



Key Learning Constructs to be developed over the academic year. – Core Knowledge	Scheme of Learning Autumn Term	Scheme of Learning Spring Term	Scheme of Learning Summer Term
<p>*matter is composed of tiny particles called atoms and there are about 100 different naturally occurring types of atoms called elements</p> <p>*elements show periodic relationships in their chemical and physical properties * these periodic properties can be explained in terms of the atomic structure of the elements</p> <p>*atoms bond by either transferring electrons from one atom to another or by sharing electrons</p> <p>* the shapes of molecules (groups of atoms bonded together) and the way giant structures are arranged is of great importance in terms of the way they behave</p>	<p><b>Part 1</b> Atomic Structure</p> <p><b>Part 2</b> The Periodic Table</p>	<p><b>Part 3</b> Bonding and Structure – Ionic, Covalent</p> <p><b>Part 4</b> Bonding and Structure – Metallic Allotropes of Carbon, Nanoscience</p>	<p><b>Part 5 Quantitative Chemistry</b></p> <p><b>Part 6 Chemical Changes – Reactions of Metals and Acids</b></p>
<b>Hinterland Knowledge</b>	Real examples of the APPLICATION of the content studied (eg, development of the Periodic Table etc)	Real examples of the APPLICATION of the content studied (eg uses of diamond, links with nanoscience)	Real examples of the APPLICATION of the content studied (eg the work of an Industrial Chemist)
<b>Assessment: -Formative Techniques</b>	Use of whiteboards, hinge questions, recall questions.		
<b>-Summative Pieces</b>	End of Topic Tests	End of Topic Tests	End of Topic Tests and End of Year Assessment
<b>Key Vocabulary</b>	Key scientific terminology appropriate to each topic studied	Key scientific terminology appropriate to each topic studied	Key scientific terminology appropriate to each topic studied
<b>Key Skills</b>	Working Scientifically, relevant mathematical techniques (percentages, mean, mode, median etc) Graph plotting skills. Understanding variables and anomalies and their causes and effects	Working Scientifically, relevant mathematical techniques (percentages, mean, mode, median etc) Graph plotting skills. Understanding variables and anomalies and their causes and effects	Working Scientifically, relevant mathematical techniques (percentages, mean, mode, median etc) Graph plotting skills. Understanding variables and anomalies and their causes and effects