المدرسة الوطنية الأرثوذكسية الشميساني

The National Orthodox School Shmaisani

Revision Sheet | The Primary Stage of Grades (4-5)

2023-2024

Name: …Answer key …… **Subject: Science**

Date: / / **Class:** Grade 4 (C, D, E, F, G)

Question 1:

a) Define the rate of evaporation.

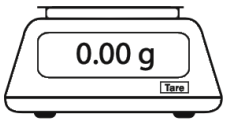
The speed at which evaporation occur……

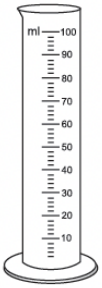
b) State the factors that affect the evaporation rate:

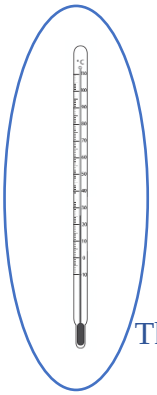
1. Temperature ……
2. Wind speed……
3. Surface area……

Question 2:

Anastasia wants to measure the temperature of water in the cooking pot before putting it over the heat. What does she use to accurately measure the temperature? Circle the correct answer and state its name.



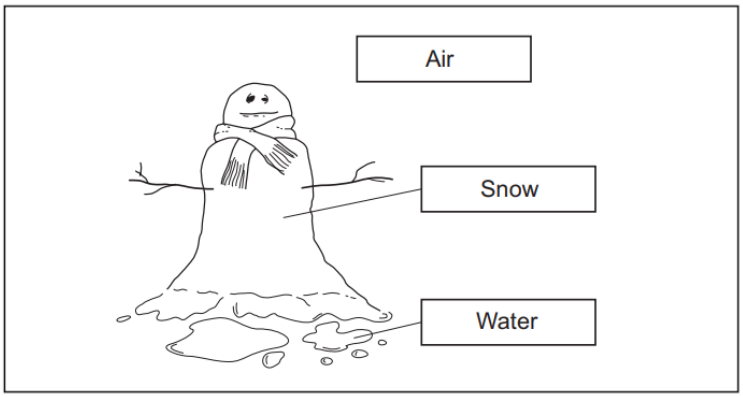




Thermometer

Question 3:

Sarah has built a snowman on a cold but sunny day.



a) Identify the states of matter of the following?

Air:..Gas…… Snow:…Solid……. Water :…Liquid….

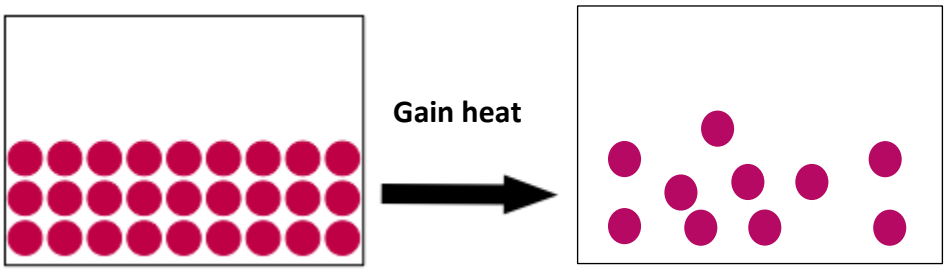
b) State the process that is happening to the snowman in the sun?

Describe what happens to the particles during this process.

Melting.

Particles gain heat and move further apart so the solid turns into a liquid. .

c) Describe in drawing the change that happens to the particles of ice.

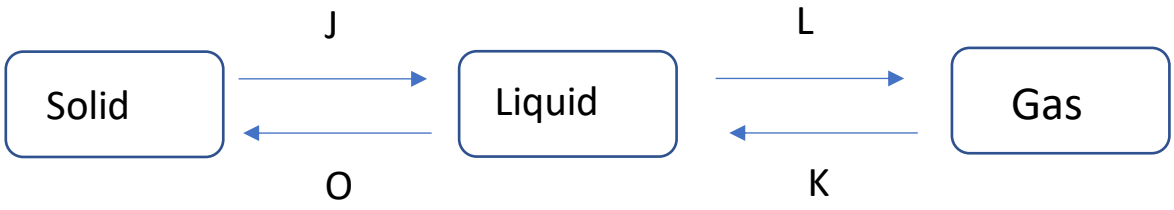


d) After several hours water started to evaporate.

What name is given to **water** in the gaseous state? …Water vapour……

Question 4:

In the diagram below, arrows **J,K,L** and **O** represent processes involving the changes in states of matter.



a) State the name of the process that each arrow represents:

J:……Melting……. **K**:……Condensation...

L:…Evaporation……. **O**:……Freezing……..

b) In process **K**, how can a gas turn back into a liquid?

