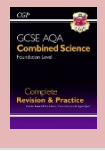
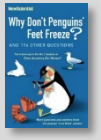
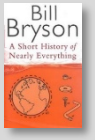
The English Martyrs Catholic School and Sixth Form College

Chemistry Year 10	Module 1	Module 2	Module 3
Topic Theme and Intent	Students learn about sections of the **periodic table** and the **patterns** that exist within groups. They then move on to **chemical bonding.** This topic is studied so that students can understand the **forces** that hold **atoms together** and so that they can understand why certain chemicals have a particular chemical **formula**.	Students learn about **calculations in chemistry.** Students look at how the **relative mass** of a chemical **formulae** can be determined based on the **relative atomic masses** of its atoms, and they practice these calculations to become competent.	Students learn about **chemical changes** in **reactions**. They will consider the reactions of **acids and alkalis**, the **reactivity of metals** and the use of **electrolysis** to separate ionic substances.
Knowledge	• Metals and Non-Metals • Group 1, Group 7, Group 0 • Ionic Bonding • Covalent Bonding • Metallic Bonding	• Calculations including, M_r, Conservation of mass, concentration and molar calculations (HT)	• Acids and Alkalis • Reactivity of Metals • Redox • The use of electrolysis to separate ionic compounds.
Skills	Students will investigate the reactions of Group 1 and Group 7 elements and link their observations to ideas of electronic structure.	Students will use mathematical skills to calculate quantities in chemistry including masses of reactants and products.	Students will use electrolysis to separate ionic compounds.
Literacy Links	**Reading –** Students will read about patterns in the Periodic Table and bonding. **Writing –** Students start to communicate scientific ideas and concepts through writing. **Oracy –** Students start to use scientific vocabulary in discussion and question and answering.	**Reading** – Students will read about the relative formula mass of different chemical formulae. **Writing –** Students practise communicating scientific ideas and concepts through writing. **Oracy** – Students practise the use of scientific vocabulary in discussion and question and answering.	**Reading –** Students will read about the reactivity of metals. **Writing –** Students will communicate scientific ideas and concepts through writing. **Oracy –** Students use scientific vocabulary in discussion and question and answering.
Essential Vocabulary	Ionic, covalent, metallic, gain, loss, share, delocalised, electron	Relative atomic mass, relative formula mass, moles, concentration	Acids, alkalis, reactivity, electrolysis, ionic substances.

Disciplinary Reading	Reading for Pleasure		
CGP Books – GCSE Science COM and SEP, & Oxford Revise COM and SEP.	Dr Nguyen-Kim - Chemistry for Breakfast	New Scientist - Why don't penguin's feet freeze?	B. Bryson - A Short History of Nearly Everything
 			

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