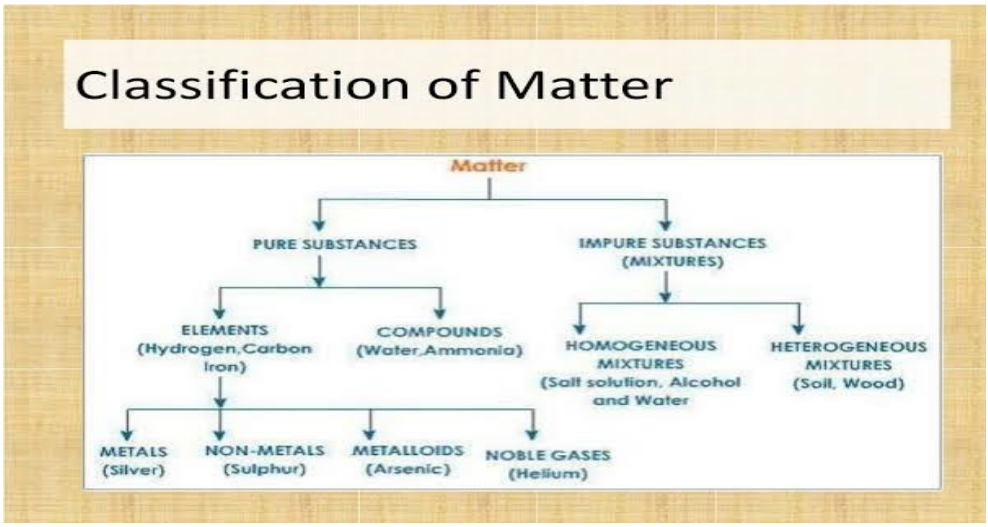
ODM EDUCATIONAL GROUP
Changing your Tomorrow

ODM Teachers' Note

Class	VII	Subject	CHEMISTRY
PD	1	Chapter-3	ELEMENTS, COMPOUNDS AND MIXTURES
Recapitulation of the previous chapter taught.	✔ We had learnt about the concept of physical change. ✔ We had learnt about the concept of chemical change. ✔ We had learnt about the concept of slow and fast changes, reversible and irreversible changes. ✔ We had learnt about the concept of periodic and Non-periodic changes as well as Natural and Man-made changes.		
Sub-Concepts	Introduction-Elements and Compounds. Elements		
Teaching Aid To be used	Smart Class, PowerPoint presentation, classroom objects, charts.		
Learning Outcome	• Student will be able to know about the classification of substances or matter. • Student will be able to know about the pure and impure substances or matter. • They will come to know of the concept of elements along with examples. • Student will be able to know about the concept of compounds. • Student will be able to know about the classification of elements as well as their examples.		
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 types of	For Average ➤ They would made familiar with the classification chart of substances. ➤ They would know of the elements and compounds.	

	substances in this world? ➤ Vision to acquire knowledge of the classification of the substances or matter. ➤ They need to know of the various categories of substances. ➤ Vision to acquire knowledge of the elements and its classification along with examples. ➤ They need to know of the compounds with examples.	
2. Classification of Substances		
3-Pure and Impure Substances	SUBSTANCE • It is of two types: 1. Pure Substance 2. Impure substance 1. 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 2. Impure Substance: (b) It may be defined as a material which contains only one kind of atoms or molecules.	

	(c) It is also named as mixture.
4.Elements and its types.	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. Elements are further grouped into the following three categories: (i) Metals, for example: Iron, copper, gold, sodium, silver, mercury, etc. (ii) Non – metals, for example: Carbon, oxygen, sulphur, nitrogen, oxygen, hydrogen, etc. (iii) Metalloids: Boron, silicon, germanium, etc. Properties of Metals: • These are lustrous (shine). • They conduct heat and electricity. • All metals are malleable and ductile. • They are sonorous. • All metals are hard except sodium and potassium. • All metals are solids at room temperature except mercury which is a liquid. Properties of Non-metals: • Metals are dull.

5. Compounds	• They are poor conductors of heat and electricity except diamond which is a good conductor of heat and graphite which is a good conductor of electricity. • They are neither malleable nor ductile. • They are generally soft except diamond which is the hardest natural substance known. • They may be solids, liquids, or gases at room temperature. **Metalloids:** The elements that have properties intermediate between those of metals and non-metals, are called metalloids. **INERT OR NOBLE GASES** • These Elements do not react chemically with other elements or compounds, so they are known as noble or inert gases. • They are found in air in traces. • They are six in number------- Helium, Neon, Argon, Krypton, Xenon, Radon. **Compounds:** • It is a form of matter formed by combining two or more elements in a definite ratio by mass. • It Can be decomposed into its constituent elements by suitable chemical methods. • For example: Water (H_2O), oxygen (O_2), Nitrogen dioxide (NO_2), etc.
5.Home Assignment	Exercise-1 Q 1, Q2 & Q 7