

## Year 10 Chemistry Learning Programme 2

<p>The LORIC skill focus for his LP is: ORGANISATION The Moral Virtues focus for this LP are: COMPASSION and HONESTY</p> <p>Compassion - the quality of feeling pity and concern for the sufferings or misfortunes of others. Honesty - the quality of being truthful.</p> <p><b>What will I be learning about in this Learning Programme?</b> How the properties of substances relate to their bonding and structure, how to use the mole to calculate the amounts of a substance produced in a chemical reaction.</p> <p><b>Where have I seen this learning before?</b> Atomic structure from LP1 and states of matter from KS3</p> <p><b>What could I use it for?</b> Bonding and structure will be used to explain the properties of substances in electrolysis and organic chemistry. Quantitative chemistry is used across the course</p>		<p><b>Literacy:</b></p> <ul style="list-style-type: none"> <li>Capital letters must be used at the start of sentences and for the first letter of proper nouns</li> <li>Full stops must be used at the end of a sentence</li> <li>Question marks must be used at the end of a question</li> <li>Apostrophes should only be used for possession or omission</li> <li>Days of the week and months must be spelled correctly</li> <li>Key words must be spelled correctly</li> </ul>
<p><b>In LP2.1, I will know:</b></p> <p>how to draw dot and cross diagrams of unfamiliar ionic compounds; why ionic compounds have a high melting point and describe, in terms of ions, how an ionic compound can conduct electricity; how to draw dot and cross diagrams and ball and stick diagrams for H<sub>2</sub>, Cl<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, HCl, H<sub>2</sub>O, NH<sub>3</sub>, and CH<sub>4</sub>.</p>	<p><b>21/10/24 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Ionic bond</p>	<p><b>Homework</b></p> <p>Retrieval quiz</p>
<p><b>In LP2.2, I will know:</b></p> <p>how to explain the properties of diamond and graphite using their structure; how to compare the properties of simple molecules to giant covalent and giant ionic structures;</p>	<p><b>04/11/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>Covalent bond</p>	<p><b>Homework</b></p> <p>PPQ</p>
<p><b>LP2 RLW, I will:</b></p> <p>review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.</p>	<p><b>11/11/24 - (WK 2)</b></p>	
<p><b>In LP2.3, I will know:</b></p> <p>the properties and consequent uses of graphene, fullerenes and carbon nanotubes; in detail, including labelled diagrams, how alloying affects the structure and bonding in metals and its effect on properties; how to evaluate the use of nanoparticles in their applications, including sun cream.</p> <p>Extended Task.</p>	<p><b>18/11/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>Metallic bond</p>	<p><b>Homework</b></p> <p>Retrieval quiz</p>
<p><b>In LP2.4, I will know:</b></p> <p>how to calculate the relative formula mass for unfamiliar compounds when the formula is given; how to calculate the number of moles or mass of a substance from data supplied.</p>	<p><b>25/11/24 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Moles</p>	<p><b>Homework</b></p> <p>PPQ</p>
<p><b>In LP2.5, I will know:</b></p> <p>how to calculate the number of moles of a substance using molar ratio and balanced symbol equations; how to use balanced symbol equations to calculate reacting masses;</p>	<p><b>02/12/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>Molar ratio</p>	<p><b>Homework</b></p> <p>Retrieval quiz</p>
<p><b>In LP2.6, I will know:</b></p> <p>how to use balanced symbol equations to calculate reacting masses when there is a limiting reactant; how to calculate the percentage yield; how to calculate the concentration, in mol/dm<sup>3</sup> and g/dm<sup>3</sup>, of a solution when the number of moles and volume in dm<sup>3</sup> is given.</p> <p>Extended Task.</p>	<p><b>09/12/24 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Limiting reactant</p>	<p><b>Homework</b></p> <p>PPQ</p>
<p><b>In LP2.7, I will know:</b></p> <p>how to calculate a titre; how to calculate the unknown concentration of a reactant in a neutralisation reaction when the volumes are known and the concentration of one reactant is also known.</p>	<p><b>16/12/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>Concentration</p>	<p><b>Homework</b></p> <p>Retrieval quiz</p>
<p><b>Resources to support learning:</b> Resource booklet, Knowledge organiser, BBC GCSE Bitesize, Free GCSE Science videos on YOUTUBE. COGNITO Science</p>		
<p><b>FFET Award Challenge for this Learning Programme:</b> LP2 Year 10 Science: Create a revision resource on a topic of your choice,</p>		

PRT Task 1

PRT Task 2