JOHN GRAY HIGH SCHOOL

KS3 SCIENCE: YEAR 8

EXPLAINING PHYSICAL CHANGES I

PAPER 2

Time : 45 mins

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

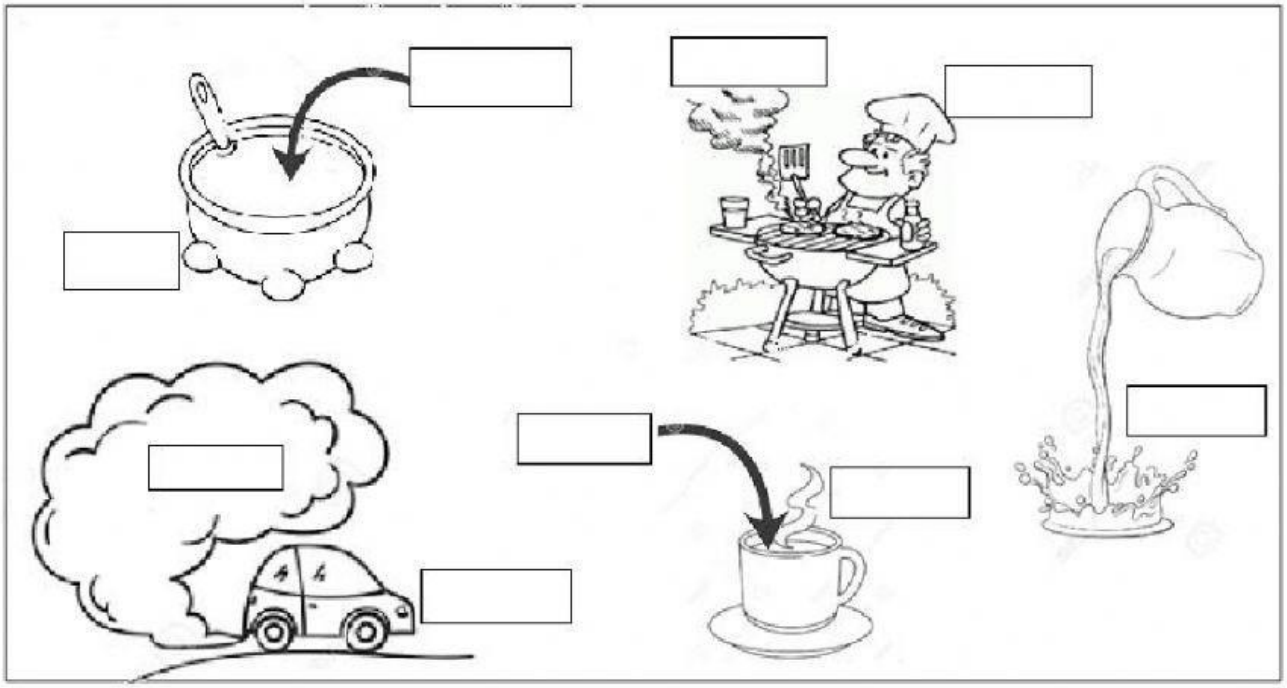
1. This paper consists of **FOUR** questions.
2. Answer **ALL** questions.
3. Indictate your answers in the spaces provided.
4. Remember to read the questions properly before attempting to answer
5. You are permitted to use a calculator in this exam.

Name: _____

Teacher's Name: _____

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

1. a. Look at the picture below and drag the words SOLID, LIQUID or GAS, to label the indicated substances.



Solid	Solid	Solid
Liquid	Liquid	Liquid
Gas	Gas	Gas

(9 marks)

b. Complete the sentences on states of matter by selecting words from the drop-down boxes.

Solids:

- cannot be _____, do not _____, and have a fixed _____ and _____.
- have a high _____.
- are made of _____ that are very close together.

Liquids:

- cannot be _____ and have a fixed _____, _____ easily and do not have a fixed _____.
- are _____, but not as _____ as solids.
- are made of _____ that are close together.

Gases:

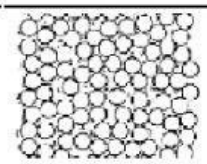
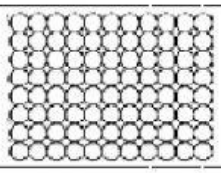
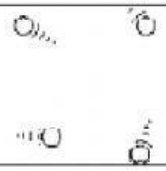
- are easy to _____, _____ very easily, and do not have a fixed_____ or _____.
- have a lower _____ than liquids.
- are made of _____ that are far apart.

