

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic(s)	B1+2: revision. B3+4: infection and response + bioenergetics. B1 mock.	P1+2: revision. P3+4: particle model of matter + atomic structure	Overlap for P4 teaching and mock. C1 + C2 revision, C3: quantitative	C4 - chemical changes C5 – energy changes	B5 – homeostasis. B6 – inheritance.	B7 – ecology (PPE),
Topic Objectives	B3: explore a range of diseases and treatments. B4: distinguish between aerobic and anaerobic respiration	P3: apply understanding of the particle model. P4: explore the uses/dangers of radiation and types of decay	C3: utilise the periodic table in order to complete a range of quantitative calculations in a range of scenarios	C4: Use knowledge of reactions to understand salts/electrolysis. C5 Define differences related to endo and exothermic reactions	B5: explore how conditions are controlled in organisms. B6: explore how genetics link to inheritance, development, and evolution.	B7 – students can explore how systems survive and are interleaved.
Acquired Knowledge/ Skills	<p>B3 Students can:</p> <ul style="list-style-type: none"> <li>Know that pathogens cause infectious diseases and produce toxins</li> <li>explore ways we can avoid spread of disease</li> <li>understand the role of white blood cells</li> <li>learn how vaccinations work</li> </ul> <p>B4 Students can:</p> <ul style="list-style-type: none"> <li>understand the role and importance of photosynthesis and respiration in plants/animals</li> <li>link understanding of aerobic respiration to anaerobic respiration</li> </ul>	<p>P3 Students can:</p> <ul style="list-style-type: none"> <li>Understand that the particle model is widely used to predict the behaviour of solids, liquids and gases</li> <li>Learn that the particle model can help scientists to explain a wide range of observations.</li> </ul> <p>P4 Students can:</p> <ul style="list-style-type: none"> <li>Understand the dangers of radiation</li> <li>Explore how today, radioactive materials are widely used in medicine, industry, agriculture and electrical power generation</li> </ul>	<p>C3 Students can:</p> <ul style="list-style-type: none"> <li>utilise quantitative analysis to determine the formulae of compounds and the equations for reactions</li> <li>use quantitative methods to determine the purity of chemical samples</li> <li>utilise chemical equations to provide a means of representing chemical reactions and to communicate chemical ideas</li> </ul>	<p>C4 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.</p> <p>C5 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.</p>	<p>B5 Students can: explore the structure and function of the nervous system and the hormonal system related to the menstrual cycle, fertility and contraception</p> <p>B6: Students can: 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.</p>	<p>Students can: 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.</p>
Assessments	Preparation and sitting of full B1 mock (may run to Aut2)		Preparation and sitting of full P1 mock	Preparation and sitting of full C1 mock		PPE. Preparation and sitting of full B2 mock