

## Year 12 Curriculum Map 2020-21

### Term 1

Subject:	Year:	
Focus/Topic	UAE Links	Home Learning / Reading
Introduction and Expectations including key skills		Preparation for Year 12 summer work
<ul style="list-style-type: none"> <li>• Physical Chemistry               <ul style="list-style-type: none"> <li>- Fundamental Particles</li> <li>- Mass number and Isotopes</li> <li>- Electron Configuration</li> </ul> </li> </ul>		Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry               <ul style="list-style-type: none"> <li>- Relative atomic mass and molecular mass</li> <li>- The mole and Avogadro's constant</li> </ul> </li> </ul>		Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry               <ul style="list-style-type: none"> <li>- The ideal gas equation</li> <li>- Empirical and molecular formula</li> </ul> </li> </ul>		Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry               <ul style="list-style-type: none"> <li>- Ionic bonding</li> <li>- Nature of covalent and dative covalent bonds</li> </ul> </li> </ul>		Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry               <ul style="list-style-type: none"> <li>- Metallic bonding</li> <li>- Bonding and Physical Properties</li> </ul> </li> </ul>	Link to the metals commonly used in the UAE, consider building materials (link to Burj) or electric cables needed for all the lights/ technology	Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry               <ul style="list-style-type: none"> <li>- Shapes of simple molecules and ions</li> <li>- Bond Polarity</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)	Guided Reading
<b>Mid Term Break</b>		
<ul style="list-style-type: none"> <li>• Physical Chemistry               <ul style="list-style-type: none"> <li>- Forces between molecules</li> </ul> </li> </ul>		Guided Reading

<ul style="list-style-type: none"> <li>- Enthalpy change</li> </ul>		
<ul style="list-style-type: none"> <li>• Physical Chemistry <ul style="list-style-type: none"> <li>- Calorimetry</li> <li>- Applications of Hess's Law</li> </ul> </li> </ul>	Relate to the initiative to promote healthy eating in the UAE i.e. counting calories	Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry <ul style="list-style-type: none"> <li>- Bond enthalpies</li> <li>- Collision theory</li> </ul> </li> </ul>		Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry <ul style="list-style-type: none"> <li>- Maxwell-Boltzmann distribution</li> <li>- Effect of temperature, concentration, pressure and catalysts</li> </ul> </li> </ul>	<p>Consider the industrial production of pharmaceuticals and evaluate the use of catalysts for industry e.g. Pharmax or Life Pharma</p> <p>Evaluate the implications of Health and Safety standards in the UAE for increasing rate of reactions</p>	Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry <ul style="list-style-type: none"> <li>- Chemical equilibria and Le Chatelier's principle</li> </ul> </li> </ul>		Guided Reading
<ul style="list-style-type: none"> <li>• Physical Chemistry <ul style="list-style-type: none"> <li>-Revision</li> <li>- Physical Chemistry Mock examination (50 marks)</li> </ul> </li> </ul>		Guided Reading
<ul style="list-style-type: none"> <li>• Practical Skills <ul style="list-style-type: none"> <li>- Variables</li> <li>- Hypothesis</li> <li>- Methods</li> <li>- Risk assessments</li> <li>- Interpreting data</li> </ul> </li> </ul>		Guided Reading
<b>Winter Break</b>		