

Class - IX

Subject - Science

Topic - Matter in our Surrounding
(Chemistry)

Matter: — The matter is the material of which everything in this universe in and around us is made up of in different shapes. It is anything that occupies space and has mass and offers resistance to any applied force.

Physical Nature of particles: — Matter is made up of particles. The particles of matter are very, very small in size.

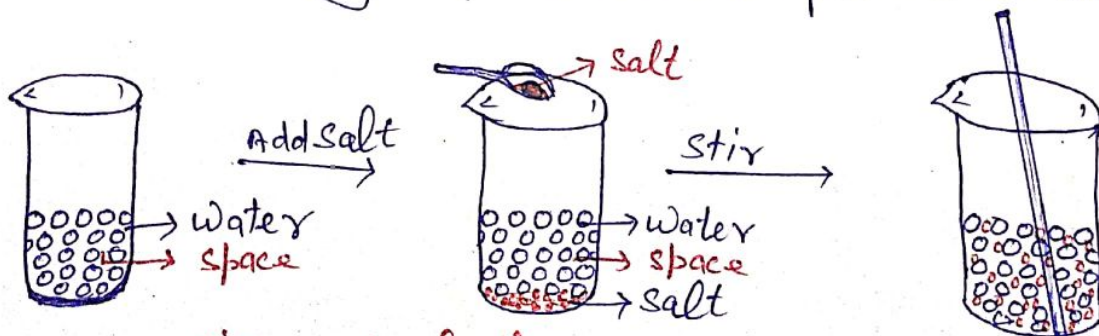
Characteristic of Particles: —

(i) Particles of matter are continuously moving: —

Particles of matter possess kinetic energy. As the temperature rises, particles move faster because kinetic energy of particles increases.

(ii) Particles of matter have space between them: —

When we make tea, coffee or lemonade (nimbu Pani) particles of one type of matter get into the space between particles of the other. This shows that there is enough space between particles of matter.



NOTE: — Size or level of water in beaker does not rise.

Particles of matter attract each other : — ^{IX} when we open a water tap, try to break the stream of water without fingers, can we do this? No, because the stream of water remains together. Particles of water are held together because of force of attraction between them.

Note : — (i) The space between the particles and kinetic energy of particles is minimum (less) in solids, intermediate in liquids and maximum in gases.
(ii) The force of attraction between the particles is strongest in solids, intermediate in liquids and weakest in gases.

STATES OF MATTER : — There are three states of matter : —

- (i) Solid
- (ii) Liquid
- (iii) Gaseous

We can classify our body into three states of matter i.e. —

- (i) Bones and teeth are solids
- (ii) Blood and water present in our body are liquids
- (iii) Air in our lungs is gaseous

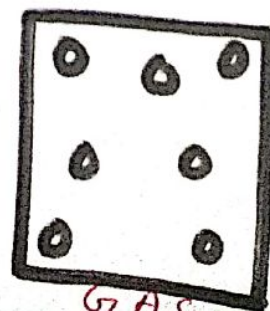
“Arrangement of particles in three states of matter”



SOLID

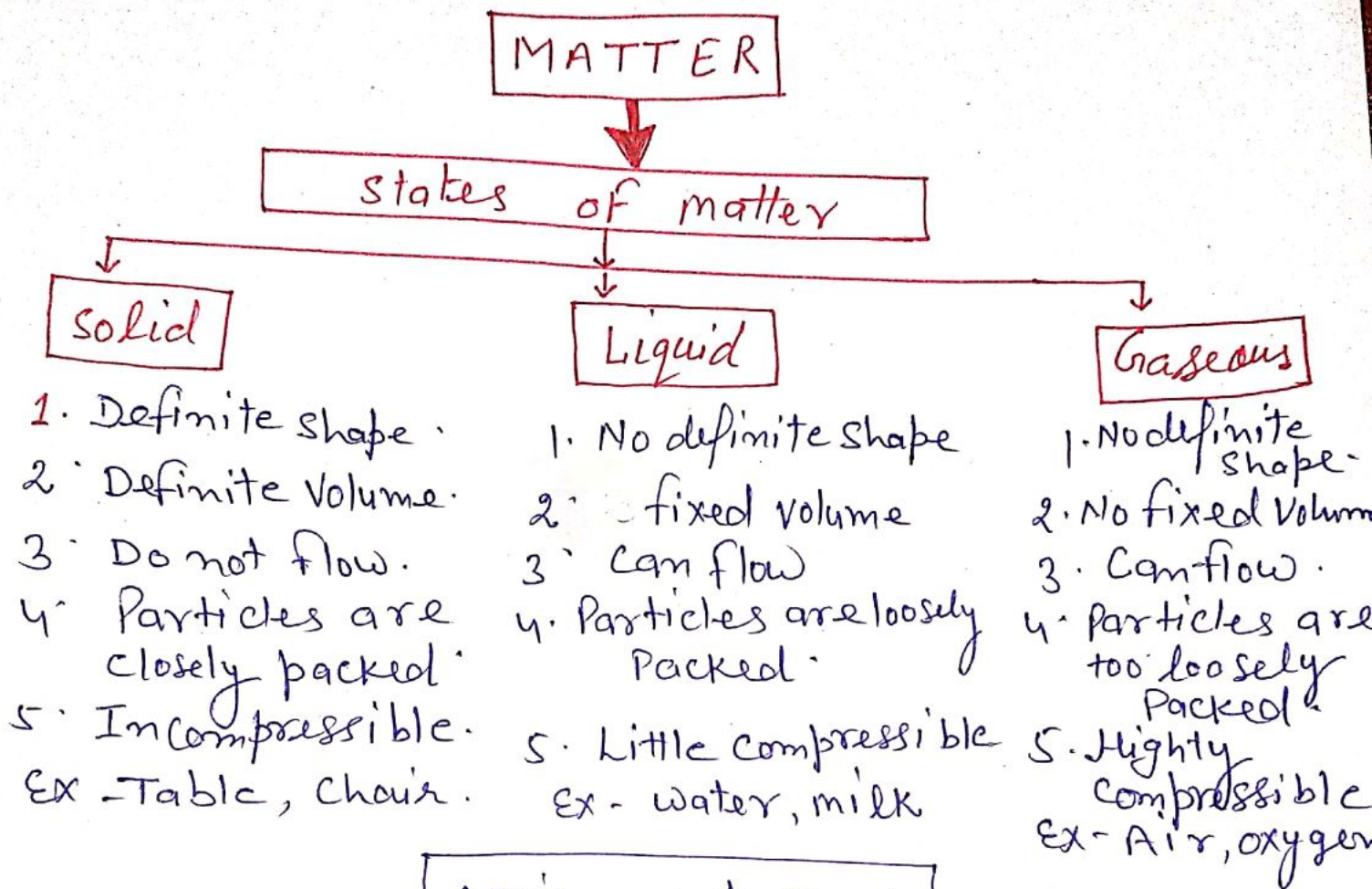


LIQUID



GAS

CONCEPT MAPPING



Assignment To do

1. Note it down in your register of previous class
2. Segregate the following matters into solid, liquid and gases in tabular form: — Honey, Gold, oxygen, Iron, Neon, Platinum, milk, chlorine
3. write the characteristics of solid states.
4. write the characteristics of liquid and gaseous states.
5. Air is matter? Justify your statement.
6. Particles of matter are very small. How can you say so? Explain it.