

Year 8 – C2 Atoms, Reactions and The Periodic Table - Science

Rationale and Context of Unit:	Core curriculum content:	Tier 2 & Tier 3 vocabulary explicitly taught:
<ul style="list-style-type: none"> • <i>This unit is the first unit of the Year 8 Chemistry as it builds on the topics have learnt in Year 7 particles and properties unit and is seen again at of GCSE. There are some tricky concepts which is why it is taught in Year 8. Without the fundamental understanding of the particle model and states students could no access this work.</i> • <i>This unit links to the GCSE Atoms and bonding units C1, C2 and C3.</i> 	<ul style="list-style-type: none"> • What are atoms • What are elements • What are compounds • What are mixtures • What is and how do we arrange the periodic table • How we represent chemicals and their reactions with chemical equations • How the properties of the different groups of the periodic table change 	<ul style="list-style-type: none"> • <i>Atom</i> • <i>Elements</i> • <i>Compound</i> • <i>Mixture</i> • <i>Periodic table</i> • <i>Group</i> • <i>Monomer</i> • <i>polymer</i>
Challenge and Support:	World wide learning/ links to 21 st century:	Cultural capital/ Industry/ Enrichment:
<p><i>Each lesson plan has ideas for differentiation with suggestions for suitable differentiation based on the ability of the students in different classes.</i></p> <p><i>An example is "Sentence starters for properties and uses can be provided for low prior attaining students. Higher prior attaining students to explain why the property is needed for that use.</i></p>	<ul style="list-style-type: none"> • Metal shortages and recycling (L5) • What will science discover in the future (L1) 	<ul style="list-style-type: none"> • Industrial manufacturer • Material science • Chemist • Scientist

Historical, Social, Moral, Spiritual, Cultural context:	Cross curricular links/ literacy/numeracy:	Common misconceptions:
<ul style="list-style-type: none"> Who moral responsibility to reduce, reuse and recycle (L5) The historical model of the periodic table (L4) The history of the different elements (L1) 	<ul style="list-style-type: none"> <i>Cross-curricula links: DT – The forming, use of and properties of materials such as metals</i> <i>Numeracy: Student use algebra to understand the components of chemical equations.</i> 	<ul style="list-style-type: none"> <i>Atoms are very small</i> <i>Elements are only those present in the periodic table</i> <i>There are many metals in the periodic table</i> <i>Numbers at the start of a chemical equations refer to the number of whole molecules</i> <i>Subscript numbers after an element only refer to that element.</i>
Assessment timeline:		
<ul style="list-style-type: none"> <i>Practical skills monitored by teacher when conducting experiments.</i> <i>End of topic exam to assess pupil progress at the end of test.</i> <i>All lessons have success criteria presented to pupils at the start of the lesson.</i> <i>Assessed tasks (highlighted above) will have feedback to help improve pupils understanding after they have completed the assessment.</i> 		
Home learning		
<ul style="list-style-type: none"> <i>Seneca online learning or homework booklet – 2 pages.</i> <i>Scholarly reading – The history of the periodic table - https://edu.rsc.org/download?ac=500676</i> 		
Feedback		
<ul style="list-style-type: none"> <i>Students will have feedback on their skills throughout this unit.</i> <i>Students will have instance feedback on their home leering OR self-assess their home learning page of the homework booklet.</i> <i>Students will have feedback on their end of topic text which will be teacher assessed also</i> 		

Length of unit (duration indicated in lessons)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Unit:C2 Atoms, Reaction and The Periodic table																		