

**GHS 2025-2026 TERM 1 SCHEME OF WORK  
CHEMISTRY-FORM 4**

<b>Week</b>	<b>Unit Topic</b>	<b>Objectives</b>	<b>Assessment/Activities</b>
<b>1</b>	Types of Bonding	<ul style="list-style-type: none"> <li>• Explain the process of bonding</li> <li>• List the types of bonding</li> <li>• Distinguish between ionic and covalent bonding in terms of electron transfer/sharing</li> <li>• Draw dot and cross diagrams to display the process of ionic bonding.</li> </ul>	<i>Classwork-ionic bonding</i>
<b>2</b>		<ul style="list-style-type: none"> <li>• Draw a dot and cross diagram to display the process of covalent bonding- single, double and triple</li> <li>• Predict the likelihood of an atom forming an ionic or a covalent bond based on atomic structure.</li> <li>• Describe metallic bonding and how it occurs.</li> <li>• Draw a symbolic representation of metallic bonding.</li> </ul>	<i>SBA Lab- Separation Technique</i>  <i>Classwork- Practice Bonding</i>
<b>3</b>	Structure and Bonding	<ul style="list-style-type: none"> <li>• List the four types of solids (Ionic, simple molecular, giant molecular and metallic)</li> <li>• Describe ionic crystals</li> <li>• Draw a diagrammatic representations of an ionic crystal (sodium chloride)</li> <li>• Explain properties of ionic crystals</li> <li>• Describe simple molecular crystals and give examples.</li> <li>• Explain physical properties of simple molecular crystals</li> </ul>	<i>Exercise-types of bonding</i>  <i>Classwork 1- ionic crystals and simple molecular crystals</i>

4		<ul style="list-style-type: none"> <li>• Describe giant molecular crystals and give examples.</li> <li>• Draw a diagrammatic representation of graphite and diamond.</li> <li>• Distinguish physical properties between graphite and diamond (melting point, solubility, hardness, electrical conductivity and lubricating power).</li> <li>• Describe metallic crystals and give examples</li> <li>• Explain physical properties of metals</li> <li>• Distinguish between ionic and molecular solids (melting point, solubility, conductivity)</li> </ul>	<p><i>SBA Lab- Separation Technique</i></p> <p><i>Classwork 2- distinguishing physical properties of crystals</i></p>
5	Periodicity	<ul style="list-style-type: none"> <li>• Review arrangement of elements in groups and periods.</li> <li>• Review meaning of group and period numbers</li> <li>• List examples of elements in group II</li> <li>• Explain trends in group II (ease of ionisation, reactivity with oxygen, water and dilute hydrochloric acid)</li> <li>• List examples of elements in group VII.</li> <li>• Explain trends in group VII (physical state at room temperature, strength of oxidizing power)</li> </ul>	<p><i>Exercise 2- Types of Solid</i></p> <p><i>Classwork 3- trends in Group II and VII</i></p>
6		<ul style="list-style-type: none"> <li>• List elements in period 3</li> <li>• Identify trends in period 3 (electronic configuration, electrical conductivity, atomic radius, ease of ionization and reactivity)</li> </ul>	<p><i>Plan and design lab- sugar and salt</i></p> <p><i>Classwork 4- trends in period 3</i></p>

		<ul style="list-style-type: none"> <li>Predict properties of unknown elements based on the position in periodic table.</li> </ul>	
7	Rates of Reaction	<ul style="list-style-type: none"> <li>Define rate of reaction</li> <li>Write equation used to calculate rate of reaction</li> <li>Explain different ways to measure rate of reaction</li> <li>Explain how collision theory allows reactions to occur (collision, energy, orientation)</li> <li>Draw and label axes of rate curves</li> </ul> <p><b>*Emphasis on drawing graphs*</b></p>	<i>Classwork 5- rates of reaction</i>
8 (MidTerm)		<ul style="list-style-type: none"> <li>Identify the factors which affect rate of reaction (concentration, temperature, surface area, presence or absence of a catalyst)</li> <li>Predict the effect of factors on rate of reaction from given data</li> <li>Interpret graphical representation of data obtained in studying rates of reaction (include graphs of concentration vs time, concentration vs 1/t, rate vs time)</li> </ul>	<i>SBA Lab- Rates Lab</i>
9-10	Equation Writing	<ul style="list-style-type: none"> <li>Write the formula to represent cations and anions</li> <li>Name ionic compounds</li> <li>Combine cations and anions to write formula units</li> <li>Write balanced word and molecular equations including state symbols</li> <li>Write balanced ionic equations</li> </ul>	
11	<b>Revision</b>		