Anglo-Chinese School (Junior)

BITE-SIZED ASSESSMENT 2 (2021)

PRIMARY 5

SCIENCE

Friday **7 May 2021** **50 min**

Name: _____ ( ) Class: 5.( ) Parent's Signature: _____

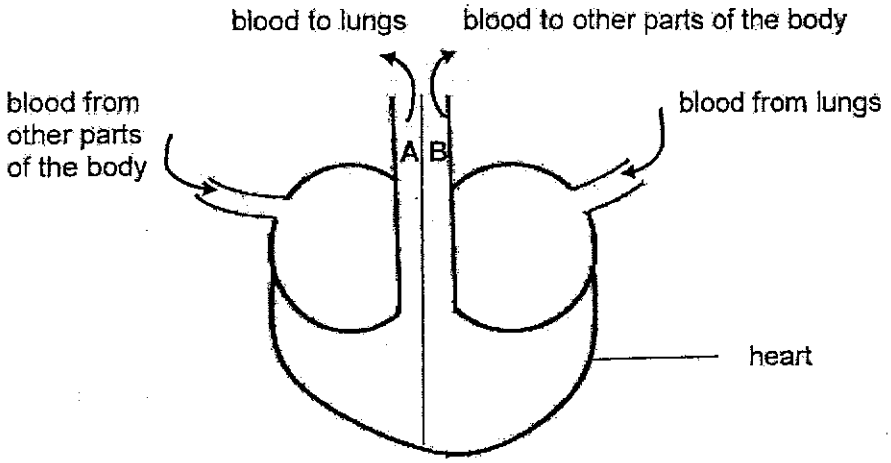
INSTRUCTIONS TO PUPILS

1 Do not turn over the pages until you are told to do so.
2 Follow all instructions carefully.
3 There are 12 questions in this booklet.
4 Answer ALL questions.
5 The marks are given in the brackets [ ] at the end of each question or part question.

Question Paper	Possible Marks	Marks Obtained
Total	**30**	

This question paper consists of 9 printed pages (inclusive of cover page).

1. The diagram shows the movement of blood to and from a heart in the human body.

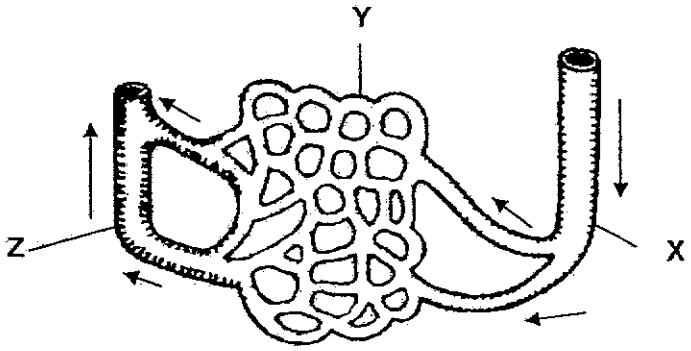


Compare the amount of carbon dioxide carried in the blood in blood vessels A and B. [1]

_____

_____

2. The diagram shows three types of blood vessels, X, Y and Z, found in a human body. The arrows show the direction of blood flow.



(a) State the organ in the body that pumps blood to all parts of the body. [1]

_____

(b) Explain why the blood in blood vessel Z contains less oxygen as compared to the blood in blood vessel X. [1]

_____

_____

(c) Name two substances, apart from gases, that are transported in the blood in X. [1]

_____

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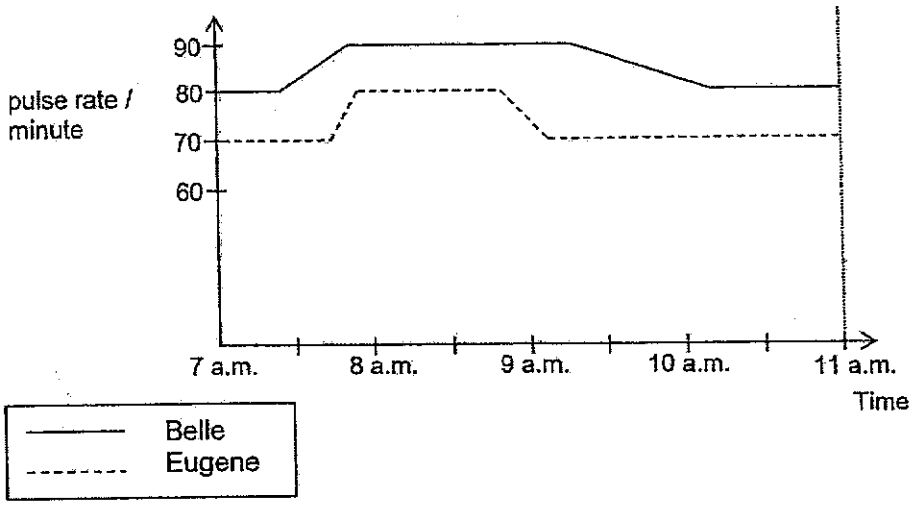
3. Eugene and Belle have a resting pulse rate of 70 beats per minute and 80 beats per minute respectively. Both of them began running round the track. After running for some time, they walked slowly to cool down.