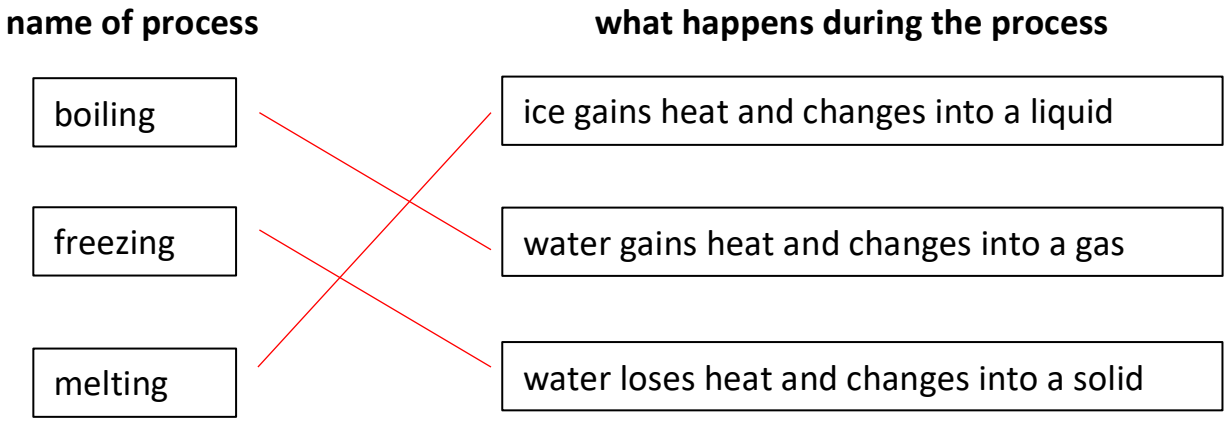
Describe what happens to the particles during this change.

By cooling, when particles touch a cold surface they lose heat and turn back into liquid.

Question 5:

Boiling, freezing and melting are three processes that water can go through.

Draw a line to match each process to what happens to the water during the process.



Question 6:

Anastasia is investigating the melting and boiling points of pure water.

She puts some ice in the cooking pot over a flame and heats it.

The ice starts to melt.

a) What will happen to the **liquid water as it gains heat**?

It will change into gas ……..

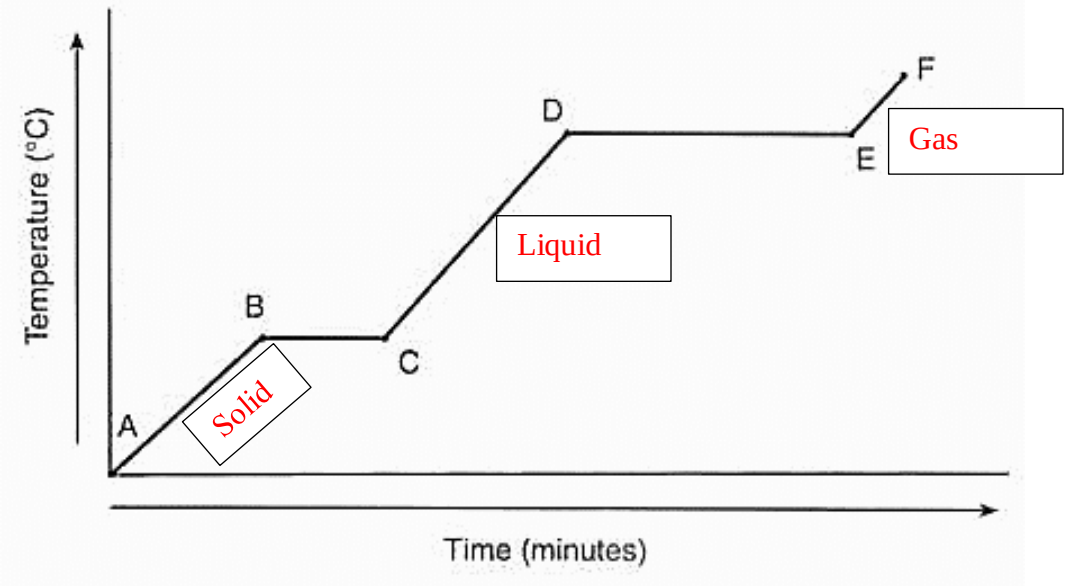
b) After a while, **water started to boil**. How can Anastasia know that the water is boiling?

She can see bubbles……

c) State the name given to **the temperature at which a liquid starts to boil**?

The boiling point……..

d) Anastasia represented her results in the following line graph:



Study the graph and answer the following:

1. Which point represents the melting point of ice? …B-C……
2. Which point represents the boiling point of water? …D-E……
3. On the graph, decide the area where water is in the solid state, liquid state and gaseous state.
4. What happens to the temperature in the area **B-C**?

   …It stays the same until all solid changes into liquid ……
5. What happens to the temperature in the area **D-E**?

