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SPRINGBOARD



A-Level Biology

OUR COURSE DETAILS

The AQA specification has the largest market share of A-level Biology in the country. It was chosen as it meets our student needs, having content which is relevant to real world experiences and that is interesting to learn and to teach. It covers a wide range of biology topics and has something for everyone, inspiring our students to develop a passion for biology while developing the high level skills needed for progression beyond college. Several of the teachers in the department are also examiners for AQA and this has been a strength when developing resources to prepare students for the exams. Students are offered the chance to take part in the Biology Olympiad and Nuffield Bursary schemes as well as opportunities to take part in talks by external speakers.



PREPARING FOR STUDY

The first unit of the A level course is **biological molecules** so recapping this unit from GCSE will be very useful. Other key topics in the first year are immunity, gas exchange, DNA, the heart and membrane transport... can you explain how substances move across membranes by active transport, diffusion and osmosis? We can highly recommend getting the CGP book Head start to A level biology which will help you bridge the gap between GCSE and A level.

The kindle edition is currently FREE to download!



EMPLOYABILITY

A level Biology can lead to a wide variety of careers – you could check out a few of them at <https://www.prospects.ac.uk>. Some you might not know much about include

RESEARCH SCIENTIST, ANIMAL PHYSIOTHERAPIST, MARINE BIOLOGIST, PROSTHETIST



TV & FILM

- Gattaca
- Sir David Attenborough Box Sets – BBC iPlayer
- Secrets of Skin – BBC iPlayer
- Gifted Hands: The Ben Carson Story

UNIVERSITY COURSES

As well as straight Biology, there are many different Biology related degrees and plenty of great places to study at University – this is a link to the Guardian’s University Guide for biosciences 2020 <https://www.theguardian.com/education/ng-interactive/2019/jun/07/university-guide-2020-league-table-for-biosciences> - just press the + at the side of the university name to see the courses they have.

Apart from the obvious degrees such as biosciences, medicine, physiotherapy etc. there are plenty of degrees where Biology A level is useful and sometime essential. These include: Chemical engineering, Psychology, Veterinary medicine, Anthropology, Dietetics, Optometry, Sports Science and Environmental Science to name but a few..



OUR TOP READS

- The Epigenetics Revolution – Nessa Carey
- The Island of the Colour blind – Oliver Sacks
- The Life of Mammals – David Attenborough

USEFUL ONLINE LINKS

- A lot of our students really like the www.khanacademy.org
- There are some good BBC podcasts such as <https://www.bbc.co.uk/programmes/b015sqc7>
- And if you want to listen to something a little more advanced <https://naturalselectionpodcast.weebly.com/about-the-podcast.html>

LINKS TO THE SPECIFICATIONS

<https://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402/specification-at-a-glance>

PEOPLE TO RESEARCH

The A level Biology course starts by looking at Biological Molecules such as DNA, and proteins. X-ray diffraction by scientists such as **Rosalind Franklin** was used to help determine these structures. We move on to look at selection and the work of **Charles Darwin** before moving into the second year of the course where you study aspects of physiology. One aspect of this is the nervous system which includes Schwann cells named after **Theodor Schwann**. In the final topic of the course we look at genetic engineering including genetic fingerprinting which was pioneered by **Alec Jeffreys** in the 1980s.

