

	Autumn 1	Autumn 2	Spring 1	Spring 2
Topic(s)	C6 – rate of reaction, C7 – organic chemistry, C8 – chemical analysis, C9 – chemistry of the atmosphere C10 – using resources. C2 full mock.	(PPE fortnight)  P5 – forces, P6 - waves	P7 – magnetism + electromagnetism, P2 full mock. B5 – homeostasis (PPE preparation)	(PPE fortnight)  B6 – inheritance, B7 – ecology. B2 mock.
Topic Objectives	C6-10: explore how energy lost/gained is related to a range of chemical reactions, complete a range of chemical investigations in order to explore rates of reactions. Explore how organic chemistry closely links with real life contexts, appreciate the role of chemical analysts, explore how the atmosphere has evolved. Understand a range of example where the earth provides vital resources and how over use is creating worldwide	(Robust in class revision in preparation of PPE fortnight).  P5–6: students will explore how a range of forces interact with each other and in the world around them. Students will compare waves and their properties	P7: Explore how magnetism is linked to electromagnetism,  B5: explore how conditions are maintained/controlled in organisms	B6: explore how genetics links to inheritance, development, and evolution  B7 – students can explore how systems survive and are interleaved.
Acquired Knowledge/Skills	C6-10: explain that chemical reactions can occur at vastly different rates dependent on many variables that can be manipulated in order to speed them up/slow them down. Comprehend that the chemistry of carbon compounds is so important that it forms a separate branch of chemistry. Learn the results for a range of chemical tests and link to real life industries: e.g. forensic science. Explain that the causes of these atmospheric changes to be as a result of man-made and sometimes part of many natural cycles. Understand that chemists aim to develop ways of disposing of products at the end of their useful life in ways that ensure that materials and stored energy are utilised. Earth’s natural cycles, and how damaging effects can be minimised.	P5-6: re-engage with the maths components of equation triangles and equation manipulation. Understand that engineers analyse forces when designing a great variety of machines and instruments. Link this to understand that anything mechanical can be analysed in this way. Understand that wave behaviour is common in both natural and man-made systems. Explain that waves carry energy from one place to another and can also carry information. Learn that modern technologies such as imaging and communication systems show how we can make the most of electromagnetic waves.	P7: understand that when current flows around a magnet it can produce movement meaning that systems that involve control or communications can take full advantage of this.  B5: explore the structure and function of the nervous system and the hormonal system related to the menstrual cycle, fertility and contraception  (Robust in class revision in preparation of PPE fortnight).	B6: Explain how meiosis works and link to variation, know that gene mutations occur and some are beneficial in plants/animals, explore how scientists have developed selective breeding for the good of the people.  B7: explore how all species live in ecosystems composed of complex communities of animals and plants dependent on each other and that are adapted to conditions, both abiotic and biotic. Appreciate that for the world to benefit from these services humans need to engage with the environment in a sustainable.
Assessments	Combined topic tests. Preparation and sitting of full C2 mock.	Combined topic tests.	Preparation and sitting of full P2 mock. PPE preparation.	B5-7 combined test. Preparation and sitting of full B2 mock.