

# Naparima College

## Chemistry

### Form Three

### Term I

Sessions	Topic	Syllabus Objectives	Activities/ Labs/ Comments
2	<b><u>Bonding</u></b>	1: State the types of bonding: i) ionic ii) covalent iii) metallic	
8		i) <i>Ionic Bonding</i> Describe ionic bonding between metal & non-metal to achieve stability  Illustrate showing: <ul style="list-style-type: none"><li>• Formation of ions from atoms</li><li>• Electron transfer</li><li>• Charges on ions</li></ul>	
5		ii) <i>Covalent Bonding</i> Describe covalent bonding between non-metals to achieve stability  Illustrate showing: <ul style="list-style-type: none"><li>• Sharing of electrons rather than loss or gain of</li></ul>	

		<p>electrons to become stable</p> <ul style="list-style-type: none"> <li>• Overlap of orbitals</li> <li>• Electrons being shared must fall within the intersecting region of overlap</li> <li>• Molecules formed ( no charges)</li> </ul>	
2		<p>iii) <u>Metallic Bonding</u></p> <p>Describe metallic bonding as a force of attraction between fixed cations held by a “sea” of mobile electrons (diagram included )</p>	
3		<p>2: <u>List the physical properties of:</u></p> <ul style="list-style-type: none"> <li>• Ionic compounds &amp; Simple Covalent molecules (comparatively)</li> <li>• Metals</li> </ul> <p>3: List of anions and cations (names and charges)</p>	
4		<p>4: Allotropes of Carbon</p> <ul style="list-style-type: none"> <li>• Labelled Structure of i) Diamond                      ii) Graphite ( include annotations)</li> <li>• Describe the structures</li> <li>• Relate the physical properties of the allotropes of carbon to the structures</li> </ul> <p>5: Define an alloy</p>	

2		<ul style="list-style-type: none"><li>• State examples of alloys</li><li>• Include the combinations of metals for sited examples</li><li>• Relate the properties of these alloys with their uses</li></ul>	
5-8		<p><b><u>Acids, bases &amp; salts</u></b></p> <p>1: Describe the pH scale with aid of a diagram</p> <p>2: <u>Acids</u></p> <ul style="list-style-type: none"><li>• a): Describe the properties of acids</li><li>• b): Determine the types of acids:<ul style="list-style-type: none"><li>• i) strong acids</li><li>• ii) weak acids</li></ul></li><li>• c): Distinguish the position of strong/ weak acids on the pH scale</li><li>• d): List examples of strong/ weak acids</li><li>• e): Identify the general reactions (rxns) of acids with:<ul style="list-style-type: none"><li>• i) metals</li><li>• ii) bases or alkalis</li><li>• iii) carbonates</li></ul></li></ul>	