

CLASS- VII  
CHAPTER- 1,

SUBJECT- CHEMISTRY  
TEACHER- MOHINISHA THAKUR

Good morning to all the students!

Students this lesson is for class-VII for the subject of chemistry, Topic:- 'Interconversion of States of matter' which is covered in chapter-1, 'Matter And Its Composition' starting on page-no -9 of your text-book titled- 'concise chemistry' by 'Balna Publication' and is being submitted to you on **22 April, 2024**

All students may now please open page no-9 of your notebook in front of you.

If all students are ready then let us start with this chapter. All students may now please listen carefully.

Interconversion Of States Of Matter :-

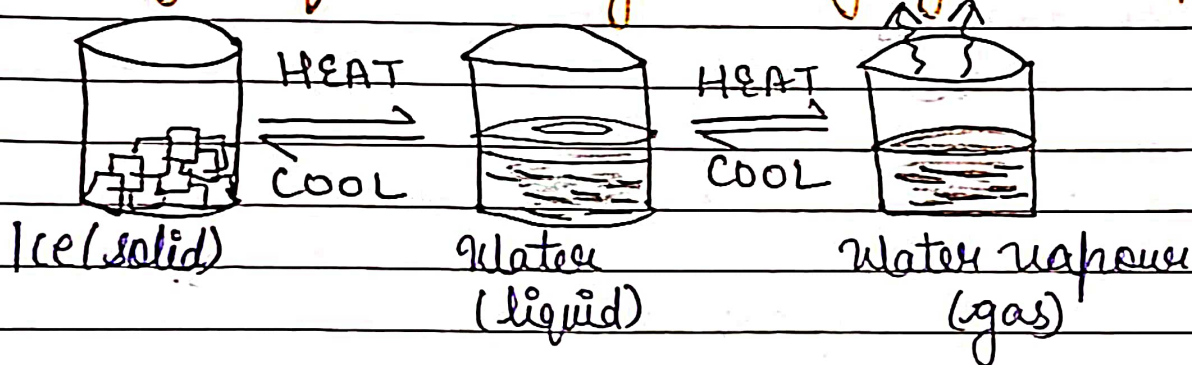
We have studied that there are three states of matter - Solid, Liquid and Gas. Matter can change its state from one to another and back to its original state, without any change in its chemical properties (atoms and molecules do not change, only their arrangement is changing). This process is called interconversion of (P.T.O)

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States of matter. The change of state can take place by:-  
 → change in temperature.  
 → change in pressure

## 1) Change of state by changing the temperature:-

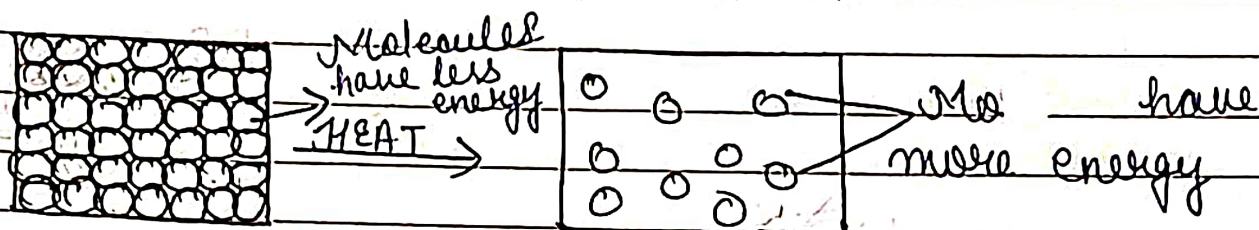


At ordinary temperature, water is in liquid state, but when it is kept in refrigerator, it cools and changes into ice at  $0^{\circ}\text{C}$ . Ice will melt and again change into liquid water if it is kept at room temperature. When water is heated it starts changing into steam at  $100^{\circ}\text{C}$ , and steam on cooling again changes back to liquid water. When you burn a candle, some of the wax melts and flows down. Then it cools and changes into solid wax. Thus the state of matter can change by increasing or decreasing the temperature.

On heating the molecules absorb energy and they start moving from their place. Due to which the force of attraction between the molecules weakens and the intermolecular space starts increasing.

(P.T.O.)

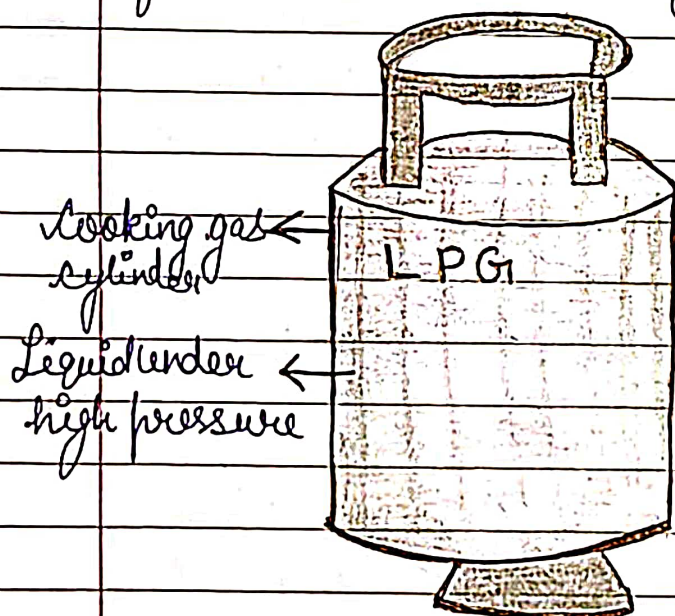
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On cooling the molecules lose energy and the same amount of heat energy is lost to the atmosphere.

## 2) Change of state by changing pressure :-

The state can also be changed by applying pressure. The molecules can be compressed by increasing pressure or they can move away from each other by decreasing pressure.



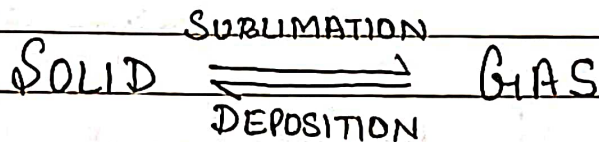
The cooking gas is in liquid form inside the cylinder, thus it is called Liquefied Petroleum Gas (LPG). When we open the regulator valve, the pressure decreases and LPG changes into gas form and comes out.

## Sublimation :-

Some substances change from solid state to gaseous state on heating, without going to liquid state. On cooling the gas directly changes back to solid state. (Iodine, Camphor, Naphthalene, etc.)

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to solid. This process is called sublimation.  
Example :- Camphor, Iodine crystals, naphthalene etc



Now, I will give you three a very short Questions. You will get a three minutes break to write the answers.

The Questions are :-

- Q1 :- Name the two factors through which the change of state can take place.  
Q2 :- Give full form of L.P.G.  
Q3 :- Name the process in which solid is directly converted to Gas or vice-versa.

I hope you all have written the answers by now. Let us check the answers now.

- Ans1 :- 1) Change in temperature 2) Change in pressure.  
Ans2 :- Liquefied Petroleum Gas.  
Ans3 :- Sublimation.

(P.T.O)

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Students, Now I am ending the lesson for today by giving 'Instructions' and 'Homework'

### Instructions:-

You all are required to read the lesson again and revise or learn the topics which we have cover today.

### Homework:-

Do Q-1 to 13 from back Exercise of Chapter-1 given on page no -11

\* (Thank You) \*