

## Curriculum

Class: Grade 7

Cycle: 3

Subject: Chemistry

Textbook: National Textbook

Learning Domains/Units	Objectives	Learning Outcomes/ Competencies
<p><b>Matter: Classification and Separation Techniques</b></p> <ul style="list-style-type: none"><li>• Classification of matter</li><li>• Separation techniques</li></ul> <p><b>Solutions</b></p> <ul style="list-style-type: none"><li>• Kinds of solutions</li><li>• Solubility</li></ul>		<ul style="list-style-type: none"><li>-Define matter with its three states</li><li>-Define the five changes of state.</li><li>-Classify physical properties of substances as measurable or descriptive properties.</li><li>-Differentiate between evaporation and boiling.</li><li>-Differentiate between physical and chemical changes; give examples.</li><li>-Differentiate between pure substances and mixtures.</li><li>-Differentiate between homogeneous and heterogeneous mixtures.</li><li>-Discuss separation techniques for heterogeneous mixtures: Decantation – centrifuging – filtering – using a separatory funnel.</li><li>-Discuss separation techniques for homogeneous mixtures: simple distillation – fractional distillation – crystallization</li></ul> <ul style="list-style-type: none"><li>-Define: solution, solute and solvent.</li><li>-Relate the physical state of the solution to that of the solvent in it.</li><li>-Define aqueous and non-aqueous solutions.</li><li>-Differentiate between dilute and concentrated solutions.</li></ul>

<p><b>Chemical Reactions</b></p> <ul style="list-style-type: none"> <li>• Reactants and Products</li> <li>• Conservation of matter</li> <li>• Energy and chemical reactions</li> <li>• Combustion as one type of chemical reaction</li> </ul> <p><b>Pollution due to Combustion Reactions</b></p>		<ul style="list-style-type: none"> <li>- Explain how to dilute and concentrate a solution.</li> <li>- Explain and give examples on solid and gaseous solutions.</li> <li>-Define solubility.</li> <li>-Define unsaturated, saturated and supersaturated solutions and prepare them.</li> <li>-Discuss the three factors that affect the rate of dissolving a solid in a liquid.</li> <li>-Discuss factors influencing solubility of solid in liquid and gas in liquid.</li>   <li>-Define a chemical change.</li> <li>-Define reactants and products.</li> <li>-Define a precipitate.</li> <li>- Discuss signs of a chemical reaction.</li> <li>-Specify the reactants, products and signs of chemical reaction in some chemical reactions.</li> <li>-Discuss Lavoisier's Law.</li> <li>-Define combustion, oxidizer and combustible.</li> <li>-Define and give examples on kindling temperature.</li> <li>-Differentiate between complete and incomplete combustion .</li> <li>-Differentiate between rapid and slow combustion reactions.</li> <li>-Explain how to test for hydrogen, oxygen and carbon dioxide gas.</li>   <li>-Specify the composition of air.</li> <li>- Discuss sources of air pollution.</li> <li>- Discuss the effects of pollutants on the environment and health.</li> <li>- Discuss means of reducing air pollution.</li> </ul>
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