The graph shows their pulse rates from 7am to 11am.



(a) Who began running first? Explain why. [1]

_____

_____

(b) Explain why their pulse rate increased while exercising. [2]

_____

_____

_____

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4. Figure 1 shows how blood travels in the human body.

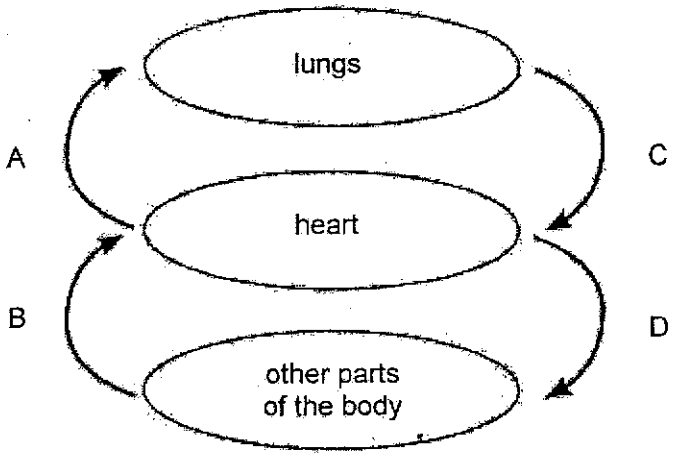


Figure 1

Figure 2 shows the amount of oxygen in four blood samples, W, X, Y and Z, taken at the same time from different blood vessels, A, B, C and D in Figure 1.

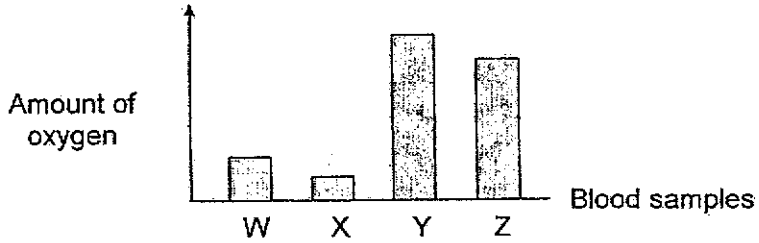
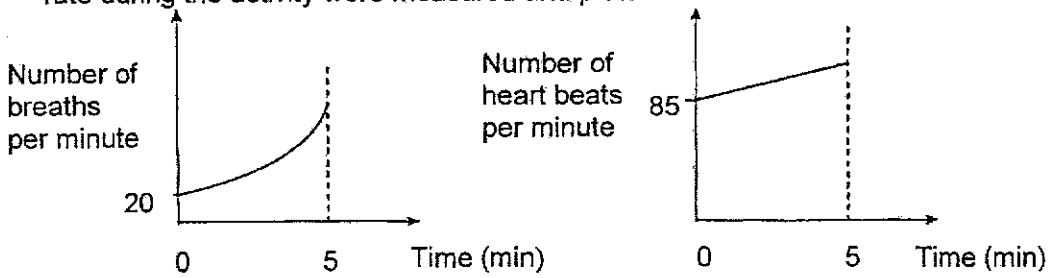


Figure 2

(a) Match each blood vessel, A, B, C and D, in Figure 1 correctly to its blood sample, by writing W, X, Y and Z, in the table. [2]

Blood vessels	A	B	C	D
Blood samples				

Elliott was asked to jog around a field for five minutes. His breathing rate and heart rate during the activity were measured and plotted as shown.



(b) Based on the graph, what happened to his heart rate when his breathing rate increased? [1]

_____

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5. Ann, Bruno and Candice observed water boiling in a kettle.
They each made the following statements.

Ann: "There is more water vapour in the surroundings now."

