

## Year 12 Applied Science Learning Programme 4

<p>The LORIC skill focus for this LP is: INITIATIVE. The Moral Virtues focus for this LP are: INTEGRITY and GRATITUDE.</p> <p>Integrity - Having strong moral principles. I will show integrity by taking responsibility for my actions. Gratitude - Feeling and expressing thanks. I will show gratitude by saying please and thank you.</p> <p><b>What will I be learning about in this Learning Programme?</b> You will be learning how to test the purity of an organic compound using chromatography and melting point data.</p> <p><b>Where have I seen this learning before?</b> You will have seen chromatography at KS3 and GCSE and will have seen melting points used at KS3 and GCSE.</p> <p><b>What could I use it for?</b> You could use this to study for a degree in analytical chemistry and to work in the pharmaceutical industry.</p>		<p><b>Literacy Non-Negotiables:</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> <li>• Vocabulary to be taught using the Frayer model</li> </ul>
<p><b>In LP4.1, I will know:</b> 09/03/26 - (WK 2)</p> <p>how to improve my learning on Assignment A1 following assessment.</p>	<p><b>Frayer Model Words</b></p> <p>assessment</p>	<p><b>Homework</b></p> <p>Review Assignment A1.</p>
<p><b>In LP4.2, I will know:</b> 16/03/26 - (WK 1)</p> <p>the different techniques used in chromatography; how and why to use locating agents in chromatography.</p>	<p><b>Frayer Model Words</b></p> <p>locating agent</p>	<p><b>Homework</b></p> <p>Work on write up of chromatography techniques.</p>
<p><b>In LP4.3, I will know:</b> 23/03/26 - (WK 2)</p> <p>the method to carry out chromatography of aspirin; the risks and hazards of carrying out chromatography of aspirin.</p> <p>Extended Task.</p>	<p><b>Frayer Model Words</b></p> <p>chromatography</p>	<p><b>Homework</b></p> <p>Work on write up of chromatography techniques.</p>
<p><b>In LP4.4, I will know:</b> 13/04/26 - (WK 1)</p> <p>how to carry out chromatography of aspirin; how to analyse the results of chromatography of aspirin.</p>	<p><b>Frayer Model Words</b></p> <p>analyse</p>	<p><b>Homework</b></p> <p>Work on writing up the chromatography investigation.</p>
<p><b>In LP4.5, I will know:</b> 20/04/26 - (WK 2)</p> <p>how to evaluate the aspirin chromatography investigation; the method for using melting point data to test the purity of aspirin.</p>	<p><b>Frayer Model Words</b></p> <p>evaluate</p>	<p><b>Homework</b></p> <p>Work on writing up the chromatography investigation.</p>
<p><b>In LP4.6, I will know:</b> 27/04/26 - (WK 1)</p> <p>the risks and hazards of the procedure to test the melting point of aspirin; how to carry out the aspirin melting point practical.</p> <p>Extended Task.</p>	<p><b>Frayer Model Words</b></p> <p>hazard</p>	<p><b>Homework</b></p> <p>Write up the melting point practical.</p>
<p><b>In LP4.7, I will know:</b> 04/05/26 - (WK 2)</p> <p>how to analyse the results to determine the purity of aspirin; how to evaluate the investigation to determine the purity of aspirin.</p>	<p><b>Frayer Model Words</b></p> <p>purity</p>	<p><b>Homework</b></p> <p>Write up the melting point practical.</p>
<p><b>Resources to support learning:</b> Synergy, teacher notes, writing frames, text book. <a href="https://www.youtube.com/watch?v=eV5MEIq_8uE">https://www.youtube.com/watch?v=eV5MEIq_8uE</a></p>		
<p><b>FFET Award Challenge for this Learning Programme:</b> Link the practicals we are doing to real life and research some famous cases where drug purity has been an issue.</p>		