(19 marks)

c. Complete the table below with the information in the Information Bank to give the properties of solids, liquids and gases. Use the information already in the table to guide where to place your responses.

SOLIDS	LIQUIDS	GASES
	No fixed shape	
	Fixed volume	
		Low density

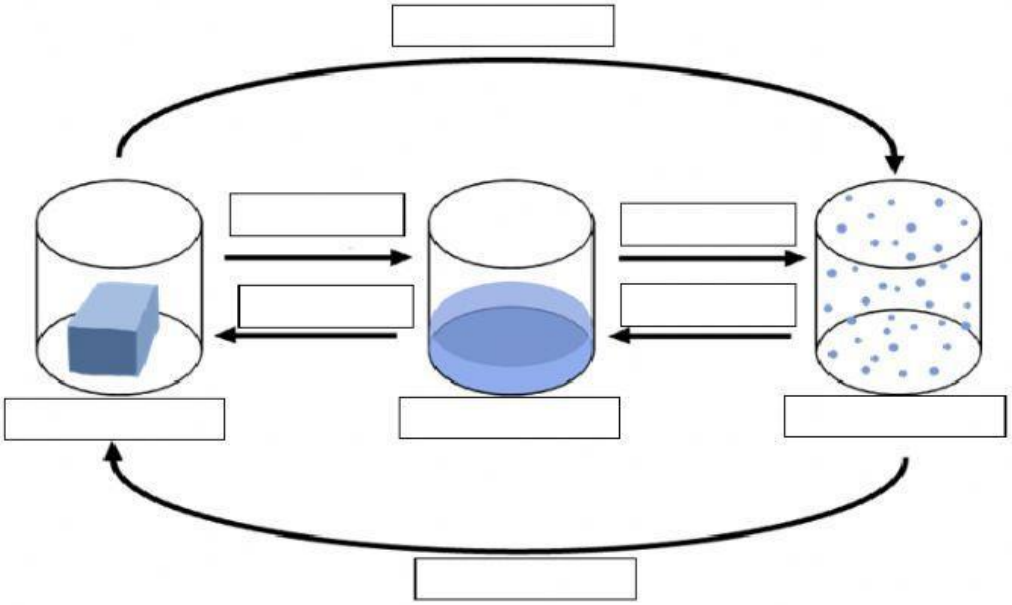
Choose from this information bank.

	High density	Fixed volume
Fixed shape		No fixed shape
No fixed volume	Very high density	

(9 marks)

2. a. States of matter are able to change. Complete the diagram below by dragging the correct labels.

LIQUID	deposition	condensation
evaporation	melting	SOLID
sublimation	GAS	freezing



(9 marks)

b. Complete the sentences below about changing states.

Matter changes from one _____ to another when it is _____ or cooled.

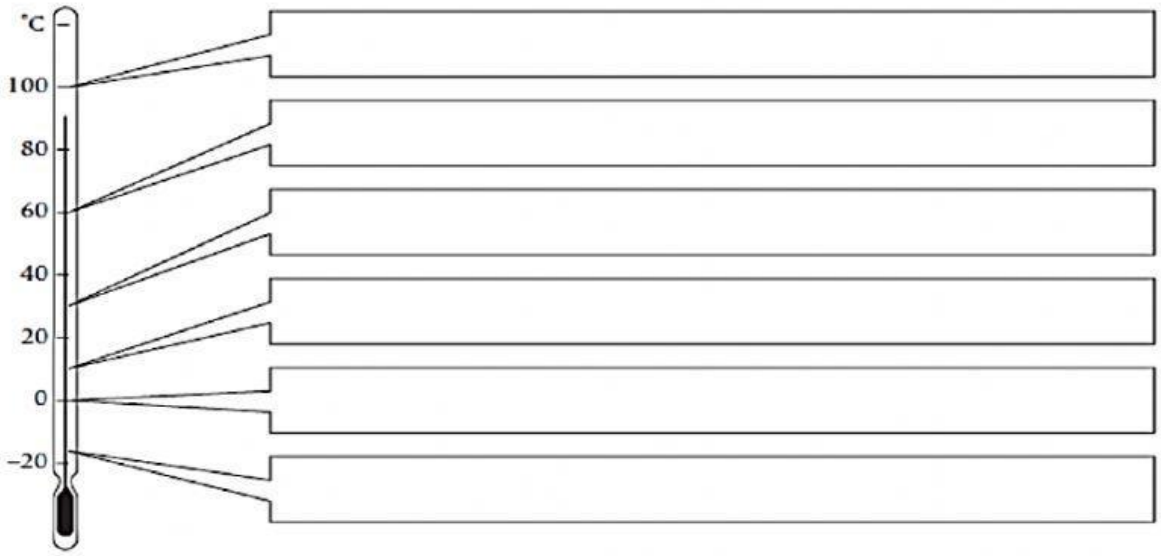
When matter is heated, the particles gain _____ energy and _____.

