



Scheme of Learning	Mixtures and Compounds Y8 Chemistry
Learning Objectives	<p>1) Define the following key terms:</p> <ul style="list-style-type: none"> <li>• Atom</li> <li>• Element</li> <li>• Compound</li> <li>• Mixture</li> </ul> <p>2) Explain how the properties of a range of compounds differ from their constituent elements</p> <p>3) Explain what an alloy is and why it is useful</p> <p>4) Describe the evidence that compounds can react with other substances to form different compounds or elements</p> <p>5) Explain the difference between a compound and a mixture</p> <p>6) Explain how we can use melting and boiling point to identify elements and compounds</p> <p>7) Use experimental evidence to distinguish between pure water and a solution</p> <p>Identify and use state symbols correctly.</p>
Key Questions	How can we identify elements, compounds and mixtures?
Knowledge	<ul style="list-style-type: none"> <li>• Recognise symbols representing different elements.</li> <li>• Explain how the properties of a range of compounds differ from their constituent elements.</li> <li>• Describe the differences between a compound and a mixture.</li> <li>• Describe how we can separate mixtures.</li> <li>• Use experimental evidence to distinguish between pure water and a solution.</li> <li>• Identify elements within a compound</li> <li>• Use chemical tests in forensic science to identify samples.</li> </ul>
Ongoing Assessment	<ul style="list-style-type: none"> <li>• Retrieval questions at the start of every lesson.</li> <li>• Worksheets for all major concepts to be used for self and peer assessment.</li> <li>• Homework</li> <li>• Revision checklist at beginning of handout pack and retrieval questions at the end.</li> </ul>
Final Assessment	End of topic test, 30 marks in 35 minutes. Including a mixture of MCQ, short answer and long answer questions. With mark schemes moderated by the team, with notes on standardised language.



<b>Content</b>	<p>An overview of the definitions of different types of chemicals, how chemicals can be represented as compounds leading to the use of chemical equations in subsequent topics in year 8. We cover the way in which some chemicals can be separated and how some elements within compounds can be identified. Calculations related to chemical formulae are introduced.</p> <p>These key concepts are also revisited at the start of GCSE and therefore learning the concepts now gives them prior exposure to aid the transition to KS4.</p>
<b>Careers</b>	Analytical chemists working in industry. Food scientists identifying minerals in food. Forensic scientists analysing a crime scene. Water technologists considering purification of potable water. Cosmetic scientist formulating new products.
<b>Diversity and Inclusion</b>	<ul style="list-style-type: none"> <li>• Compare sources of potable water in parts of Europe, Africa Middle East and Asia.</li> <li>• Comparing different shades of lipstick</li> </ul>
<b>Support</b>	Learning checklist and key terminology are highlighted throughout. Online textbook via Kerboodle includes working scientifically, glossary and literacy support. Adaptive teaching in the classroom supports all learners.
<b>Challenge</b>	<ul style="list-style-type: none"> <li>• Stretch challenge question on end of topic test to test application of knowledge in complex situation.</li> <li>• Stretch and challenge question sheet.</li> <li>• Discussion – what roles do Analytical Chemists play in your daily life? List all the ways they have impacted on your life today.</li> </ul>