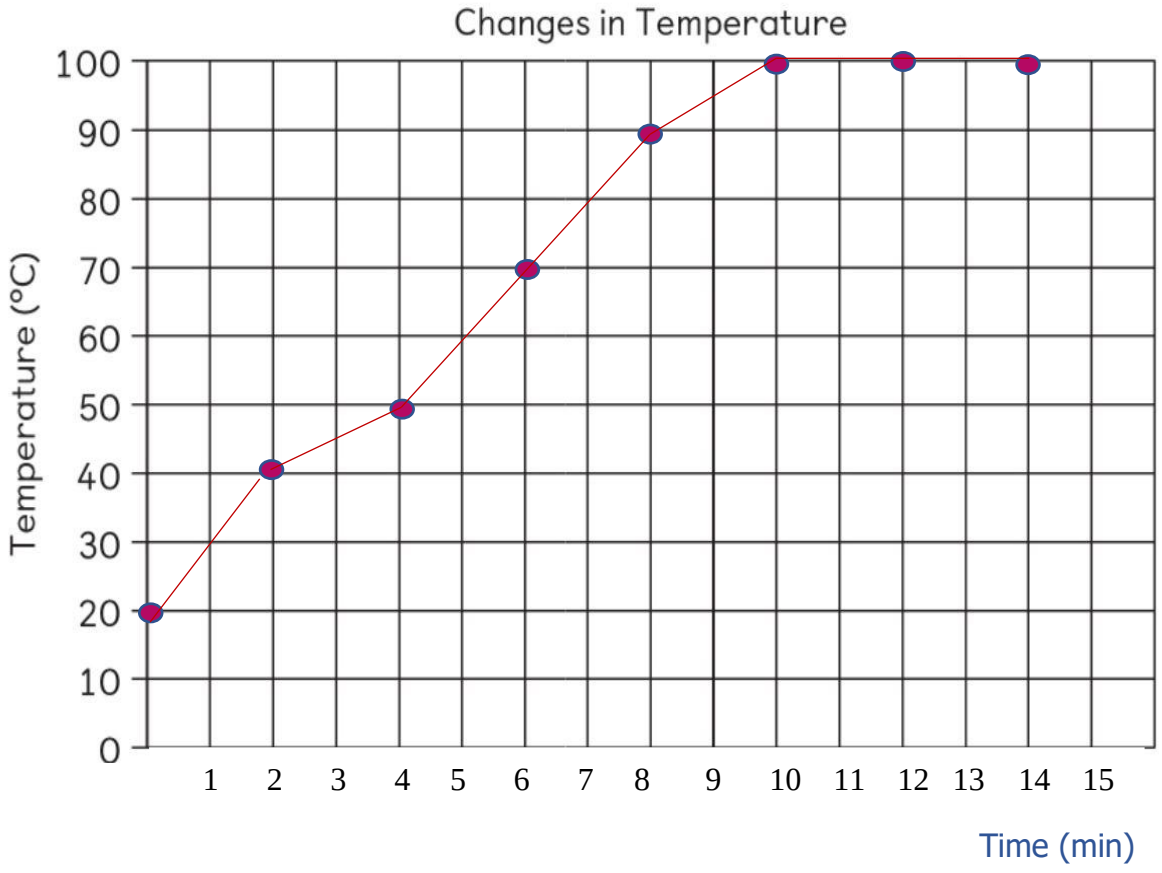
   … It stays the same until all liquid changes into gas ……
6. At which temperature does pure water boil. …100 °C……
7. State the melting point of pure water. ……0 °C ……..

Question 7:

Anastasia measures the temperature every two minutes. She recorded her results in the table below:

Time (Minutes)	Temperature (°C)
0	**20**
2	**40**
4	**50**
6	**70**
8	**90**
10	**100**
12	**100**
14	**100**

Draw a line graph that shows her results



Question 8:

a. Classify the following substances into soluble and insoluble in water.

Sand Jelly Powder Clay Iron

Sugar Salt Flour

Soluble	Insoluble
Jelly powder	Sand
Sugar	Clay
Salt	Iron
	Flour

b. Sugar dissolves in water forming a colorless solution.

In this mixture what is the name given to:

- The mixture of water and sugar: …Solution……
- Sugar: ……Solute……
- Water: ……Solvent……

c. Maya has sea water solution. She wants to obtain the sea salts dissolved in this water. Describe the method used to obtain these salts.

……She can evaporate the water; solid salts will be left behind……

……

Question 9:

Maya and Rami are planning an investigation to determine if the surface area of the container affects the rate of evaporation.

They poured 100 ml of water in each of the beakers shown below and left it **for 3 days** at the room temperature.

After **3 days**, they n[redacted]e amount of water that was left.

Beaker A **Beaker B**

1. Identify the following in this investigation:

Dependent variable: ……Volume of water that was left (rate of evaporation)…

Independent variable: …Surface area of the container……

Control variable: ……Same starting amount of water / same temperature……

2. Predict, from which beaker will water evaporate faster?

……Beaker (B)……..

4. Complete the following **conclusion:**

The …larger…. the surface area of a container, the …faster….. the rate of evaporation is.

Question 10:

Tick (√) the correct box beside each statement:

Statement	Solid	Liquid	Gas
Has a fixed shape and volume	√		
Particles can be compressed			√
Particles are tightly packed	√		
Takes the shape of the container		√	
Particles spread randomly			√
Particles vibrate in their place	√		
Particles slide against each other		√	
Has no fixed shape or volume			√