



MATTER ,[Class-VIII]

CHAPTER-1 CHEMISTRY

CHANGING YOUR TOMORROW

Website: www.odmegroup.org
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EARNING OUTCOMES

- **STUDENTS WILL BE ABLE TO :**
- Learn about the composition of Matter
- Properties of particles of matter.
- Different States of matter and their composition.
- Interconversion of states of matter.
- Knowing the terminology.

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Points to Remember

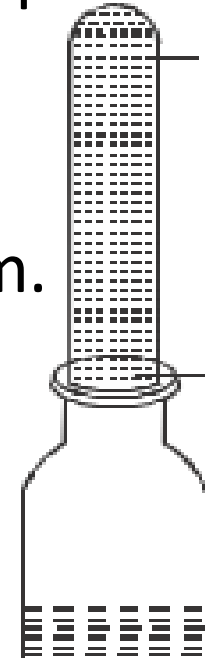
- Introduction
- Matter is made up of very tiny particles.
- Properties of particles of matter.
- States of matter.
- Conversion of states of matter.
- Factors affecting during Conversion.

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Introduction

- Every object is composed of matter which again is composed of tiny particles. Nature of particles of matter :
 - > Particles have spaces among them
 - > Particles have strong forces of attraction among them.
 - > They always remain in ceaseless motion
 - > They can diffuse among each other.

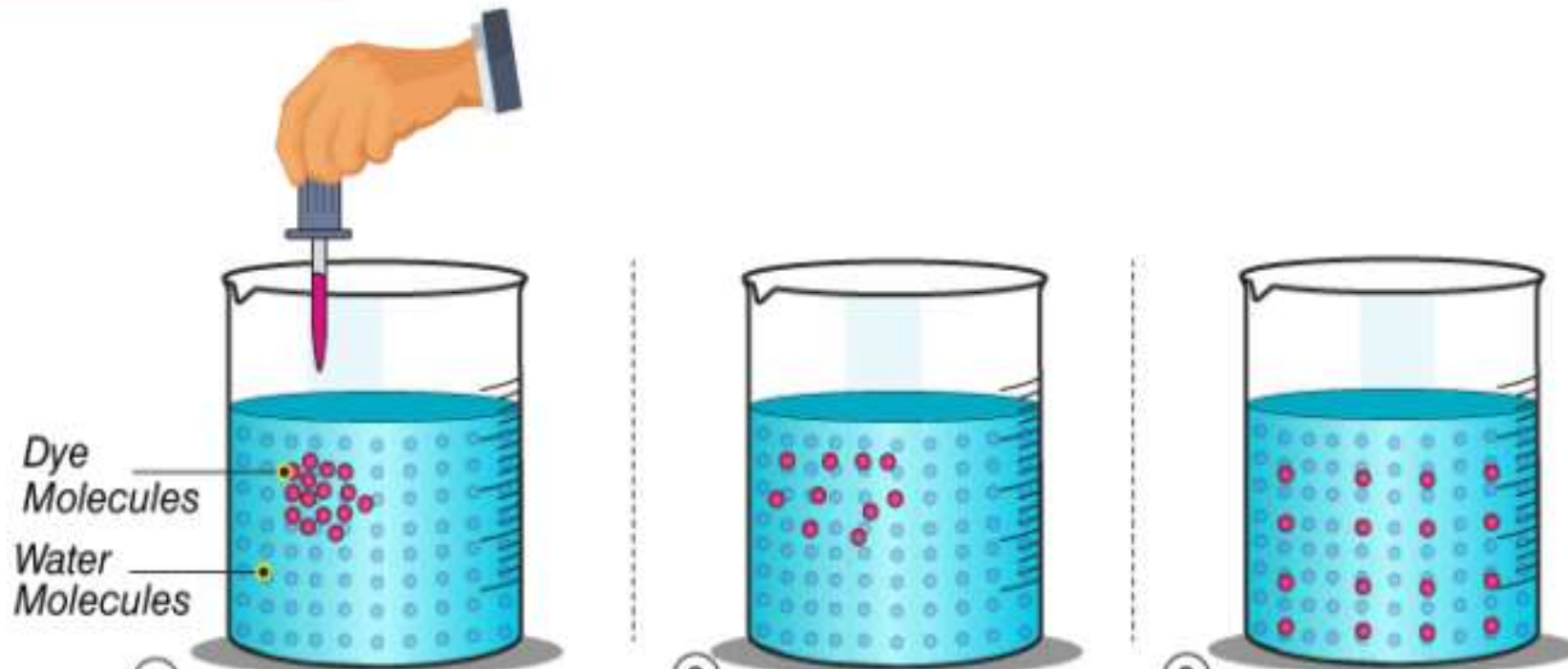
Some activities are followed to clarify each concept.



