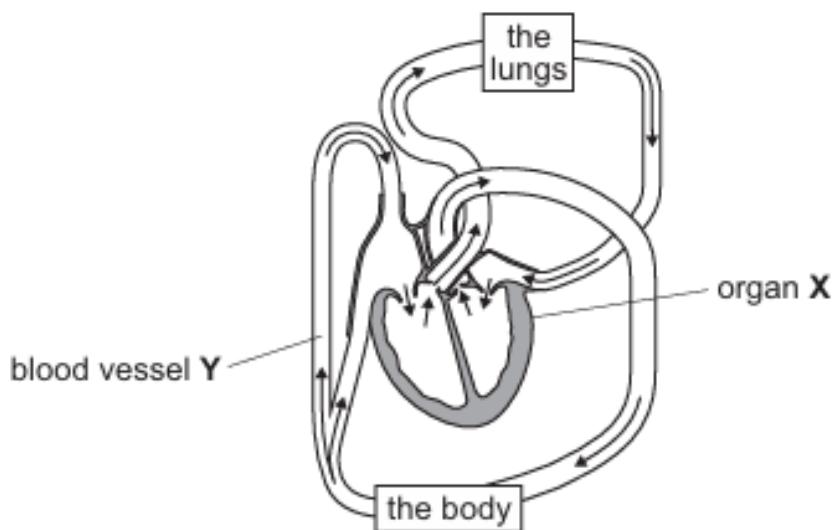
**vector**

**(d)** Describe **one** way to avoid being bitten by insects.

.....  
.....

**Q14) October 2023 paper 1 / Q9**

The diagram shows the human circulatory system.



**(a) Organ X pumps blood through the circulatory system.**

Name organ X.

---

**(b) Blood vessel Y is a vein.**

Name **one other** type of blood vessel in the human circulatory system.

---

**(c) What is a function of the human circulatory system?**

Tick (✓) **one** correct box.

break down food

control the body

move the bones

transport waste

**Q15) April 2023 paper 2 / Q1**

The diagram shows part of the circulatory system.



**(a) Name the organ labelled X.**

.....

**(b) Describe the function of the organ labelled X.**

.....

**(c) Write down the name of **two** types of blood vessel shown in the diagram.**

1 .....  
2 .....

**(d) A scientist measures the percentage of oxygen in the blood travelling through different blood vessels.**

The table shows the results.

blood vessel	percentage (%) of oxygen
A	99
B	79
C	83
D	75
E	92

The blood vessels are found in different parts of the body.

Which blood vessel transports blood **from** the lungs **to** the heart?

.....

Explain your answer.

.....

**Q16) April 2023 paper 2 /Q5**

Carlos investigates how different types of exercise affects his breathing rate.

Carlos:

- counts how many times he breathes in for one minute before exercising
- exercises by walking around the room for one minute
- counts how many times he breathes in for one minute
- rests for five minutes.

Carlos repeats his method two more times but changes the type of exercise each time.

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

.....

**(b)** Explain why Carlos rests between each type of exercise.

.....

.....

**(c)** Here are his results.

type of exercise	number of times Carlos breathes in for one minute
before exercise	25
walking	28
running	45
jumping	52

Complete the sentence about the results.

Carlos breathes faster when he exercises.

He does this to get more ..... into his body.

**Q17) April 2023 paper 2 / Q9**

Some fungi cause diseases in the body.

(a) Name **one other** type of living thing that causes diseases in the body.

.....

(b) Mucus is a defence mechanism against infectious diseases.

Which organ system of the body contains mucus?

.....

**Q18) April 2023 paper 1 / Q5**

Increase in height is one physical change that happens to females during puberty.

Describe **two other** physical changes that happen to females during puberty.

1 .....

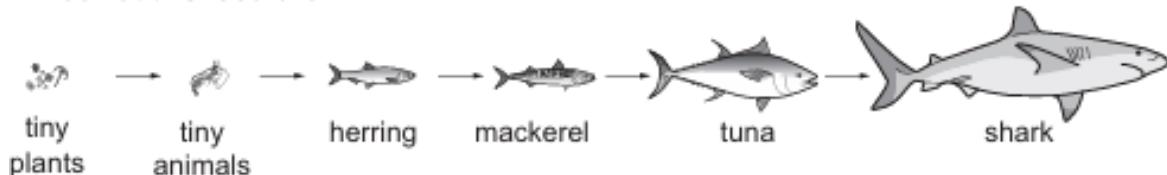
2 .....

**Q19) October 2024 paper 2 / Q5**

Humans pollute the ocean with toxic substances.

Tiny plants absorb the toxic substances.

Look at this food chain.



Not drawn to scale

(a) Explain why the shark has toxic substances in its body.

.....

.....

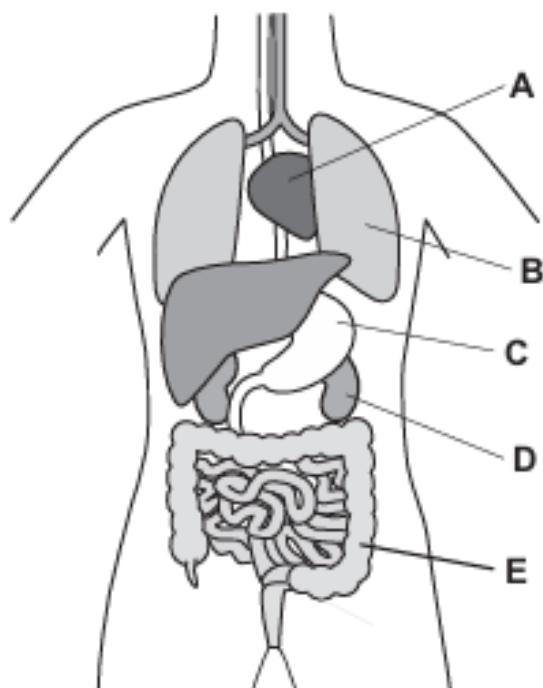
(b) Suggest **one** way humans reduce pollution in the ocean.

