

# Year 8: Chemical World- Elements, Compounds and Mixtures

	Check	Date
<b>Revise assumed knowledge:</b> <b>ST3-12MW</b> identifies the observable properties of solids, liquids and gases, and that changes made to materials are reversible or irreversible	<input type="checkbox"/>	
<b>ST3-13MW</b> describes how the properties of materials determine their use for specific purposes		
<b>CW2 Scientific knowledge and developments in technology have changed our understanding of the <u>structure</u> and properties of matter.</b>		
<b>ELEMENTS</b>		
<b>4CW2a. describe the properties and uses of some common elements, including metals and non-metals</b>	<input type="checkbox"/>	
<b>Recall</b> the particle theory of matter	<input type="checkbox"/>	
<b>Define</b> the terms element, metals and non-metals	<input type="checkbox"/>	
<b>Identify</b> the symbols for the first 20 elements in the periodic table	<input type="checkbox"/>	
<b>Identify</b> general patterns on the periodic table. E.g. periods/groups, metals and non-metals	<input type="checkbox"/>	
<b>Describe</b> the differences between metals and non-metals	<input type="checkbox"/>	
<b>Distinguish</b> between physical and chemical properties	<input type="checkbox"/>	
<b>Compare</b> the physical and chemical properties of metals and non-metals	<input type="checkbox"/>	
<b>Describe</b> the uses of five metals and non-metals in current society	<input type="checkbox"/>	
<b>CODE: 8CW1 First-Hand Investigation:</b> Simple circuits. Compare a range of metals and non-metals for their malleability, ductility and ability to conduct electricity (Oxford pg. 174)	<input type="checkbox"/>	
<b>CODE: 8CW2 First-Hand Investigation:</b> Student designed task. Compare chemical and physical properties of copper (element) and copper sulfate (compound) (Oxford pg182)	<input type="checkbox"/>	
<b>4CW2b. identify how our understanding of the structure and properties of elements has changed as a result of some technological devices</b>	<input type="checkbox"/>	
<b>Identify</b> the structure of atoms, including the location of subatomic particles	<input type="checkbox"/>	
<b>Identify</b> the contributions of Democritus, Dalton, Thomson, Rutherford and Bohr	<input type="checkbox"/>	
<b>Identify</b> key technologies involved in our increased understanding of the structure and properties of element (used by the above scientists, including CERN)	<input type="checkbox"/>	
<b>Extension work:</b> Relate the atomic number and atomic mass of different elements to their properties and uses	<input type="checkbox"/>	
<b>4CW2d. explain why internationally recognised symbols are used for common elements</b>	<input type="checkbox"/>	
<b>Recall</b> the symbols for the first 20 elements in the periodic table	<input type="checkbox"/>	
<b>Explain</b> why internationally recognised symbols are used for elements	<input type="checkbox"/>	
<b>LITERACY SET 1: COSMOS ARTICLE</b>	<input type="checkbox"/>	
<b>Assessment: Oxford online test-</b> Elements Students to achieve 100% in Support and Consolidate <b>OR</b> Consolidate and Extend	<input type="checkbox"/>	

COMPOUNDS AND MIXTURES		
<i>4CW2c. identify some examples of common compounds</i>	<input type="checkbox"/>	
<b>Define</b> the terms pure, impure, compound, mixture	<input type="checkbox"/>	
<b>Distinguish</b> between elements, compounds and mixtures	<input type="checkbox"/>	
<b>Identify</b> a range of common compounds	<input type="checkbox"/>	
<b>CODE: 8CW3 First-Hand Investigation:</b> Molymod kits I Construct common compounds using the kit.	<input type="checkbox"/>	
<b>CODE: 8CW4 First-Hand Investigation:</b> Making a compound from its elements. Burn magnesium in a crucible	<input type="checkbox"/>	
<b>LITERACY SET 2: MIXED ACTIVITIES</b>	<input type="checkbox"/>	
<b>Assessment: Oxford online test-</b> Compounds and mixtures Students to achieve 100% in Support and Consolidate <b>OR</b> Consolidate and Extend	<input type="checkbox"/>	
THE IMPACT OF ELEMENTS AND COMPOUNDS ON SOCIETY		
<i>4CW2f. investigate how people in different cultures in the past have applied their knowledge of the properties of elements and compounds to their use in everyday life, e.g. utensils, weapons and tools</i> 🍷🌐🔧	<input type="checkbox"/>	
<b>Identify</b> how human cultural evolution is linked to the historical uses of elements and compounds e.g. Copper, Bronze, Iron and Industrial Age	<input type="checkbox"/>	
<b>CODE: 8CW5 First-Hand Investigation:</b> Isolating elements from compounds I Extract copper from copper oxide	<input type="checkbox"/>	
<b>CODE: 8CW6 First-Hand Investigation:</b> Isolating elements from compounds II Extract copper from copper sulfate using heat energy (Oxford pg194)	<input type="checkbox"/>	
<b>CODE: 8CW7 First-Hand Investigation:</b> Decomposing a compound Copper carbonate (Oxford pg181)	<input type="checkbox"/>	
<b>Compare</b> and <b>contrast</b> the modern and historical uses of a range of elements and compounds	<input type="checkbox"/>	
<b>CODE: 8CW8 First-Hand Investigation:</b> Isolating elements from compounds Electrolysis of water <b>TEACHER DEMO</b>	<input type="checkbox"/>	
<b>Describe</b> some elements and compounds used by Australian Aboriginals and Torres Strait Islanders to make utensils, weapons and tools	<input type="checkbox"/>	
<b>NUMERACY AND SKILLS SET</b>	<input type="checkbox"/>	
<b>Assessment: Oxford online test-</b> The impact of elements and compounds on society. Students to achieve 100% in Support and Consolidate <b>OR</b> Consolidate and Extend	<input type="checkbox"/>	
<b>Assessment: Elements, Compounds And Mixtures Chapter Test</b>	<input type="checkbox"/>	
<b>Comments and Suggested improvements</b>		
<p><b>Name:</b> _____ <b>Signature:</b> _____ <b>Date:</b> _____</p>		