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Diffusion of particles

DIFFUSION



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Continious motion of Particles of Matter

- A video on above activity :
- <https://youtu.be/mhHo7bKbANE>
- Forces of Particles of matter :
- https://youtu.be/_ab-IAF1kYU

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States of Matter

- There are three major states of Matter : **solid, liquid and gas.**
- Beyond that there are two other states of matter as well :
[**Plasma and BEC**]

<u>Properties</u>	<u>solid</u>	<u>liquid</u>	<u>gas</u>
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<u>Shape and Vol</u>			
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<u>Forces of attraction</u>			
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<u>Inter-particular spaces</u>			
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<u>Diffusibility</u>			
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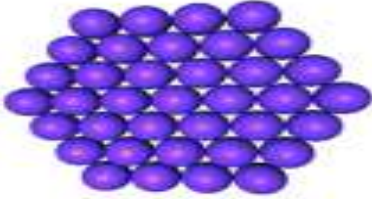
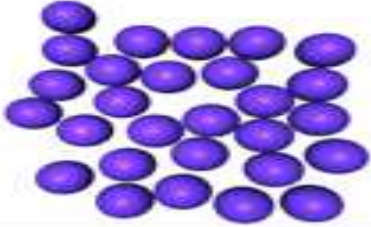

<u>Compressibility</u>			
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<u>Density</u>			
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<u>Fluidity</u>			
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Comparison among all states

Solids	Liquids	Gases
		
<ul style="list-style-type: none"> • Strong attraction between the particles. • Particles are very close together and neatly arranged. • Particles vibrate in place. 	<ul style="list-style-type: none"> • Moderate attraction between particles • Particles still very close together but not neatly arranged • Particles are able to slide passed each other. 	<ul style="list-style-type: none"> • Very weak attraction between particles. • Particles are much further away from each other. • The particles move all around and bump into each other.
<ul style="list-style-type: none"> • Definite shape • Definite volume 	<ul style="list-style-type: none"> • Indefinite shape • Definite volume 	<ul style="list-style-type: none"> • Indefinite shape • Indefinite volume