.....

.....

The heart is an organ.

(a) Look at the diagram of the human body.



Which letter on the diagram of the human body shows the heart?

Circle the correct answer.

A

B

C

D

E

(b) The heart pumps blood around the body.

Name **two** substances the blood transports.

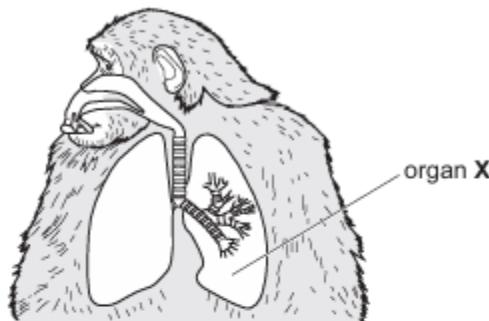
1 \_\_\_\_\_

2 \_\_\_\_\_

Q21) October 2024 paper 1 / Q1

Chimpanzees have similar organs to humans.

Look at the respiratory system of the chimpanzee.



(a) Write down the name of organ X.

(b) Which substance moves from organ X into the blood?

Tick (✓) the correct answer.

carbon dioxide

1

### nutrients

1

oxygen

1

### waste

1

Q22) October 2024 paper 1 / Q6

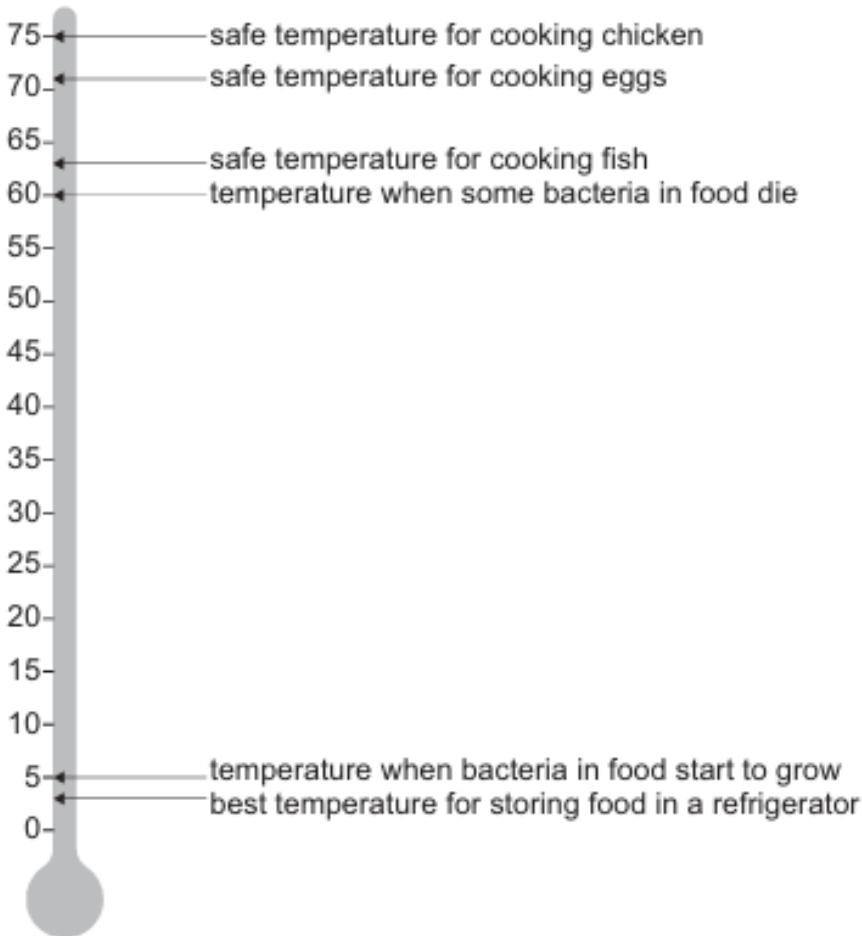
Bacteria cause infectious diseases.

(a) Write down **one other** cause of infectious diseases.

(b) Food is stored and cooked at the correct temperature so it is safe to eat.

The diagram shows:

- the safe temperature for storing and cooking different foods
- the temperature when bacteria in food start to grow
- the temperature when some bacteria in food die.



Temperature is measured in °C.

Name the equipment used to measure temperature.

.....

(c) Complete the sentences.

Use the diagram to help you.

The food with the **lowest** safe cooking temperature is .....

Bacteria in food start to grow at ..... °C and some bacteria die at ..... °C.

(d) Some bacteria in food cause infectious diseases.

Describe how human defence mechanisms protect the body from these diseases.

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(e) Chen eats food that has **not** been cooked at the correct temperature.

This food contains bacteria.

The number of bacteria in the food doubles every 15 minutes.

Complete the table to show the number of bacteria in the food at 90 minutes

time in minutes	number of bacteria in the food
0	8
15	16
30	32
45	64
60	128
75	256
90	

(f) The bacteria in the food make Chen ill.

Describe **one** way Chen stops the bacteria spreading from him to other people.

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the end..