Bruno: "I can see steam coming out of the spout of the kettle."

Candice: "The water is boiling and the temperature is still rising."

Two of them made incorrect statements.

(a) Who made the incorrect statements?
Explain why each statement is incorrect. [3]

	Name	Explanation
(i)		
(ii)		

6. Explain the difference between boiling and evaporation. [1]

7. Fanny placed a beaker of ice cubes on a table in the Science laboratory. She then recorded the changes in temperature of the contents in the beaker at intervals of five minutes.

Time (min)	Temperature (°C)
0	0
5	0
10	0
15	0
20	1
25	8
30	23

(a) Name the process that is taking place in the beaker during the first 15 minutes. [1]

_____

(b) List all the states of matter in the container at the 10th minute. [1]

_____

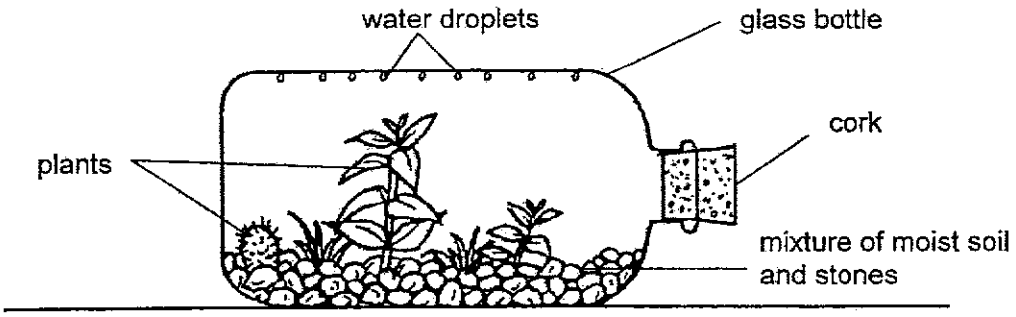
_____

(c) Explain why the temperature of the contents in the beaker increased between the 20th and 30th minute. [1]

_____

_____

8. The diagram shows a terrarium, a bottle garden. It is a small garden placed in a sealed clear glass bottle. It only needs to be watered once at the start, for a continuous supply of water for many weeks. He placed the terrarium beside a window in his air-conditioned office.



Explain clearly how the plant in the terrarium gets a continuous supply of water without being watered for two weeks. [2]

_____

_____

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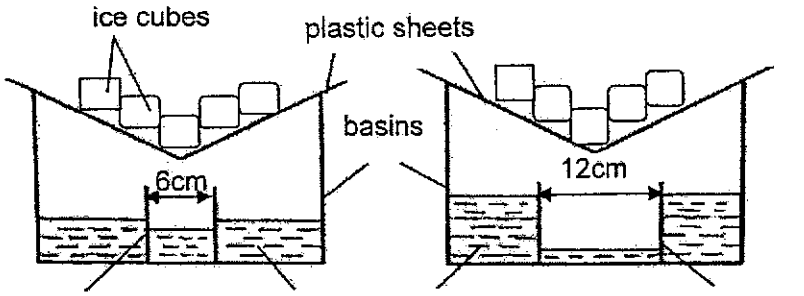
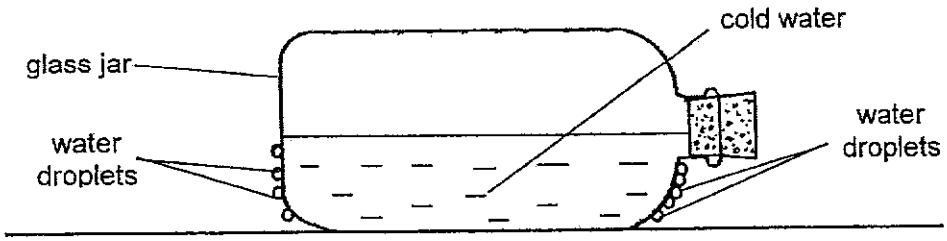
9. Farhan wanted to collect some drinking water from seawater, using containers X and Y, at room temperature. He prepared the following set-ups in identical basins and plastic sheets. He placed them in an air-conditioned room at 16 °C for three hours.



(a) Farhan noticed that container X collected water faster than container Y. Explain why. [2]

(b) If Farhan had not placed any ice cubes on the plastic sheets at the start of the experiment, how would the amount of water collected in both containers change? Give a reason for your answer. [1]

Ephraim filled a glass jar with cold water from the refrigerator. He observed that water droplets formed on the outside of the glass jar.



