

Windsor Sixth Form

Biology A Level

Course outline

Faculty	Science
Subject	Biology
Course title and code	GCE Biology (2410)
Exam Board	AQA
Subject mission statement	<p>Biology involves the study of a wide range of exciting topics, ranging from molecular biology to the study of ecosystems and from microorganisms to mammoths. Biology is never far from the headlines either.....</p> <p>The human genome has been sequenced and we know the complete arrangement of the three thousand million bases that make up human DNA. In Kenya 350 people die every day from AIDS and in South East Asia the skies are dark with smoke as the last Bornean rainforests are burned to grow oil palms.</p> <p>Biologists are concerned with all these issues. They work in the fields of cell biology, medicine, food production and ecology.....and the work they do is vital to us all.</p> <p>The Biology A Level Course helps students develop a number of skills:</p> <ul style="list-style-type: none"> • How to collect data and evaluate it • How to investigate facts and use deduction • How to put over your point of view effectively • How to take responsibility for your own learning
Course outline	<p>AS Unit 1: Biology and Disease</p> <ul style="list-style-type: none"> • How digestive and gas exchange systems may be affected by communicable and non-communicable diseases • How a knowledge of basic biology allows us to understand the symptoms of disease and interpret data relating to risk factors. <p>Assessment: 1 hour 15 mins (33% total AS level Marks)</p> <p>AS Unit 2: The Variety of Living Organisms</p> <ul style="list-style-type: none"> • The influence of genetic and environmental factors on intraspecific variation • How the variety of life is reflected in similarities and differences in its biochemical basis and cellular organisation • How size and metabolic rate affect an organism's requirements and give rise to adaptations. <p>Assessment: 1 Hour 45 minutes (46% of total AS Level Marks)</p> <p>AS Unit 3: Practical and Investigative Skills</p>

	<p>. Assessment: ISA & PSA (20% of total AS Level Marks)</p> <p>A2 Unit 4: Populations and Environment</p> <ul style="list-style-type: none"> • How living organisms form ecosystems through which energy is transferred and chemical elements cycled • How human activity affects ecological balance in a variety of ways • How genetic variation and isolation may lead to the formation of new species. <p>Assessment: 1 Hour 30mins (17% of total A Level Marks)</p> <p>A2 Unit 5: Control in Cells and in Organisms</p> <ul style="list-style-type: none"> • Stimulus and responses - the biology of the nervous and endocrine systems • Homeostasis and the maintenance of a constant internal environment • Genes and genetic expression <p>Assessment: 2 Hours 15 mins (23% of total A level Marks)</p> <p>A2 Unit 6: Practical and Investigative Skills</p> <p>Assessment: ISA & PSA (10% of total A Level Marks)</p>
Goes well with	<ul style="list-style-type: none"> • Chemistry • Physics • Psychology • PE • Sociology • Applied Science • Geography • Environmental studies • Health & Social Care • Critical Thinking • Environmental Studies • Science in Society
Careers and Higher Education	<p>Biology is a great choice for people who want a career in health and clinical professions such as:</p> <ul style="list-style-type: none"> • Medicine • Dentistry • Veterinary science • Physiotherapy • Pharmacy • Optometry • Nursing • Zoology • Marine biology • Forensic science
Completed by	Miss E Dowling (October 2010)