## Separate Sciences

## Class of 2018

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| Exam board information: Cambridge international GCSE in Biology 0610  Cambridge international GCSE in Chemistry 0620  Cambridge international GCSE in Physics 0625 |

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| Course content: Students studying separate Sciences actually study 3 separate GCSE gives thorough understanding in a broad range of topics in all three Science Disciplines, Biology, Chemistry and Physics. Practical skills are also incorporated in each course. The content of the syllabi are related to real world context to show students how Science impacts on our everyday lives. | | |
| Biology 1. Characteristics and classification of living organisms  2. Organisation of the organism  3. Movement in and out of cells  4. Biological molecules  5. Enzymes  6. Plant nutrition  7. Human nutrition  8. Transport in plants  9. Transport in animals  10. Diseases and immunity  11. Gas exchange in humans 12. Respiration  13. Excretion in humans  14. Coordination and response 15. Drugs  16. Reproduction  17. Inheritance  18. Variation and selection  19. Organisms and their environment  20. Biotechnology and genetic engineering  21. Human influences on ecosystems | Chemistry 1. The particulate nature of matter  2. Experimental techniques  3. Atoms, elements and compounds  4. Stoichiometry  5. Electricity and chemistry  6. Chemical energetics  7. Chemical reactions  8. Acids, bases and salts  9. The Periodic Table  10. Metals  11. Air and water  12. Sulfur  13. Carbonates  14. Organic chemistry | Physics 1. Motion  2. Matter and forces  3. Energy, work and power  4. Simple kinetic molecular model of matter  5. Matter and thermal properties 6. Transfer of thermal energy  7. Waves  8. Light  9. Electromagnetic spectrum  10. Sound  11. Magnetism  12. Electricity  13. Electric circuits  14. Electromagnetic effects  15. Radioactivity and the nuclear atom |

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| Skills that will be developed: The Separate science syllabus enables learners to:   * Better understand the technological world, with an informed interest in scientific matters * Recognise the usefulness (and limitations) of scientific method, and how to apply this to other disciplines and in everyday life * Develop an interest in, and care for, the environment * Better understand the influence and limitations placed on scientific study by society, economy, technology, ethics, the community and the environment * Develop an understanding of the scientific skills essential for both further study and everyday life. |

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| How the course will be assessed: All Candidates will be assessed in ***9 exams***, 3 papers in ***each subject.***  Each separate subject consists of 3 papers of the following format:   * A multiple choice paper lasting 45 minutes, consisting of 40 marks which counts for 30% of the course. * A written paper consisting of short answers and longer structured questions lasting 1 hour and 15 minutes. This counts for 50% of the overall grade. * An Alternative to practical exam, 1 hour long, which is marked out of 40 and counts for 20% of the overall grade |

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| To be successful: Students must display several qualities:   * An excellent work ethic, both in lessons and out of school ensuring classwork and homework * Resilience when encountering difficult challenges, and not giving up when problems occur * Good literacy and numeracy skills. * An ability to work with others. |

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| Onward pathways: Separate science prepares students to continue their studies most appropriately on the following courses:   * GCE A-level Biology * GCSE A-Level Chemistry * GCSE A-level Physics |

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| Further information: The Website for the each Science qualification can be found here:  [**http://www.cie.org.uk/programmes-and-qualifications/cambridge-igcse-biology-0610/**](http://www.cie.org.uk/programmes-and-qualifications/cambridge-igcse-biology-0610/)  [**http://www.cie.org.uk/programmes-and-qualifications/cambridge-igcse-chemistry-0620/**](http://www.cie.org.uk/programmes-and-qualifications/cambridge-igcse-chemistry-0620/)  [**http://www.cie.org.uk/programmes-and-qualifications/cambridge-igcse-physics-0625/**](http://www.cie.org.uk/programmes-and-qualifications/cambridge-igcse-physics-0625/)  Or contact the relevant subject leader for the subject at St Ninian’s High school by email:   * Nick Dyson, Head of Science: [ndyson@snhs.sch.im](mailto:ndyson@snhs.sch.im) * Emma Bridgewater, Head of Biology: [ebridgewater@snshs.sch.im](mailto:ebridgewater@snshs.sch.im) * Helen Shipley, Head of Chemistry: [hshipley@snhs.sch.im](mailto:hshipley@snhs.sch.im) * Gareth Young, Head of Physics: [gyoung@snhs.sch.im](mailto:gyoung@snhs.sch.im) |