THE WORTHGATE SCHOOL
CANTERBURY

COURSE DESCRIPTOR

IGCSE DOUBLE AWARD SCIENCE

SUBJECT OVERVIEW

Double Award Science contains an equal balance between Biology, Physics and Chemistry. Two GCSE grades are awarded at the end of the course, using a combined average of a student's performance in all three sciences.
Students will develop analytical and logical skills by applying understanding of scientific concepts and principles to a range of situations. Some examination questions will require problem-solving and mathematical skills to complement students' knowledge.

PRIOR LEARNING REQUIRED

No prior knowledge is required – however the Pre-GCSE course prepares students well with a basic knowledge of all three sciences which can be built upon at GCSE level. Students who are willing to spend time studying on their own will do very well and will enjoy the course. We aim to instil a deep interest in each of the three Sciences, which can be maintained in further education and beyond.

EXAM BOARD

Edexcel

COURSE CONTENT

Year 1	Year 2
Biology	**Biology**
Characteristics and variety of living organisms	Reproduction
Cell structure and movement in and out of cells	Inheritance
Biological Molecules	Breathing and respiration
Nutrition	Circulation
Excretion	Ecology

Coordination and response **Chemistry** States of matter Elements, compounds and mixtures Atomic structure The Periodic Table Chemical formulae, Equations and Calculations Ionic bonding Covalent bonding Group 1 (alkali metals) Group 7 (halogens) Gases in the atmosphere Reactivity series Acids, alkalis and titrations Acids, bases and salt preparations Chemical tests **Physics** Forces and motion Electricity Waves Energy resources and energy transfers Solids, liquids and gases	Use of biological resources **Chemistry** Rates of Reaction. Metal Reactivity and extraction. Products from Crude Oil – alkenes and alkanes. Energy in Chemical reactions. Reversible reactions. **Physics** Energy resources and energy transfers, Solids, liquids and gases, Magnetism and electromagnetism, Radioactivity and particles, Astrophysics.

ASSESSMENT

End of topic assessments take place once each half term and homework is set on a weekly basis. There is an End of Year exam in May of the first year of the course, assessing content from across the year.
Grades are determined by final examinations which take place in May and June at the end of the two-year course.

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Paper	Length of paper	Weighting
Biology 4BI1	2 hours	33% of the IGCSE grade
Chemistry	2 hours	33% of the IGCSE grade
Physics	2 hours	33% of the IGCSE grade

TEXTBOOKS/REVISION GUIDES

Title	ISBN	Author
NEW EDEXCEL INTERNATIONAL GCSE BIOLOGY REVISION GUIDE	1782946748	CGP Revision Guides

EDEXCEL INTERNATIONAL GCSE (9-1) BIOLOGY STUDENT LAB BOOK	1510451528	Adrian Schmidt and Margaret Royal
EDEXCEL INTERNATIONAL GCSE BIOLOGY WORKBOOK	9781510405653	Erica Larkcom, Roger Delpech and Kathy Evans
EDEXCEL INTERNATIONAL GCSE CHEMISTRY: REVISION GUIDE	1782946764	CGP Revision Guides
EDEXCEL INTERNATIONAL GCSE (9-1) CHEMISTRY STUDENT LAB BOOK	1510451544	David Johnston and Neil Dixon
EDEXCEL INTERNATIONAL GCSE CHEMISTRY WORKBOOK	1510405623	Robert Wensley
EDEXCEL INTERNATIONAL GCSE PHYSICS: REVISION GUIDE	178294687X	CGP Revision Guides
EDEXCEL INTERNATIONAL GCSE (9-1) PHYSICS STUDENT LAB BOOK	1510451560	Matt Shooter and Kimberley Walrond
EDEXCEL INTERNATIONAL GCSE PHYSICS WORKBOOK	1510405666	Nick England and Nicky Thomas

HIGHER EDUCATION PATHWAYS

Students who successfully complete the exam to the required standard (usually Grade 6) can be considered for the Biology, Chemistry and or Physics A level and IB courses.

COMPLEMENTARY SUBJECTS OF STUDY

Maths, Geography

CURRICULUM DIRECTOR

Ms. Emma Lock