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Inclusive two other States



BE CONDENSATES



SOLIDS



LIQUIDS



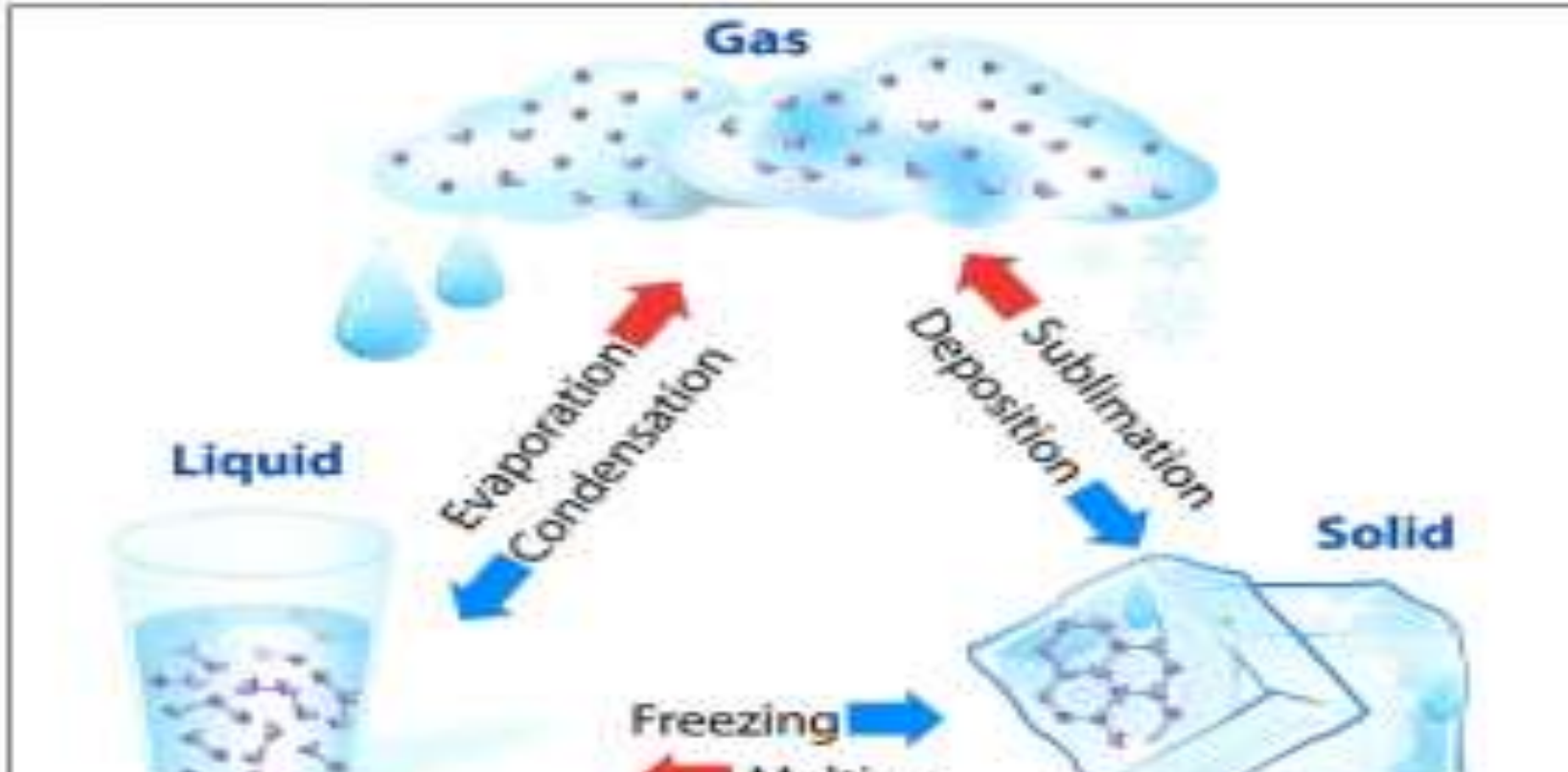
GASES



PLASMAS

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Inter-conversion of States



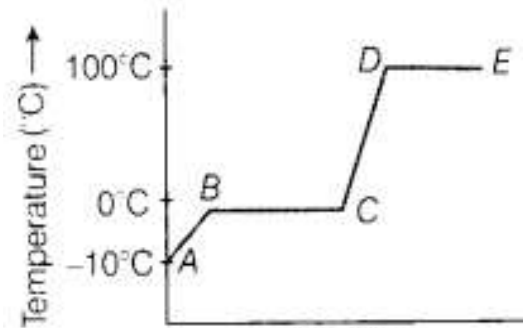
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Factors affecting in Inter-conversion of States

- Temperature
- Pressure
- How pressure and impurities affect in changing the Boiling point and Melting point of substances.
 - > higher the pressure higher is the boiling point of liquid and vice-versa.
 - > Impurities can increase the boiling point of water and decrease the melting point of Ice.

Determination of different Temp ranges for following changes.

- Melting Point, Boiling Point, Freezing Point, Condensation Point, Sublimation Point.
- Latent Heat determination.
- Latent Heat of Fusion and Latent Heat of Vaporization.
- Applications.
- Lf of Ice = 80 cal/kg
- Lv of Water = 540cal/kg



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THANKING YOU
ODM EDUCATIONAL GROUP
THE END

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