


KS4 Edexcel GCSE TRIPLE SCIENCE (2CH01, 2BI01, 2PH01)

<p>YR 10</p> <p>In the first term Year 10 students complete the one third of the remaining Core Science by studying Biology (B1) and Physics (P1). Chemistry (C1) and most of the B1 content are taught in Year 9. In the second and third terms students complete the Additional Science course.</p> <p>For B1 students learn about Problems of and Solutions to a Changing Environment. For P1 students study Visible Light and the Solar System, the Electromagnetic Spectrum, Waves and the Universe, Waves and the Earth, Generation and Transmission of Electricity, Energy and the Future.</p> <p>In B2 students will learn about the Building Blocks of Cells, Organisms and Energy, Common systems.</p> <p>For C2 students will learn about Atomic Structure and the Periodic table, Ionic compounds and analysis, Covalent compounds and Separation techniques, Groups in the periodic table, Chemical reactions, and Quantitative chemistry.</p> <p>For P2 students will learn about Static Electricity, Controlling and using electric current, Motion and forces, Momentum, Energy, Work and Power, Nuclear fission and Nuclear fusion, Advantages and disadvantages of using radioactive materials.</p>	<p>YR 11</p> <p>In Biology B3, students will study the Control systems, Behaviour, and Biotechnology.</p> <p>In Chemistry C3, students will study Qualitative analysis, Quantitative analysis, Electrolytic processes, Gases, equilibria and ammonia, Organic chemistry.</p> <p>In Physics P3, students will learn Radiation in treatment and medicine, X-rays and ECG's, Production, uses and risks of ionising radiation from radioactive sources, Motion of particles, Kinetic theory and gases.</p> 	<p>Assessment:</p> <p>All exams are linear, which means that students will sit exams at the end of Year 11. There will be regular testing and mock exams throughout the year including assessment according to School Policy.</p> <ul style="list-style-type: none"> • Unit B1 (25%), Unit B2 (25%), Unit B3 (25%) and SCA (25%) • Unit C1 (25%), Unit C2 (25%), Unit C3 (25%) and SCA (25%) • Unit P1 (25%), Unit P2 (25%), Unit P3 (25%) and SCA (25%)
<p>Science Controlled Assessment (SCA)</p> <p>Students will be expected to complete 3 SCA's, one for each science discipline.</p> <p>Controlled assessments are based on pre-released materials from the exam board. Students will have opportunity to do Practice Controlled Assessments (PCA) to prepare for the demands of the SCA. There are 3 parts; A, B and C.</p> <p>For Parts A and B students will be expected to formulate their own hypotheses, plan an experiment, make predictions and carry out their practical in a group or pair. They will need to take measurements and compare their primary data to secondary data.</p> <p>Part C is done under controlled conditions. Students will need to demonstrate mathematical skills such as drawing graphs and lines of best fit where appropriate. Finally, they will need to analyse and evaluate their practical.</p>	<p>Skills Development</p> <p>During Year 10 students will have the opportunity to develop the ability to:</p> <ul style="list-style-type: none"> • Develop hypotheses and plan practical ways to test them including risk assessment; manage risks when carrying out practical work; collect, process, analyse and interpret primary and secondary data including the use of appropriate technology to draw evidence based conclusions; review methodology to assess fitness for purpose, and review hypotheses in light of outcomes. • Use scientific theories, models and evidence to develop hypotheses, arguments and explanations; develop and use models to explain systems, processes and abstract ideas. • Communicate scientific information using scientific, technical and mathematical language, conventions and symbols. • Represent chemical reactions by word equations and simple balanced equations where appropriate. They will present data gained from experiments and draw conclusions from it. They will evaluate the limitations of any evidence collected. They will apply their knowledge by learning how scientific evidence affects society. 	<p>Expectations</p> <p>Students will be expected to do 2 hours of homework every week. They are encouraged to practise past exam papers independently and use 1-1 academic tutoring time effectively.</p> <p>Final exam entry decisions will be made in the Spring term of Yr11 based on Mock exam results and teacher assessments.</p> <p>Additional Support</p> <ul style="list-style-type: none"> • Logonscience access for homework and revision activities • Academic tutor mentoring during after school hours • Optional Yr10 booster lessons • Compulsory Yr11 Science extensions <p>Resources Needed</p> <p>Laboratory overall, dictionary, geometry set, glue, calculator, general writing equipment including pencil & ruler.</p>