Explain why water droplets were formed on the outside of the glass jar. [2]

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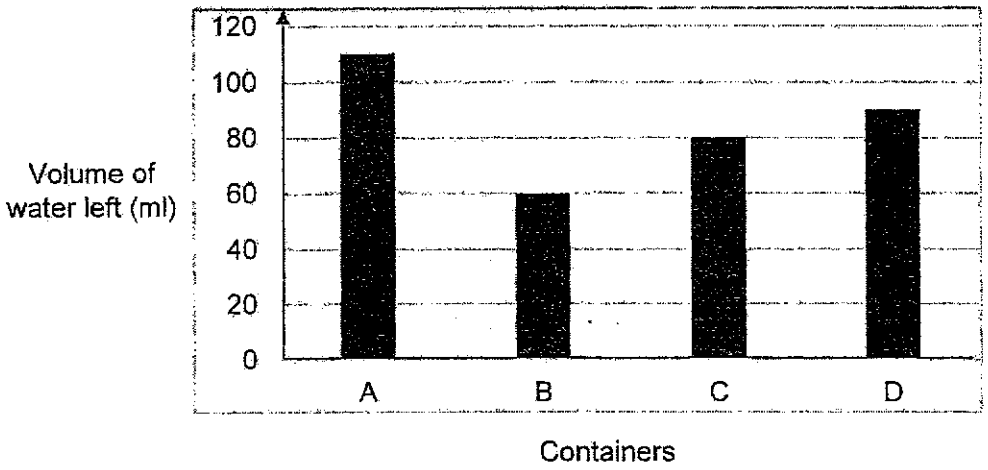
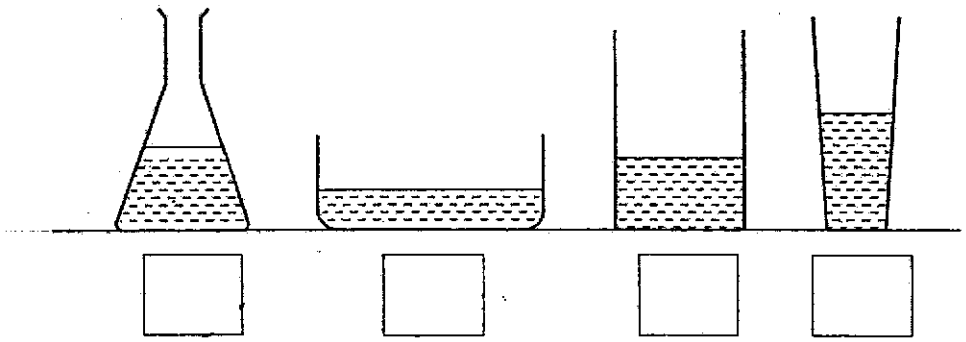
11. Lidia filled four containers, A, B, C and D, made of the same material but of different sizes and shapes with 300ml of water each. She placed them out in an open field. After three hours, she recorded the volume of water left in each container in the bar graph as shown.



(a) The diagram shows containers A, B, C and D. Identify containers A and B by filling in the boxes. [1]



(b) Name two other factors that will increase the rate of evaporation. [1]

_____

_____

(c) What is the aim of Lidia's experiment? [1]

_____

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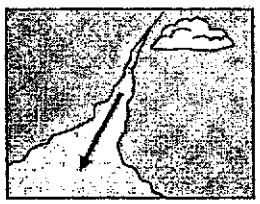
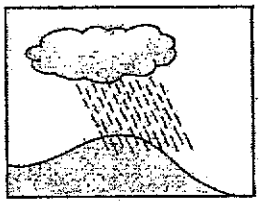
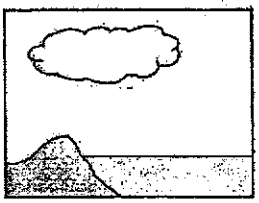
12. The diagrams show the various stages of the water cycle.



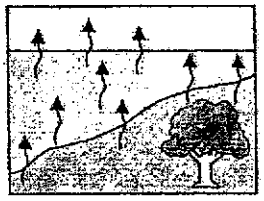
W: Water flows to various water bodies.



X: Rain falls.

