

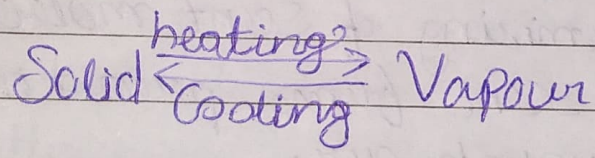
HW  
30/09/21

1. Explain how gases can be liquefied?

Ans- By adding pressure and reducing the temperature, gases can be liquefied. When pressure on a gas is increased, its molecules get closer together, and its temperature is reduced, which removes enough energy to make it change from the gaseous to the liquid state.

2. What is Sublimation? Give examples.

Ans- The change of solid on heating to vapours directly and vice-versa without passing through the liquid state is called sublimation.



For example :- Camphor, Iodine, Dry Ice and naphthalene balls etc.

3. Give reasons :-

a) Liquids and gases flow but solids do not.

Ans- The molecules of liquids and gases are far apart i.e. have more gaps, intermolecular attraction force is very less as compared to solid, hence liquids and gases can flow but solids do not as gaps in solids molecules is less and molecular force of attraction is very strong.

b) Why is an egg kicked out of a bottle when air is blown inside the bottle?

Ans- When we invert the bottle and blow air into the bottle through the side opening, it creates high pressure inside the bottle and the egg is kicked out of the bottle.

c) The odour of scent spreads in a room.

Ans- Scent fumes (molecules) being gases fill the spaces between the air molecules and the molecules of air fill the spaces between scent molecules due to diffusion fumes spread into a room.

OR - Due to intermingling of scent molecules and air molecules, scent fumes spread into the room.

d) We can walk through air.

Ans- The molecules of air are far apart i.e., large gaps and we can walk through air easily.

e) Liquids have definite volume but no definite shape.

Ans- The molecules of liquid are loosely packed and intermolecular force of attraction is small but number of molecules in it remain the same. Hence liquids have definite volume but no definite shape.

f) When a teaspoon of sugar is added to half a glass of water and stirred the water level in the glass remains unchanged.

Ans- When a teaspoon of sugar is added to half a glass of

water and stirred, the water level in the glass remains unchanged because the sugar particles are adjusted between the water molecules as inter-molecular gaps are more in liquids.

g) When an empty gas jar is inverted over a gas jar containing a coloured gas, the gas also spreads into the empty jar.

Ans- This is because gases can diffuse or flow in all directions.

h) A red ink drop added to a small amount of water in a glass turns the water red in some time.

Ans- When we put a drop of red ink in a glass of water, its particles diffuse with particles of water slowly but continuously and the water turns red.