

Year 9 Science Learning Programme 2

<p>The LORIC skill focus for this LP is: ORGANISATION The Moral Virtues focus for this LP are: COMPASSION and HONESTY Compassion - the quality of feeling pity and concern for the sufferings or misfortunes of others. Honesty - the quality of being truthful.</p>		<p>Literacy:</p> <ul style="list-style-type: none"> • Capital letters must be used at the start of sentences and for the first letter of proper nouns • Full stops must be used at the end of a sentence • Question marks must be used at the end of a question • Apostrophes should only be used for possession or omission • Days of the week and months must be spelled correctly • Key words must be spelled correctly
<p>What will I be learning about in this Learning Programme? The different types of energy and the different ways electricity can be generated. The structure of the atom and how the periodic table was developed by grouping elements, making predictions about elements.</p>		
<p>Where have I seen this learning before? The difference between elements, compounds and mixtures, writing formula equations in KS3. Irreversible and reversible chemical reactions in KS2.</p> <p>What could I use it for? GCSE chemistry topic atomic structure and the periodic table, further study.</p>		
<p>In LP2.1, I will know: 21/10/24 - (WK 2)</p>		
<p>how to recognise compounds from their formula and describe how mixtures can be separated; how to represent elements and compounds as formulae; how to explain that early models of atoms developed as new evidence became available.</p>	<p>Key Vocabulary</p> <p>molecule</p>	<p>Homework</p> <p>Learn spellings</p>
<p>In LP2.2, I will know: 04/11/24 - (WK 1)</p>		
<p>how to recall the masses of protons, neutrons and electrons and understand that atoms become charged if they lose or gain electrons; how to calculate the number of sub-atomic particles in atoms, isotopes and ions using atomic and mass numbers; how to explain that the electronic arrangement of atoms follows a pattern up to the atomic number 20.</p>	<p>Key Vocabulary</p> <p>sub atomic particle</p>	<p>Homework</p> <p>Learn definitions</p>
<p>LP2 RLW, I will: 11/11/24 - (WK 2)</p>		
<p>review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.</p>	<p>Key Vocabulary</p> <p>periodic table</p>	<p>Homework</p> <p>Knowledge organiser flipper</p>
<p>In LP2.3, I will know: 18/11/24 - (WK 1)</p>		
<p>how to explain how elements are organised in the periodic table and recognise that the number of outer shell electrons corresponds to group number; how to explain how Mendeleev was able to make predictions for elements that were not discovered; how to understand that non-metals need to gain or share electrons during reactions, whereas metals lose electrons. Extended Task.</p>	<p>Key Vocabulary</p> <p>alkali metals</p>	<p>Homework</p> <p>Numeracy task</p>
<p>In LP2.4, I will know: 25/11/24 - (WK 2)</p>		
<p>how to complete an assessment; how to describe the trend down group 0 of increasing boiling point in terms of atomic mass; how to relate the properties of the alkali metals to the number of electrons in their outer shell.</p>	<p>Key Vocabulary</p> <p>reactivity</p>	<p>Homework</p> <p>Revision task</p>
<p>In LP2.5, I will know: 02/12/24 - (WK 1)</p>		
<p>how to explain why Group 1 are known as the alkali metals and know their properties and reactions; how to describe the order of reactivity and explain the displacement of the halogens; how to draw a graph to show melting point data of elements.</p>	<p>Key Vocabulary</p> <p>electronic structure</p>	<p>Homework</p> <p>10 core questions</p>
<p>In LP2.6, I will know: 09/12/24 - (WK 2)</p>		
<p>how to predict and explain the reactivity down the groups and across periods with links to electronic structure; how to describe similarities and differences between transition metals and contrast them; why an atom can become an ion. Extended Task.</p>	<p>Key Vocabulary</p> <p>transition metals</p>	<p>Homework</p> <p>Extended exam question</p>
<p>In LP2.7, I will know: 16/12/24 - (WK 1)</p>		
<p>my strengths and targets so far; how to link metallic bonding to the properties of metals; how to understand how atomic mass is calculated.</p>	<p>Key Vocabulary</p> <p>atomic mass</p>	<p>Homework</p> <p>10 core questions</p>
<p>Resources to support learning: Knowledge map, KS3 bitesize, science booklets on synergy.</p>		
<p>FFET Award Challenge for this Learning Programme: Create a biography of Dmitri Mendeleev.</p>		

