ODM EDUCATIONAL GROUP
Changing your Tomorrow

ODM Teachers' Note

Class	IX	Subject	CHEMISTRY
PD	2	Chapter-2	IS MATTER AROUND US PURE
Recapitulation of the previous taught.	✔ We came across the classification of matter. ✔ We discussed regarding the pure and impure substances. ✔ We discussed regarding the types of pure substances and its concept. ✔ We came to know of the differentiation of homogenous and heterogenous mixtures. ✔ We came across the properties of mixture and compounds and learn to differentiate it.		
Sub-Concepts	❖ Traditional methods of separation of mixtures. ❖ Filtration, Evaporation, Magnetic separation, Sieving, winnowing, Threshing and Loading.		
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 traditional methods of separation. • They would know of the Filtration, Evaporation, Magnetic separation, Sieving, winnowing, Threshing and Loading.		
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 need for the separation of substances? ➤ Vision to acquire knowledge of the traditional methods of separation of mixture.	For Average ➤ They would made familiar of the traditional methods like Filtration, Evaporation, Magnetic separation, Sieving, winnowing, Threshing and Loading. ➤ They would be given some examples of these processes	

	➤ They need to know of the principle of Magnetic separation, Winnowing, and Threshing etc. ➤ They would know of concept of filtration, evaporation, sieving and loading etc. ➤ They would justify the methods with examples. ➤ Examples-separation of pure water from muddy water. ➤ Examples- separation of iron particles from the eyes.	
2. Magnetic Separation and Evaporation	**Separation process:** The process of separating the constituent substances of a mixture by physical methods, taking advantage of the differences in their physical properties is called separation process. Commonly used separation methods are **Magnetic Separation:** This method is used when one of the components is magnetic. Example: The mixture of iron filings and sulphur powder can be separated by using magnets. **Evaporation:** Evaporation is the process of vaporizing the solvent to obtain the solute. Evaporation is used to separate a mixture containing a non-volatile, soluble solid from its volatile, liquid solvent. We can separate salt from a solution by evaporating the water from the solution. **Filtration:** Filtration is a process by which insoluble solids can be removed from a liquid by using a filter paper. A filter paper is a special type of paper which has pores that are tiny enough to let only liquids pass through it. If you pass a solution	

	through filter paper, any undissolved solid particles will get left behind on the paper whereas the liquid will filter through. The liquid that passes through is called the filtrate and the undissolved solid particles are called residue. Example: A mixture of chalk powder and water can be separated by this method.
3-Filtration as Separation method	**Filtration:** Filtration is a process by which insoluble solids can be removed from a liquid by using a filter paper. A filter paper is a special type of paper which has pores that are tiny enough to let only liquids pass through it. If you pass a solution through filter paper, any undissolved solid particles will get left behind on the paper whereas the liquid will filter through. The liquid that passes through is called the filtrate and the undissolved solid particles are called residue. Example: A mixture of chalk powder and water can be separated by this method.
4.Threshing, Winnowing and Sieving	**Threshing:** • The process of separating grains from chaffs by biting on the ground. • It can be done by a thresher. **Winnowing:** • The method of separating the lighter chaff from the heavier grains by the help of air. **Sieving:** • The method of separating solid-solid mixture by using a sieve. • Pebbles are removed from the sand to make fine by the method of sieving.
5.Home Assignment	Exercise Q5 to Q11 1) How can we separate saw dust, sand and iron fillings?

	2) How can we obtain clean water from muddy water?