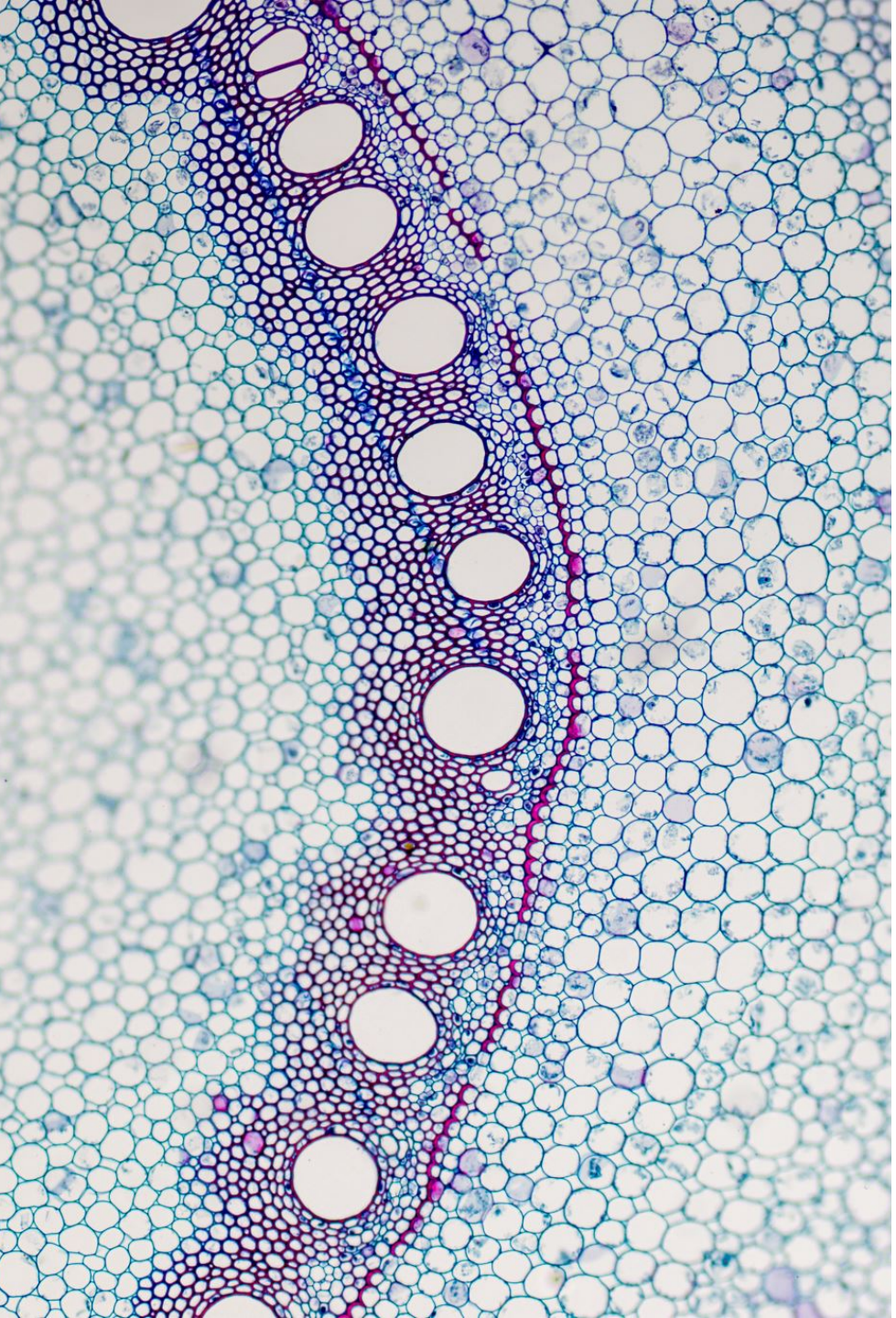
A level Biology

Exam board: Edexcel Biology B



What is it

- Biology A Level gives students the skills to make connections and associations with all living things around them.
- Biology literally means the study of life and if that's not important, what is? Being such a broad topic, students are bound to find a specific area of interest, plus it opens the door to a fantastic range of interesting careers.
- **Next steps - what this course can lead to**
- Possible degree options: Biology, Psychology, Sport and exercise science, Medicine, Anatomy, Physiology and Pathology Pharmacology, Toxicology and Pharmacy Chemistry.
- Possible career options: Clinical molecular geneticist, Nature conservation officer, Pharmacologist, Research scientist, Higher education lecturer, Secondary school teacher, Dentist/Doctor.

Why choose A level Biology

- **We want students who**: Are prepared to ask difficult questions. Students will have to learn a lot of detailed facts and apply them in an intelligent manner. If a student is inquisitive about the world, they will love Biology. We want students who are motivated, hardworking, inquisitive, and committed

- Biology is one of the top 'facilitator subjects' required to enter good courses at outstanding universities (Russell Group). Universities are becoming increasingly aware of Biology as an indicator of analytical skill. Biology is a prerequisite for Medicine and Veterinary Science and the growing world of Biotechnology and Pharmacology.

- **What other courses does it complement?** Students who take Biology often also study from a wide range of subjects, including Psychology, Sociology, PE, Chemistry, Physics, Applied Science, Health & Social Care, History and Geography**.**

What does it involve

The course covers 10 units over 2 years

Topic 1- Biological Molecules

Topic 2- Cells, Viruses and Reproduction of living things

Topic 3- Classification and Biodiversity

Topic 4- Exchange and Transport

Topic 5- Energy for Biological Processes (photosynthesis and respiration)

Topic 6- Microbiology and Pathogens

Topic 7- Modern Genetics (includes DNA technology)

Topic 8- Origins of Genetic Variation

Topic 9- Control systems

Topic 10- Ecosystems

There is no coursework on this course. However, students' performance during practical work will be assessed through a series of required practical's

16 required practical's are covered as well as many more additional practical's to enhance investigative skills of planning, modifying, data analysis, evaluation, justification and validation.

Assessment: A level Biology

How will students be assessed?

Paper 1: Advanced Biochemistry, Microbiology and Genetics Topics 1-7 /90 marks, 1hour 45 minutes

Paper 2: Advanced Physiology, Evolution and Ecology Topics 1-4 and Topics 8-10 /90 marks, 1 hour 45 minutes

Paper 3: General and Practical Principles in Biology, Topics 1-10 /120 marks, 2 hours 30minutes

16 required practical's are covered during the 2 year course and these are the main focus of paper 3

Best bits

- Free access to Exam wizard, which is a collection of all past papers questions for Edexcel Biology B and also gives the ability for students to build topic specific exam papers for revision
- A 2 day Biology fieldtrip to Drigg Beach and the River Irt, Holmrook. To study Succession and sampling techniques (topic 10). We also cover 2 of the required practical's, collecting data for statistical analysis back at school. This usually occurs in June/July of the first year of the course when the weather is nice.
- Trip to Centre of Life, Newcastle to use degree level laboratory equipment including the DNA technology processes of PCR and gel electrophoresis which is covered in Topic 7. We usually try to arrange the trip when the ice skating rink is available at the Centre of Life!!
- Each student is given the personal use of a textbook covering the whole course, endorsed by Edexcel, which is theirs to keep for the duration of the course.
- Each student is given a Specialist student lab book to write up the 16 required practical's, the book is endorsed by Edexcel. It includes planning sheets and key questions

For further information on the specification go to:

https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/biology-b-2015.html