This is why when particles of a _____ are heated, they become particles in a liquid.

When heat is removed from matter, it _____. The particles lose _____ energy and come closer together. So, particles of a liquid turn back into particles in a _____. Heating liquids turn them to _____ and _____ gases turn them to liquids. ***(10 marks)***

3. Drag each sentence to the correct box to label the diagram of the thermometer below.

Water turns into ice.
Wax melts at about this temperature.
A hot summer day.
Temperature inside a fridge.
Temperature inside a freezer.
Water boils.



(6 marks)

b. Complete the sentences below by dragging the correct words to the sentences. Each word is used only ONCE. Place any unused words into the DISCARD pile.

abdorbs	better	cold	cool
evaporates	faster	freezes	
gives out	hot	moving	
slower	temperature		
water	worse		

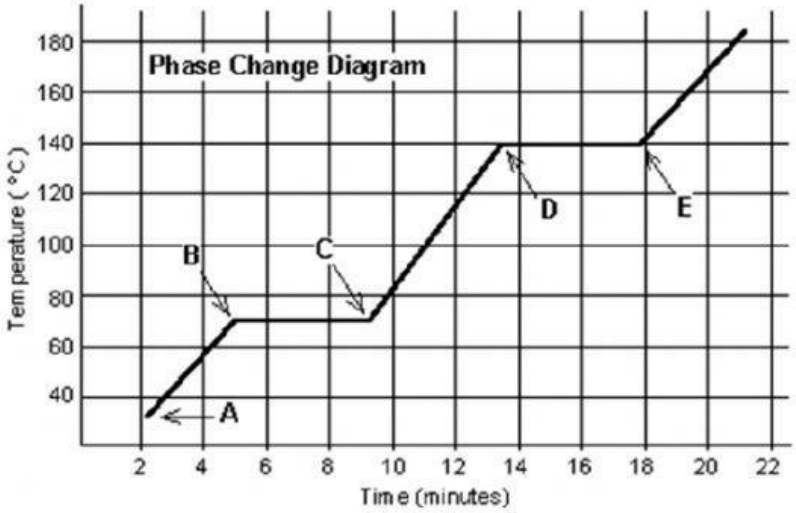
Place unused words here.

DISCARD PILE

Our bodies need to stay at a constant_____. if we get too_____, we sweat. When the _____ in the sweat evaporates, it _____ the energy it needs from our bodies. This helps to _____us down. Sweating works even _____ if there is a breeze because the _____ air helps the sweat to evaporate _____.

(8 marks)

4a. Below is a heating curve. Use information from the diagram to answer the questions.



i. From A to B, the material is in the _____ state of matter.

ii. From B to C, the process of _____ is taking place.

iii. From C to D, the material is in the _____ state of matter.

iv. From D to E, the process of _____ is taking place.

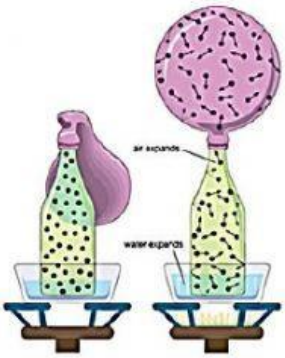
v. Anything after E is in the _____ state of matter.

vi. The boiling point of the substance is _____°C.

(6 marks)

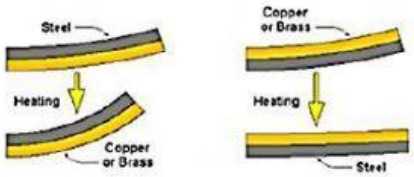
b. Choose the correct description of each of the thermal experiments below.

I.

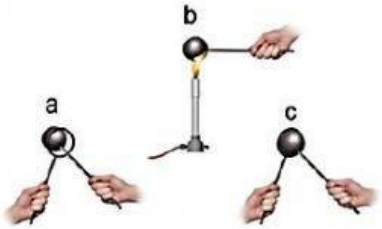


II.

III.



IV.



(4 marks)

Total 80 marks