

MATTER

CHAPTER NO.1 SUB: PHYSICS

CHANGING YOUR TOMORROW

LEARNING OUTCOMES

- **Students will be able to :**
 - Demonstrate different change of states.
 - Differentiate between solids, liquids and gases on the basis of their molecular models.

CHANGING YOUR TOMORROW

POINTS TO BE COVERED

- Matter
- Characteristics of molecules
- States of matter.

CHANGING YOUR TOMORROW

INTRODUCTION

- Evaporation takes place at _____ temperatures.
- _____ Process is just the reverse of melting.
- _____ is a process that involves direct conversion of a solid into its vapour on heating.
- The temperature at which a solid converts into a liquid is called its _____.
- The smallest unit of matter that exists freely in nature is called _____.
- Molecules of a substance are always in a state of _____ and so they possess _____.
- Inter molecular space is maximum in _____ less in _____ and least in _____.

Distinguish between solids liquids and gases.

<https://youtu.be/6bHkWh5T3mk>

Change of state

<https://youtu.be/ENVKQVIDNLY>

MELTING

- The change from solid state to liquid state on heating at a fixed temperature is called melting.



Melting point of a solid

- The temperature at which a solid changes into liquid without further increase in temperature is called melting point of the solid.



Freezing

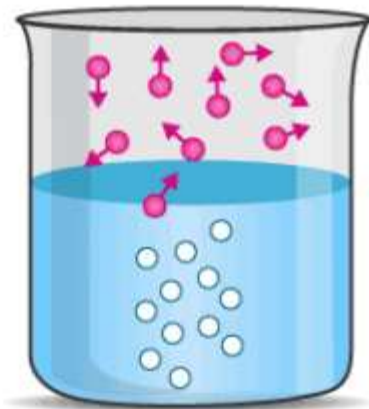
- The change of state of a substance from the liquid state to its solid state on cooling(rejecting heat) is called freezing.



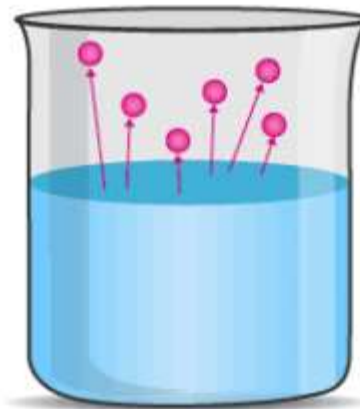
Melting By Molecular Model

- In a solid, molecules are closely packed.
- They have strong intermolecular force between them.
- On heating, the kinetic energy of molecules increases .
- At a particular temperature, called melting point, the molecules get far separated from each other.
- The state of substance becomes liquid.

Vaporization or boiling



Boiling



Evaporation

Vaporization



VAPORIZATION

- The change from liquid state to gaseous state on heating at a constant temperature by absorption of heat is called vaporization or boiling.
- The temperature at which a liquid changes into vapour without further increase in temperature is called boiling point of the liquid.

CONDENSATION



- **Condensation** is the change of water from its gaseous form (water vapor) into liquid water.

https://youtu.be/Y9cASQn_SEw

HOME ASSIGNMENT

- Define the term matter. What is it composed of?
- State three properties of molecules of matter.
- What do you mean by inter molecular spaces?
- How do they vary in different states of matter?
- Exercise: B- 4,5,6,7

THANKING YOU
ODM EDUCATIONAL GROUP