

Groups	Brief/ Heading from subject LTPs						Subject Intent	Syllabus/ exam board q Suggested reading/te	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2			
KS3	Contact Forces Pressure Magnetism Electromagnets	Work Heating and Cooling Wave effects Wave properties	Elements Periodic table Types of reaction Chemical energy	Climate Earth's resources	Breathing Digestion Respiration	Photosynthesis Evolution Inheritance	<p>At Ashley College, we strive to develop a deeper understanding of a range of scientific ideas in the subject disciplines of Biology, Chemistry and Physics working to begin to see the connections between these subject areas and become aware of some of the big ideas underpinning scientific knowledge and understanding. Students are encouraged to relate scientific explanations to phenomena in the world around them a start to use modelling and abstract ideas to develop and evaluate explanations. Students should continue to be able to work scientifically in their approach to understanding the world around them. They should understand that many ideas we use in science today are ideas that fit a model and that models can and do change as new information and discoveries come to light.</p>	<p>Collins Key Stage 3 Science student book Combined Science and Entry Level Certificate textbook CD rom Collins connect; Tiered worksheets (Collins & Kerboodle) PowerPoint presentations/ Quiz /Slide shows Videos; Boardwork Kerboodle programme & Doodle learning used for summative and for to fill gaps in student knowledge and to enable students to find their own additional challenge for themselves. Extensive use of Oak Academy, Bitesize and other platforms for students who miss lessons.</p>	
KS4	Yr 10	<p>UNIT 1 Building Blocks States of matter Atomic structure The use of models to explain science Cells in animals and plants Moral issues involved in genetic engineering and cloning Waves (check KS 3) Unproven fears about the effect of EM radiation and the real dangers</p>	<p>UNIT 5 Building blocks for understanding The periodic table Chemical quantities Mathematical calculations in moles and bond energies</p>	<p>UNIT 2 Transport over larger distances Systems in the human body The endocrine system and the secretion of hormones that affect: - Puberty, human reproduction. Contraception (moral issues see unit 1) Plants and photosynthesis Plant's place in keeping the atmosphere in balance removing carbon dioxide and production of oxygen</p>	<p>UNIT 6 Interactions over small and large distances Forces and energy changes Renewable energy sources Structure and bonding Linked back to chemical quantities Magnetism and electromagnetism</p>	<p>UNIT 3 Interactions with the environment Lifestyle and health Link with health issues in PE and Food Tech. Radiation and risk Link back to Waves and EM spectrum</p>	<p>UNIT 3 (continued) Interactions with the environment (continued) Preventing, treating and curing diseases Looking at the present pandemic Production and development of drugs and vaccines</p>	<p>At Ashley College, we all recognise our responsibility of teaching students well through our curriculum. Lessons reflect subject knowledge through clearly presented materials that engage and inspire discussion. Lessons are appropriately scaffolded to ensure that all students can achieve the highest standards. The science curriculum is sequenced to ensure that students are able to recall prior knowledge and build upon this making connection within and across subjects. Students will revisit previous learning and be able to</p>	<p>AQA combined Science Synergy (1-9) Science student text book Combined Science and Entry Level Certificate textbook CD rom Collins connect; Tiered worksheets (Collins) PowerPoint presentations/ Quiz /Slide shows Videos; Boardworks; Kerboodle programme & Doodle learning used for summative and for self-assessment tool for students to use with column 4 as well as to fi Primrose Kitten another tool to fill the gaps in knowledge and review t Essential Maths Skills for GCSE Science textbook Extensive use of the Oak Academy, Bitesize & other platforms for sup</p>

KS4	Yr11	<u>UNIT 7</u> <u>Movement and interactions</u> Forces and Motion <small>Link to use of drugs / alcohol with reaction time and road safety</small> Electricity Acids and Alkalis <small>Link to concentration and filtration</small>	<u>UNIT 7 (continued)</u> <u>Movement and interactions</u> (continued) The rate and extent of chemical change Chemical quantities Atoms and ions <small>Maths - scale, measurements and magnification, English - suffixes + prefixes</small>	<u>UNIT 4</u> <u>Explaining change</u> The Earth's atmosphere <small>Global responsibility for national issues – Pollution; global warming; ozone.</small> Ecosystems and biodiversity <small>Valuing all in nature and the contribution each makes to maintain balance</small> Inheritance, Variation and evolution <small>Link back to the issues covered in genetics</small>	<u>UNIT 8</u> <u>Guiding spaceship Earth to a sustainable future</u> Carbon Chemistry <small>Link to the role of plants in the carbon cycle and maintaining the environment.</small> Resources of materials and energy <small>The importance of recycling and upcycling.</small>	Revision of year 10 work & Past paper Practice	Useful Revision websites: - Doddle Primrose Kitten My GCSE Science You-tube	<p>show their understanding through activities which require application of prior knowledge. Skills for future learning and employment for example team work, listening and speaking, are developed in all areas of the science curriculum.</p> <p>We recognise the need for all students to have the opportunity to study all disciplines of science but as students are not likely to complete a whole key stage, they may not have the time to cover every aspect of all sciences. For this reason, all students will have the opportunity to complete the whole of AQA entry level Science and if they remain for year 11, will also be able to complete Coordinated Science Synergy.</p>	