



	Lessons Sequence					
<b>TOPIC (S)</b> <b>ATOMIC STRUCTURE</b>	1. Atoms, Elements, Compounds and Mixtures 2. Development of the model of the atom 3. Subatomic particles		4. Electron structure 5. The periodic table 6. Development of the periodic table 7. Metals and non-metals		8. Group 0 9. Group 1 10. Group 7 11. Transition metals	
<b>Knowledge &amp; Skills development</b>	<ul style="list-style-type: none"> <li>Understanding of how particles are arranged in different types of substances</li> <li>Knowledge of the contributions of JJ Thompson, Earnest Rutherford, Niels Bohn and James Chadwick towards the current model of the atom</li> <li>Knowledge of the mass and charge of atoms, ions and sub-atomic particles</li> <li>The ability to complete electronic structure diagrams for the first 20 elements</li> <li>Understanding of how the current periodic table is structure and using this to determine properties of elements</li> </ul>			<ul style="list-style-type: none"> <li>Knowledge of Mendeleev’s contributions to the current format of the periodic table</li> <li>Understanding of how the reactions of elements depend on their electronic structure</li> <li>Knowledge of the difference between metals and non-metals in terms of their physical characteristics and chemical properties.</li> <li>Knowledge of chemical trends within groups 0, 1 and 7 of the periodic table</li> <li>Comparison between group 1 metals and transition metals in terms of their chemical properties and physical characteristics</li> <li>Knowledge of the ions and compounds formed by specific transition metals</li> </ul>		
<b>Assessment / Feedback Opportunities</b>	Targeted questioning throughout topic	Teacher assessment of practical skills during investigation - verbal	Knowledge Recall Quizzes	Deep marking of written task in students books	Topic Test	Targeted exam questions – teacher or self-assessed
<b>Cultural Capital</b>	<ul style="list-style-type: none"> <li>Possible Entry into the salters festival of chemistry competition</li> </ul>					
<b>SMSC / Promoting British Values</b> (Democracy, Liberty, Rule of Law, Tolerance & Respect)	<ul style="list-style-type: none"> <li>Listening to others during presentations</li> <li>Working in groups during practicals or research tasks</li> </ul>					
<b>Recommended Reading</b>	<ul style="list-style-type: none"> <li>Recommended Read: Periodic Table (DK Eyewitness)</li> <li>Recommended Read: The Atom: The building block of everything (Jack Challoner)</li> <li>Recommended Read: The Elements: A Visual Exploration of Every Atom in the Universe (Nick Mann)</li> <li>Recommended Read: All About Chemistry (Big Questions) (Robert Winston)</li> </ul>					
<b>Key Vocabulary</b>	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest					

	Atom, Element, Compound, Mixture, Proton, Neutron, Electron, Sub-atomic, Scattering, Charge, Mass, Structure, Periodic, Column, Metal, Non-metal, Reactivity, Physical, Characteristic, Density, Strength, Hardness
<b>Digital Literacy</b>	SharePoint resources including topic quizzes Possible use of excel to plot graphs and analyse data, powerpoint, word, etc to present information, internet for research
<b>Cross-Curricular Links</b>	Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators
<b>Careers</b>	Chemist, Pharmacist, Chemical Engineer, Materials Scientist