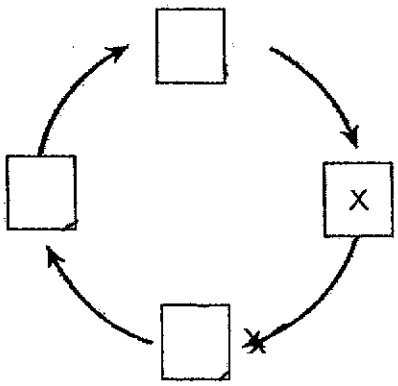


Y: Clouds form.



Z: Water vapour rises from various water bodies.

(a) Arrange the stages in the correct order by filling in the boxes with the letters W, Y and Z. [1]

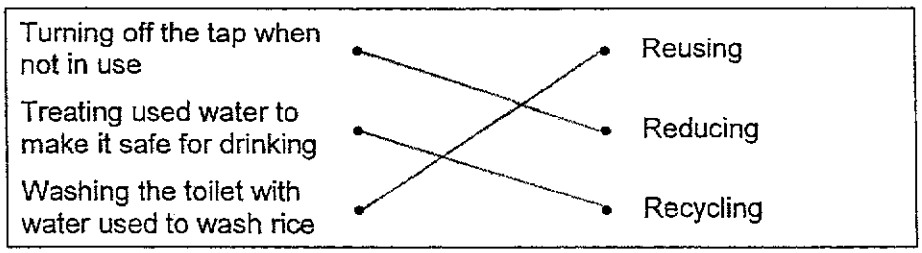


(b) Name the processes happening in stages Y and Z. [1]

(i) Y : _____

(ii) Z : _____

(c) Draw a line to match the following activities to the correct method of water conservation. [1]

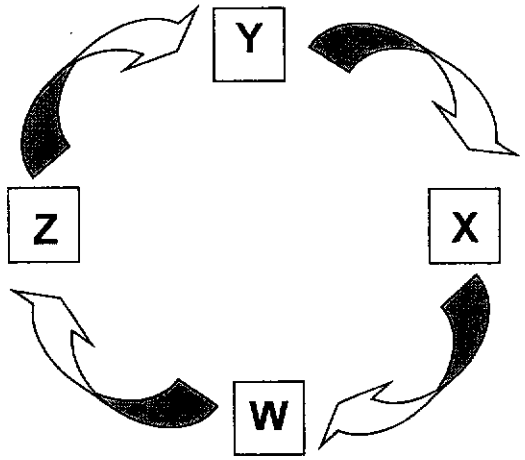


End of Paper

SCORE	
	3

SCHOOL : ANGLE CHINESE PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : 2021 WA2

Q1)	There is more carbon dioxide in A then in B.
Q2a)	Heart.
Q2b)	The oxygen in the blood in Z has already been used up while the oxygen in the blood in X is being transported to other body parts.
Q2c)	Digested food and water.
Q3a)	Belle. Her heart rate increased before Eugene.
Q3b)	Their heart pumped blood faster to transport digested food and oxygen to all parts of the body to release more energy.
Q4a)	X, W, Y, Z
Q4b)	As his number of breaths increased, his number of heart beats increased.
Q5a)	i) Bruno. Bruno did not see steam, steam is a gas and it is invisible. ii) Candice. When water reaches its boiling point, it temperature cannot increase.
Q6)	Boiling produces bubbles while evaporation does not produce bubbles.
Q7a)	Melting.
Q7b)	Liquid solid and gas
Q7c)	The water gained heat from the surroundings
Q8)	Some water in the soil gains heat and evaporates into water vapour. The water vapour rises and comes into contact with the cooler inner surface of the glass terrarium, loses heat and condensed into water droplets which fall back into the soil.
Q9a)	The exposed surface area of seawater in set-up P is larger than that in set-up Q. Rate of evaporation and condensation will be faster in X than in Y.
Q9b)	Both containers will collect lesser amount of water as the surface for condensation to take place on is not as cold, so the rate of condensation decreases.
Q10)	Water vapour in the surroundings touched the cooler outer surface of the jar and lost heat to it and condensed into water droplets.
Q11a)	A, B, C, D
Q11b)	More wind and more sunlight.
Q11c)	The aim of the experiment is to find out if the exposed surface area of water affects the rate of evaporation.
Q12a)	

<table>
<tr><td></td><td> 
</td></tr>
<tr><td>Q12b)</td><td>i) Condensation
ii) Evaporation</td></tr>
<tr><td>Q12c)</td><td>Turning off the tap when not in use
Treating used water to make it safe drinking
Washing the toilet with water used to wash rice
Reusing
Reducing
Recycling</td></tr>
</table>