

| Key Stage 5 (13) | |
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| Course title: Biology A-Level | |
| Exam board: AQA | |
| Specification code: 7402 | |
| Autumn 1 (September – October) to Autumn 2 (October – December) | TEACHER 1 - Energy transfers in and between organisms (Photosynthesis, respiration, energy and ecosystems, nutrient cycles). |
| | Having looked at ecosystems at a microscopic level, students now return to the microscopic to examine the key reactions for life. Information from year 10 is combined with knowledge of biological molecules from year 12 and the reactions of photosynthesis and respiration are considered in detail. From this, students return to the macroscopic looking at how carbon cycles through an ecosystem, then examining other nutrient cycles. |
| | TEACHER 2 - Genetics, Populations, inheritance (Inheritance, populations, speciation). |
| | Students build on their knowledge of inheritance from year 11, then link back to more recent work on natural selection in year 12, again expanding on this. |
| Spring 1 (January – February) to Spring 2 (February – March) | TEACHER 1 - Organisms respond to changes in their internal and external environments (survival and response, receptors, control of heart rate, nerve impulses, synaptic transmission, skeletal muscles, homeostasis and negative feedback, control of blood glucose concentration, control of blood water potential. |
| | Students make links back to year 11 to explain how organisms respond to changes in their environment, making their way from simple to complex system. Knowledge of biochemistry and cell transport from year 12 informs this. |
| | TEACHER 2 - The control of gene expression (recombinant DNA technology, DNA probes, genetic fingerprinting mutation and protein structure, non-coding DNA, regulating transcription and translation, gene expression and cancer, genome projects). |
| | Teacher 2 concludes with challenging material linked to cutting edge science. Year 11 material on gene technology is expanded. Students then take their knowledge of transcription and translation from year 12 and extend this to explain how genetically different cells can diversify into a wide range of specialised cells. This topic requires a high level of prior understanding as well as the analysis skills built up over the past two years. |
| Summer 1 (April – June) Summer 2 (June – July) | Exam preparation - interpreting questions, maths and statistics in biology, essay skills, exam practice. |
| | Skills focused preparation has been found to be key in allowing students to achieve the highest grade possible. Students now have knowledge of the whole course and can attempt challenging synoptic questions, including the essay where both depth and breadth of knowledge are assessed. |