

## Year 12 Chemistry Key Stage 5 Curriculum Map 2021-22

Subject: Chemistry			Year: 12	
Focus/Topic	UAE Links	HPL Links	Home Learning / Guided Reading	
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Fundamental Particles</li> <li>- Mass number and Isotopes</li> <li>- The Mole and Avogadro's Constant</li> <li>- The Ideal Gas Equation</li> </ul> </li> </ul>		<b>VAA: Empathetic Collaborative:</b> <i>The ability to seek out opportunities to receive responses to your work; present your own views and ideas clearly and concisely; listen to the views of others; be willing and able to work in teams; take a variety of roles and be able to evaluate your own ideas and contributions.</i>	Guided Reading	
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Electron Configuration</li> <li>- Relative Atomic Mass and Molecular Mass</li> <li>- Empirical Molecular Formula</li> </ul> </li> </ul>			Guided Reading	
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Ionic Bonding</li> <li>- Nature of Covalent and Dative Covalent bonding</li> <li>- Enthalpy change</li> <li>- Calorimetry</li> </ul> </li> </ul>	Relate to the initiative to promote healthy eating in the UAE i.e. counting calories		<b>ACP: Metathinking Metacognition</b> <i>The ability to knowingly use a wide range of thinking approaches and to transfer knowledge from one circumstance to another.</i>	Guided Reading
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Metallic Bonding</li> <li>- Bonding and Physical Properties</li> <li>- Applications of Hess's Law</li> <li>- Bond Enthalpies</li> </ul> </li> </ul>	Link to the metals commonly used in the UAE consider building materials (link to Burj) or electrical cables needed for all the lights/ technology		Guided Reading	
Half term				
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Shapes of Simple Molecules</li> <li>- Bond Polarity</li> <li>- Forces between Molecules</li> </ul> </li> </ul>	Link to the simple molecules in the air (oxygen, nitrogen, carbon dioxide) and how this changes with pollution (carbon foot print of the UAE)	<b>VAA : Agile Creative and Enterprising:</b> <i>The ability to be open-minded and flexible in your thought processes. Demonstrate a willingness to innovate and invent new and multiple solutions to a problem or situation.</i>	Guided Reading	
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Collision Theory</li> </ul> </li> </ul>	Consider the industrial production of pharmaceuticals and evaluate the use of		Guided Reading	

<ul style="list-style-type: none"> <li>- Maxwell Boltzmann</li> <li>- Oxidation and Reduction</li> </ul>	catalysts for industry e.g. Pharmax or Life Pharma	<i>Be resourceful when presented with challenging tasks and problems, using your initiative to find solutions.</i>		
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Effect of Temperature, Concentration, Pressure and Catalysts</li> <li>- Chemical Equilibria and Le Chatelier's Principle</li> </ul> </li> </ul>	Evaluate the implications of Health and Safety standards in the UAE for increasing rate of reactions		Guided Reading	
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Full Rate Investigation</li> <li>- Oxidation, Reduction and Redox</li> </ul> </li> </ul>			<b>ACP : Analysing</b> Critical and logical thinking <i>The ability to deduct, hypothesise, reason, see supporting evidence</i>	Guided Reading
<ul style="list-style-type: none"> <li>• <b>Physical Chemistry</b> <ul style="list-style-type: none"> <li>- Practical Skills</li> <li>- Variables</li> <li>- Hypothesis</li> <li>- Methods</li> <li>- Risk assessments</li> <li>- Interpreting data</li> </ul> </li> </ul>			<b>Multistep problem solving</b> <i>The ability to break down a task, decide on a strategy, approach, and then act</i>	Guided Reading

**Winter break**