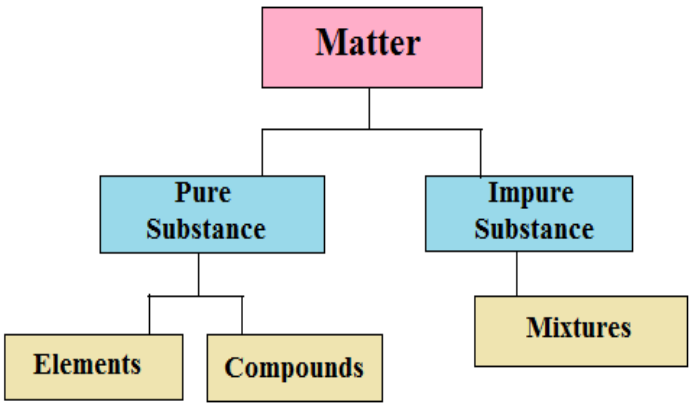
ODM EDUCATIONAL GROUP
Changing your Tomorrow

ODM Teachers' Note

Class	IX	Subject	CHEMISTRY
PD	1	Chapter-2	IS MATTER AROUND US PURE
Recapitulation of the previous chapter taught.	✔ We came across the concept of matter. ✔ We discussed regarding the physical nature of matter. ✔ We discussed regarding the characteristics of matter. ✔ We came to know of the states of matter and the factors affecting it. ✔ We came across the concept of evaporation and the factors affecting it.		
Sub-Concepts	❖ Pure substance and impure substance ❖ Elements, Compounds and Mixture		
Teaching Aid To be used	Smart Class, PowerPoint presentation, classroom objects, newspaper clips (advertisements), charts.		
Learning Outcome	• Student will be able to know about the classification of the states of matter in terms of pure and impure substances. • Students will be able to know of the elements, compounds and mixture and would be able to differentiate based on certain properties.		
Sl. No	Step Wise (What to be done)		
1 Introduction	For Achievers Teacher should initiate the discussion on following topics, which will revolve around the core topic of the chapter like, What's your view on the classification of matter and its basis? ➤ Vision to acquire knowledge of the pure substances and its types. ➤ They need to know of the mixtures and its types.	For Average ➤ They would made familiar of the concept of homogenous and heterogenous mixture. ➤ They would made to differentiate between elements and compounds.	

<table>
<tr><td></td><td>➤ They would differentiate homogenous and heterogenous mixture and segregate materials on this basis.
➤ They would justify why certain thing a compound or mixture.</td><td></td></tr>
<tr><td>2. Classification of Matter.</td><td colspan="2"> 
</td></tr>
<tr><td>3-Types of Mixtures</td><td colspan="2">Types of mixture
It is of two types:
(a) Homogeneous mixture (b) Heterogeneous mixture
<table>
<tr><th>S. No.</th><th>Homogeneous mixture</th><th>Heterogeneous mixture</th></tr>
<tr><td>1.</td><td>All the components of the mixture are uniformly mixed.</td><td>All the components of the mixture are not thoroughly mixed.</td></tr>
<tr><td>2.</td><td>No separation boundaries are visible.</td><td>Separation boundaries are visible.</td></tr>
<tr><td>3.</td><td>It consists of a single phase.</td><td>It consists of two or more phases.</td></tr>
<tr><td>4.</td><td>Example: Sugar dissolved in water</td><td>Example: Air, sand and common salt.</td></tr>
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4.Elemens, Compounds and Mixture

5. Differentiation of mixture and compounds.

Pure Substance: It may be defined as a material which contains only one kind of atoms or molecules.

Pure substances are again of two types:

(a) Elements (b) Compounds

(a) Elements:

- Pure substances which are made up of only one kind of atoms are known as elements.
- They cannot be split up into two or more simpler substances by any of the usual chemical methods.
- For example, Iron, gold, silver, carbon, oxygen, nitrogen and sodium etc.

Difference between mixtures and compounds:

S. No.	Mixtures	Compounds
1.	Various elements just mix together to form a mixture and no new compound is formed.	Elements react to form new compounds.
2.	A mixture has a variable composition.	The compound has a fixed composition.
3.	A mixture shows the properties of its constituents.	Properties of a compound are totally different from those of its constituents.
4.	They do not have a fixed melting point, boiling point, etc.	They have a fixed melting point, boiling point, etc.
5.	The constituents can be separated easily by physical methods	The constituents can be separated only by chemical processes.

5.Home Assignment

Exercise Q1 to Q4

1) Differentiate between Mixture and Compounds.
2) Why hydrogen is said to be an element but H2O is said to be a compound.