

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

<ul style="list-style-type: none"> Endothermic and exothermic reactions 	<ul style="list-style-type: none"> To investigate neutralisation reactions To investigate endothermic and exothermic reactions 		mixtures home learning project
<ul style="list-style-type: none"> Revision 	<ul style="list-style-type: none"> Revise all topics so far 	<ul style="list-style-type: none"> Recall and application 	<ul style="list-style-type: none"> Finish elements, compound and mixtures home learning project
Mid Term Break			
<ul style="list-style-type: none"> Ionic and covalent bonding Diamond and graphite Graphene and fullerenes (nanotechnology) 	<ul style="list-style-type: none"> To explain differences between ionic and covalent bonds To describe the structures and properties of diamond, graphite, graphene and fullerenes 	<ul style="list-style-type: none"> Recall, application, working scientifically 	<ul style="list-style-type: none"> Start metals home learning project. Use CGP revision guides and BBC Bitesize for further reading around the topic.
<ul style="list-style-type: none"> Metals and alloys Polymers 	<ul style="list-style-type: none"> To explain what a metallic bond is and describe properties of alloys To explain what polymers are and the uses of them 		<ul style="list-style-type: none"> Continue metals home learning project
<ul style="list-style-type: none"> Crude oil Fractional distillation 	<ul style="list-style-type: none"> To be able to name alkanes and explain what crude oil is To explain fractional distillation 		
<ul style="list-style-type: none"> Properties of hydrocarbons 	<ul style="list-style-type: none"> To understand the properties of hydrocarbons 		
<ul style="list-style-type: none"> Combustion of hydrocarbons and problems Cracking and alkenes 	<ul style="list-style-type: none"> To identify combustion products and explain problems of combustion To explain what is cracking and an alkene 	<ul style="list-style-type: none"> Recall, application 	
<ul style="list-style-type: none"> Difference between alkenes and alkanes 	<ul style="list-style-type: none"> Naming alkenes and comparing them to alkanes 		<ul style="list-style-type: none"> Finish metals home learning project
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>			