

(Ch-01) Matter in our surroundings

→ Matter :-

"An entity which occupies space and has mass."

→ Physical nature of matter :-

1. Matter is made up of particles.

Every matter is composed of several similar repeating units called particles. The nature of particles and physical forces among them determine the nature of the matter.

2. Particles of matter have spaces between them.

Different particles of matter have spaces between them. This space may vary in different matters because of the different arrangements and the nature of particles.

3. Particles of matter move continuously.

The particles of matter move continuously. Their movement depends upon the nature of matter, the physical forces operating between them and the kinetic energy of the particles. As the temperature increases, the kinetic energy increases and the particles move faster.

4. Particles of matter attract each other.

The particles of matter have a force acting between them. This force keeps the particles together. The strength of this force of attraction, however, differs from one kind of matter to the other.

5. Particles of matter are very small.

Matter is made up of extremely small particles which cannot be seen with the naked eye.

→ Classification Of Matter (Based on Physical Properties) :-

Generally matter can be classified into five states as :-

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|-----------------------------------|---|------------------------------------|
| 1. Solid state | } | Basic / Classical States of Matter |
| 2. Liquid state | | |
| 3. Gaseous state | | |
| 4. Plasma state | } | Modern Classification Based |
| 5. Bose-Einstein Condensate (BEC) | | |