Fareham Academy – Science Overview – Triple Chemistry Yr10

Fareham Academy | Unlocking Potential Creating Opportunity

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	
Topic(s)	C1 – atomic structure and the periodic table	C2 – bonding, structure and properties of matter	C3 – quantitative chemistry	C4 - chemical changes	C5 – energy changes	Paper 1 – full preparation and mock exam
Topic Objectives	Use the periodic table as a foundation	Utilise the periodic table to explore different types of bonding	Students will utilise the periodic table in order to complete a range of quantitative calculations in a range of scenarios	Use knowledge of reactions to understand salts and electrolysis	Establish differences in energy in terms of endothermic and exothermic reactions	Memory retention, application to new contexts, application of knowledge, and effective revision/preparation
Acquired Knowledge/Skills	Students can: • predict properties, both chemical and physical, of elements in different groups using known trends • understand the development of the periodic table in relation to scientists' contributions and discoveries • link the development of the periodic table to what scientists know and understand about the current atomic model	Students can: • use theories of structure and bonding to explain the physical/chemical properties of materials • analyse structures to understand that atoms can be arranged in a variety of ways, some of which are molecular while others are giant structures	Students can: • utilise quantitative analysis to determine the formulae of compounds and the equations for reactions • use quantitative methods to determine the purity of chemical samples and to monitor the yield from chemical reactions • utilise chemical equations to provide a means of representing chemical reactions and to communicate chemical ideas	Students can: • Understand that different chemical changes meant that scientists could begin to predict exactly what new substances would be formed and use this knowledge to develop a wide range of different materials and processes • Comprehend that extraction of important resources from the earth is necessary for life	Students can: • Understand that energy changes are an important part of chemical reactions. • Link ideas to know that interaction of particles often involves transfers of energy due to the breaking and formation of bonds. • Understand that some interactions between ions in an electrolyte result in the production of electricity. • Understand that cells and batteries use these chemical reactions to provide electricity.	Students will experience help on: • Revision methods • Quality of revision • Learning key model answers off by heart • Learning equations off by heart • Exam technique • Time management • Exam anxiety management
Assessments	C1 topic test to include all topics covered on the specification	C2 topic test to include all topics covered on the specification	C3 topic test to include all topics covered on the specification	C4 topic test to include all topics covered on the specification	C5 topic test to include all topics covered on the specification	Full chemistry mock released by AQA using the boundaries published