

## Key Stage 3 Curriculum Map 2019 - 2020

### Term 2

Year Group: 9		Subject: Science	
Focus/Topic	Objectives	Key Skills	Home Learning/Recommended Reading
<ul style="list-style-type: none"> <li>Baseline assessments, curriculum orientation and expectations</li> </ul>			
<ul style="list-style-type: none"> <li>Development of the periodic table</li> <li>Atoms, elements, compounds and mixtures</li> <li>Atomic structure</li> </ul>	<ul style="list-style-type: none"> <li>To explain what the differences are between atom, element, compound mixture</li> <li>To annotate a diagram of the periodic table and explain atomic structure</li> </ul>	<ul style="list-style-type: none"> <li>Recall, application, working scientifically, maths in science</li> </ul>	<ul style="list-style-type: none"> <li>Start elements, compound and mixtures home learning project. Use CGP revision guides and BBC Bitesize for further reading around the topic.</li> </ul>
<ul style="list-style-type: none"> <li>Electron arrangement</li> <li>Groups and trends of the periodic table</li> </ul>	<ul style="list-style-type: none"> <li>To draw electronic structure</li> <li>To explain trends down group 1, 7 and transitional metal properties</li> </ul>	<ul style="list-style-type: none"> <li>Recall, application, working scientifically, maths</li> </ul>	<ul style="list-style-type: none"> <li>Continue elements, compound and mixtures home learning project</li> </ul>
<ul style="list-style-type: none"> <li>Chromatography</li> <li>Distillation</li> </ul>	<ul style="list-style-type: none"> <li>To investigate chromatography</li> <li>To explain what distillation is and what it is used for</li> </ul>		
<ul style="list-style-type: none"> <li>Identification of gases (oxygen, hydrogen, carbon dioxide)</li> <li>Flame tests</li> </ul>	<ul style="list-style-type: none"> <li>To carry out tests to identify gases</li> <li>To determine the unknown using flame tests</li> </ul>	<ul style="list-style-type: none"> <li>Recall, application, working scientifically</li> </ul>	<ul style="list-style-type: none"> <li>Continue elements, compound and</li> </ul>
<ul style="list-style-type: none"> <li>Basic electrolysis</li> <li>Neutralisation reactions</li> </ul>	<ul style="list-style-type: none"> <li>To explain and investigate electrolysis</li> </ul>		

<ul style="list-style-type: none"> <li>Endothermic and exothermic reactions</li> </ul>	<ul style="list-style-type: none"> <li>To investigate neutralisation reactions</li> <li>To investigate endothermic and exothermic reactions</li> </ul>		mixtures home learning project
<ul style="list-style-type: none"> <li>Revision</li> </ul>	<ul style="list-style-type: none"> <li>Revise all topics so far</li> </ul>	<ul style="list-style-type: none"> <li>Recall and application</li> </ul>	<ul style="list-style-type: none"> <li>Finish elements, compound and mixtures home learning project</li> </ul>
<b>Mid Term Break</b>			
<ul style="list-style-type: none"> <li>Ionic and covalent bonding</li> <li>Diamond and graphite</li> <li>Graphene and fullerenes (nanotechnology)</li> </ul>	<ul style="list-style-type: none"> <li>To explain differences between ionic and covalent bonds</li> <li>To describe the structures and properties of diamond, graphite, graphene and fullerenes</li> </ul>	<ul style="list-style-type: none"> <li>Recall, application, working scientifically</li> </ul>	<ul style="list-style-type: none"> <li>Start metals home learning project. Use CGP revision guides and BBC Bitesize for further reading around the topic.</li> </ul>
<ul style="list-style-type: none"> <li>Metals and alloys</li> <li>Polymers</li> </ul>	<ul style="list-style-type: none"> <li>To explain what a metallic bond is and describe properties of alloys</li> <li>To explain what polymers are and the uses of them</li> </ul>		<ul style="list-style-type: none"> <li>Continue metals home learning project</li> </ul>
<ul style="list-style-type: none"> <li>Crude oil</li> <li>Fractional distillation</li> </ul>	<ul style="list-style-type: none"> <li>To be able to name alkanes and explain what crude oil is</li> <li>To explain fractional distillation</li> </ul>		
<ul style="list-style-type: none"> <li>Properties of hydrocarbons</li> </ul>	<ul style="list-style-type: none"> <li>To understand the properties of hydrocarbons</li> </ul>		
<ul style="list-style-type: none"> <li>Combustion of hydrocarbons and problems</li> <li>Cracking and alkenes</li> </ul>	<ul style="list-style-type: none"> <li>To identify combustion products and explain problems of combustion</li> <li>To explain what is cracking and an alkene</li> </ul>	<ul style="list-style-type: none"> <li>Recall, application</li> </ul>	
<ul style="list-style-type: none"> <li>Difference between alkenes and alkanes</li> </ul>	<ul style="list-style-type: none"> <li>Naming alkenes and comparing them to alkanes</li> </ul>		<ul style="list-style-type: none"> <li>Finish metals home learning project</li> </ul>
UAE Links across the term			
<p>The atomic lab: Design an element that can be used in the UAE</p> <p>The chemical analysis lab: The Sheikh decided to have a BBQ. Explain what type of reaction this would be and explain how you know this with scientific terminology. Include in your answer why chemical reactions may be important in the UAE.</p> <p>The materials lab: Use your knowledge about bonding, alloys and nanoscience to design a building for the UAE.</p> <p>The organic lab: Explain how cracking is used on oil in the UAE.</p>			